

Test & Measurement

	Page		Page
Anemometers	2130	Moisture Meters	2133
Audio/Video & Security	2116	Multimeters - Analogue	2065
Automotive	2116	Multimeters - Application Specific	2079
Barometers, Weather Stations		Multimeters - Bench	2080
& Office Products	2143	Multimeters - Digital	2065
Cable Locators & Testers	2107	Oscilloscopes	2084
Calibrators & Simulators	2099	Oscilloscope Accessories	2089
Component Testers	2053	Oscilloscopes - Handheld	2087
Current Clamp Meters	2058	Oscilloscopes - PC Based	2088
Current Probes	2057	Portable Appliance (PAT) Testers	2110
Data Acquisition Systems	2092	Power Quality Testers & Analysers	2107
Data Networks & Telecommunications	2111	Power Supplies - Laboratory/Test	2093
Decade Boxes	2056	Pressure & Calibration	2133
Distance Measurement	2143	Signal Strength & Detection	2092
Earth/Ground Testers	2106	Sound Level	2133
Electrical Installation Testers	2102	Tachometers & Stroboscopes	2144
Environmental Dataloggers	2142	Temperature Probes & Accessories	2141
Flash / High Potential Testers	2106	Test - Adaptors	2117
Frequency Counters	2082	Test Leads, Probes & Accessories	2117
Function Generators	2083	Thermal Imagers	2139
Heating & Refrigeration	2131	Thermometers	2134
Light Meters	2131	Thermometers - Non Contact (IR)	2137
Liquid Testers	2132	Voltage & Continuity Testers	2108
Low Ohmmeters	2097	Weighing - General Purpose & Industrial	2144

Component Testers

Battery Tester GOLD-IBT



- Simulates full battery discharge test in seconds
- Tests 12Volt SLA and Car batteries from 1.2Ah - 200Ah
- Automatically displays Ambient Temperature, DC Voltage and Ampere hour Capacity available
- Warns if battery voltage is too high or low
- Table indicates when batteries need to be recharged or replaced
- Quick, accurate and easy to use

Battery manufacturers recommend to recharge or replace the battery when the rated ampere-hour (Ah) capacity falls below 65% - but multimeters are only capable of measuring terminal voltage.

The new GOLD-IBT Intelligent Battery Tester is designed to simulate a full battery discharge test in seconds. Programmed to test 12Volt SLA and car batteries from 1.2Ah - 200Ah, this product automatically displays ambient temperature, DC voltage and Ampere-hour capacity available in the battery. It's quick, accurate and easy to use and identifies batteries that need to be recharged or replaced according to prevailing conditions - irrespective of how long they have been in use.

The Intelligent Battery Tester works by applying a pulsed frequency to the battery under test. The neutral net software analyses the chemistry of the battery during this process and provides a direct reading in Amps/Hr.

Operating voltage	12VDC(10-15VDC)	Repeat test capability	Up to 15 continuous tests
Battery type	SLA (sealed lead acid) and car batteries	Dimensions (HxWxD)	110x55x35mm
Battery size	1.2Ah - 200Ah	Weight	400g

347809.364412

Mfrs.			Price Each		
List No.	Order Code	1+	2+	10+	
GOLD-IBT	782-0097	763.17	754.34	711.39	

Capacitance and ESR Meter Atlas ESR60



W=103 H=70 D=20mm

Measuring a capacitors ESR is a great indicator of capacitor condition. The Atlas ESR offers instant results and can be used in-circuit so capacitors don't need to be removed. When testing out of circuit the meter will also show the capacitance, and can still be used on highly charged capacitors.

- Measure capacitance and equivalent series resistance (ESR)
- Capable of in-circuit testing
- Polarity free, connect any way round
- Protected against highly charged capacitors
- Easy to use; just connect the probes and press test

Parameter	Min	Typ	Max
Peak test current into S/C		±20mA	±25mA
Peak test voltage across O/C		±2.5V	±3.0V
Capacitance measurement range	1µF		22 000µF
Capacitance accuracy		± 4% ± 0.2µF	
ESR measurement range	0Ω		10Ω
ESR resolution (ESR < 1Ω)	0.01Ω		0.02Ω
ESR resolution (ESR > 1Ω)	0.1Ω		0.2Ω
ESR accuracy (ESR < 1Ω)		±1.5% ±0.02Ω	
ESR accuracy (ESR > 1Ω)		±1.5% ±0.2Ω	
Abuse voltage (for C < 10µF)		±400V	
Abuse voltage (for C > 10µF)		±40V	
Test Frequency		100kHz	
Dimensions (WxHxD)		103x70x20mm	

347708.348857

Description	Mfrs.		Price Each		
	List No.	Order Code	1+	5+	10+
ESR Meter	ESR60	783-0254	338.63	319.70	296.94
Carry Case	ATC55	521-5511	48.78	--	--



Access to leading brands
element14 offers you access to 3,500 leading brands!



1300 361 005



au.element14.com

Component Testers - continued

LCR Component Tester

PEAK



- Automatic component identification
- Automatic test frequency selection (DC, kHz, 15kHz, 200kHz)
- Delayed or instant analysis (for hands free operation)
- Auto power-off
- Non-volatile probe and test lead compensation
- Interchangeable probe sets
- Automatic ranging and scaling with REAL units display
- 1% basic accuracy

This is an advanced instrument that greatly simplifies the testing of passive components. The product does everything automatically, it tells you the component type in addition to the component value data. The analyser also automatically selects the best signal level and frequency for the particular component under test. Further component data is also displayed such as the DC resistance of an inductor.

A testers kit is also available which includes the LCR40 Component Tester, carry case and DCA55 semiconductor analyser.

Semiconductor Analyser DCA55

Automatically identifies transistors, Darlingtons, diode protected transistors, resistor shunted transistors, enhancement and depletion mode MOSFETs, JFETs, low power thyristors and triacs, diodes, diode networks, LEDs and bicolour LEDs.

		Min.	Typ.	Max.
Inductance	Range	1μH		10H
	Resolution	0.4μH		
	Accuracy		±1% ±0.8μH	
Capacitance	Range	0.4pF		10mF
	Resolution	0.1pF		
	Accuracy		±1% ±0.3pF	
Resistance	Range	1R		2MR
	Resolution	0.3R		
	Accuracy		±1% ±0.6R	
Peak test voltage		-1.05V		+1.05V
Peak test current		-3.25mA		+3.25mA
Test Frequency accuracy	1kHz	-11%		+11%
	15kHz	-11%		+11%
	200kHz	-100ppm		+100ppm
Sine purity			-60dB 2 nd harmonic	
Peak test voltage		10°C		40°C
Battery operating voltage		8.5V		13V

333710.277355

Mfrs.		Price Each			
Description	List No.	Order Code	1+	5+	10+
LCR Tester	LCR-40	470-5233	267.87	--	--
Carry Case	ATC55	521-5511	48.78	--	--
Surface Mount Tweezers	SMD03	521-5481	78.35	70.76	63.68
Crocodile Clips	CRC01	521-5493	37.15	33.62	30.21
Long Grabber Probes	XKM04	521-5500	26.54	24.81	22.24
Probes Kit (includes SMD03, CRC01, XKM04)	PTP03	783-0262	145.30	136.46	130.14
Testers Kit	LCR40+DCA55+ATC55	783-0270	422.01	--	--

Capacitance & Resistance Meter

72-8150

TENMA



Compact meter is ideal for capacitor measurement in service and assembly applications. Quickly and accurately measure capacitance values up to 20mF (20,000μF), in nine ranges, and resistance to 2,000MΩ in nine ranges.

- 3-1/2 digit 1999 count display
- Transistor HFE measurement
- Diode test & Audible continuity test
- Low battery display
- Supplied with 9V battery, test clips and owners manual

W=83 H=172 D=38mm. Weight 310g

	Range
Resistance	20R, 200R, 2kR, 20kR, 200kR, 2MR, 20MR, 200MR, 2GR
Capacitance	200pF, 2nF, 20nF, 200nF, 2μF, 20μF, 200μF, 2mF, 20mF

Accuracy
± (0.8% + 1d)
± (0.5% + 10d)

448305.460891

Mfrs.		Price Each			
List No.	Order Code	1+	+	+	+
72-8150	128-3644	66.77	--	--	--
		Price Each			
Standard Calibration Charge		\$	☎		

LCR Multimeter

72-8155

TENMA



Compact full featured meter provides inductance, capacitance and resistance (LCR) measurements. Quickly and accurately measure capacitance values up to 600μF in seven ranges, resistance to 20MΩ in six ranges and inductance to 20H in five ranges.

- 3-1/2 digit 1999 count display
- Transistor HFE measurement
- Diode test & Audible continuity test
- Low battery display
- Supplied with 9V battery, test clips and owners manual

W=83 H=172 D=38mm. Weight 312g

	Range	Accuracy
Resistance	200R, 2kR, 20kR, 200kR, 2MR, 20MR	± (0.8% + 1d)
Capacitance	2nF, 20nF, 200nF, 2μF, 20μF, 200μF, 600μF	± (1.0% + 5d)
Inductance	2mH, 20mH, 200mH, 2H, 20H	± (2.0% + 8d)

448304.460890

Mfrs.		Price Each			
List No.	Order Code	1+	+	+	+
72-8155	128-3643	118.82	--	--	--
		Price Each			
Standard Calibration Charge		\$	☎		

Component Tester

LCR55A

AMPROBE



- Inductance, capacitance and resistance meter
- 28 user ranges
- Transistor continuity, diode and microwave diode tester
- 3½ digit display, 1999 count, large 18mm high digits
- Data hold and max hold
- Zero adjustment knob (20Ω range)
- Capacitor measurement slots and dedicated test sockets
- IEC1010-1, Cat II, CE

Resistance	20Ω, 200Ω, 2 kΩ, 20 kΩ, 200 kΩ, 2 MΩ, 20 MΩ
Inductance	200μH, 2 mH, 20 mH, 2 H, 20 H, 200 H
Capacitance	200 pF, 2 nF, 20 nF, 200 nF, 2 μF, 20 μF, 200 μF, 2000 μF
Microwave	
Diode Test	0.6 mA approx, 7.0 V DC typical
Continuity tone	2 kΩ range: Tone at R < 30kΩ
Weight	311g

489613.502923

Mfrs.		Price Each		
List No.	Order Code	1+	3+	+
LCR55A	146-6450	436.51	403.76	--
		Price Each		
Standard Calibration Charge		\$	☎	
NATA Calibration Charge		N	☎	

Smart Tweezers

LCR-Meter and Component Identifier in a pair of Tweezers



- Efficient and convenient way to test SMD components
- Built-in high-precision LCR probe
- Convenient one-hand operation
- Precise tips for small size devices (ideal for SMDs)
- Automatic component recognition
- Automatic test range selection
- Manual and voltage test modes
- Diode Polarity/Short testing
- Portable and ergonomic design

Smart Tweezers automatically determine the type of component (resistance / capacitance / inductance) and selects the proper range for high accuracy measurements. The display clearly indicates the type of component, measurement result and test conditions.

Physical Specifications	Operating Temperature:	0 °C to +55 °C
	Battery Type:	1.5V LR44 (Alkaline or Air Zinc)
Basic Specifications	Battery Life (continuous):	80 Hours Alkaline 240 Hours Zinc Air
	Size:	14.0 x 2.5 x 3.0 cm
Accuracy Specifications	Weight:	53 g
	Measured Parameters:	C+R (ESR), L+R, R
Resistance	Measuring Frequencies:	100 Hz, 1 kHz, 10 kHz
	Measurement Rate:	4, 2, 1, 0.5 times per second (Default 1)
Capacity	DC Voltage:	0 to 800 mV
	Resistance:	0 to 5 MOhm
Inductivity	Capacitance:	10 pF to 900 µF
	Inductance:	1 µH to 999 mH
Resistance	Range:	0.1 Ohm - 5 MOhm
	Accuracy:	1% in the range 0.1R - 5M
Capacity	Test Frequency:	1 kHz
	Range:	10pF - 499µF
Inductivity	Accuracy:	5% in the range 20pF - 1000µF
	Resolution:	0.5pF in the range 1pF - 100pF
Test Frequency:	Test Frequency:	1 kHz C ≥ 1000pF 10 kHz C ≤ 1000pF 100Hz C ≥ 1µF
	Range:	1µH - 1H
Accuracy:	Accuracy:	10% in the range 1µH - 10µH 5% in the range 10µH - 100µH 5% in the range 100µH - 1H
	Resolution:	0.5µH in the range 1µH - 100µH
Test Frequency:	Test Frequency:	10 kHz L ≤ 1µH 1 kHz L ≥ 1µH 100Hz L ≥ 1mH

471896.502087

		Price Each	
Mfrs List No.	Order Code	1 +	3 +
Smart Tweezers	ST-1	136-0343	877.35 832.36
Smart Tweezers Rechargeable	ST-1R	182-4292	711.00 693.00
		Price / Set	
Standard Spare Tips	ST-IT-T	158-1059	101.67 91.56
Hi-Precision Spare Tips	ST-IT-THP	158-1060	123.51 111.14
Hi-Precision Spare Tips, Extra Sharp	ST-IT-TSHP	158-1061	150.33 135.28

DMM/Component Tester with Tweezers



Compact pocket size component tester with tweezers measures AC/DC volts, resistance, capacitance and provides diode test. Convenient 'pen-style' allows the unit to be carried easily in a shirt pocket or toolbox. Included SMD probe allows quick one hand measurements of resistors, capacitors and diodes, even when mounted to a PC board. Simply unplug the probe and insert the included test leads and the unit is ready to measure AC/DC volts.

- 6,000 Count LCD display
- Selectable auto/manual range
- Data Hold/Max/Min recording mode
- Auto power off
- Wide capacitance range
- Diode check & continuity test
- Simple two button operation

- Slim compact size
- Dimensions (WxHxD): 37 x 184 x 23mm

- Weight: 110g

Supplied with SMD probe & cover, test leads, 2x LR44 batteries & user guide.

Technical Data		
DC Voltage	600mV, 6V, 50V	±0.5%, ±2
AC Voltage		±1.0%, ±3
Resistance	600Ω, 6KΩ, 60KΩ, 600KΩ, 6MΩ, 60MΩ	±0.8%, ±2
Capacitance		±5%, ±7
Diode		
Continuity	Buzzer sounds at less than 30Ω	

542455

Description	Order Code	Price Each
SMD-100	174-9431	96.38



Component Analyser

Atlas DCA55



H=70, W=103, D=20



Surface Mount Tweezers



Testers Kit



Crocodile Clip

Long Reach Grabbers

Passive component Analyser LCR40

An advanced instrument that greatly simplifies the testing of passive components, it will identify the type of component (Inductor, Capacitor or Resistor) together with the components main value. Additionally, further component data is also displayed such as the DC resistance of an inductor.

- Automatically identifies transistors, Darlington, diode protected transistors, resistor shunted transistors, enhancement and depletion mode MOSFETs, JFETs, low power thyristors and triacs, diodes, diode networks, LEDs and bicolour LEDs.
- Automatic pin-out identification for all the above components
- Measures transistor gain, MOSFET gate threshold voltage, and forward voltage drop of diodes, LEDs and transistor base-emitter junctions
- 2 line scrollable LCD
- Simple two button control
- Gold plated universal probes
- Battery supplied
- Colour coded, universal clips
- Auto/manual power off

227399.410810

			Price Each		
Description	Mfrs. List No.	Order Code	1+	5+	10+
Red Analyser	DCA55R	372-7440	178.15	--	--
Translucent Blue Analyser	DCA55T	372-7476	178.15	--	--
Carry Case	ATC55	521-5511	48.78	--	--
Surface Mount Tweezers	SMD03	521-5481	78.35	70.76	63.68
Crocodile Clips	CRC01	521-5493	37.15	33.62	30.21
Long Grabber Probes	XKM04	521-5500	26.54	24.81	22.24
Probes Kit (Includes SMD03, CRC01, XKM04)	PTP03	783-0262	145.30	136.46	130.14
Testers Kit	LCR40+DCA55+ATC55		422.01	--	--

Thyristor and Triac Analyser

Atlas SCR100



H=72, W=103, D=20mm

- Thyristor and triac identification
- Automatic lead identification Gate, Anode, Cathode for thyristors and Gate, MT1, MT2 for triacs
- Gate sensitivity checking (100µA to 100mA)
- Polarity free, connect any way round
- Common fault detection
- Simple to use (just connect thyristor or triac and press test)

Thyristors and triacs vary a great deal in their requirements for gate trigger currents, some can be triggered with just 50µA, others may need up to 100mA. The Atlas SCR will progressively increase gate trigger currents until the device is triggered, it will then display its findings. Even sensitive devices can be tested in safety, test currents last for less than 200µS and levels are limited to safe levels.

Parameter	Min	Typ	Max	Units
Gate test current	0.1		100	mA
Load test current	90	100	120	mA
Gate trigger duration		100		µS
Main current duration		200		µS
Peak O/C test voltage	±12			V
Peak S/C test current		120		mA
Battery type	GP23/MN21 12V			

347707.348855

		Mftrs.	Price Each		
Description	List No.	Order Code	1 +	+	+
Analysers	SCR100	783-0246	353.80	--	--
Carry Case	ATC55	521-5511	48.78	--	--

Decade Boxes

Resistance Decade Box

72-7270



Ideal for service, prototype and experimental use, this useful tool may be set at any value from 1-11,111,110ohm, in one ohm increments. Twenty eight individual slide switches allow the user to quickly and easily select resistor values. Wave soldered, two layer PC board utilises high quality 1 tolerance 1/8W resistors.

- Maximum stray internal resistance is 1/8ohm
- Colour coded binding posts provide resistor and ground connections
- Passive device requires no power source
- Dimensions (WxHxD): 146x114x32mm

336768.343652

Mfrs.	Order Code	1+	+
List No.			
72-7270	490-8454	181.96	--

Capacitance Decade Box

72-7265



Ideal for service, prototype and experimental use, this useful tool may be set at any non-polarised capacitor value from 100pF to 11,111μF, in 100pF increments. Twenty individual slide switches allow the user to quickly and easily select capacitor values. Wave soldered, two layer PC board utilises high quality 5% tolerance mylar capacitors.

- Maximum internal residual capacitance is 50pF
- Colour coded binding posts provide capacitor and ground connections
- Passive device requires no power source

336766.343911

Mfrs.	Order Code	1+	+
List No.			
72-7265	490-8442	181.96	--

Decade Box, RM6



Cost effective decade box offering excellent value for money. This 6 decade model has a total resistance of 11.1111 Mega ohm with a resolution of 10 ohm. The accuracy of ±1% is achieved using metal film resistors which have a power rating of 0.4 Watt, the maximum specified voltage is 250V. Designed for durability the case is hardwood with an anodised aluminium top panel which is clearly marked with the switch position numbers and the decade values.

Key Features

- 6 decades
- Range 10 ohm to 10 Mega ohm
- Accuracy 1%
- Low cost

Terminals:

2 binding posts will accept 4mm banana plugs and spade tags. 1 terminal for connection to panel/earth

Dimensions:

287mm x 65mm x 65mm (W H D) approx

RM6 Specifications			RM6 Specifications		
Decades	Accuracy	Maximum Current	Decades	Accuracy	Maximum Current
10 x 10Ω	±1%	100mA	10 x 10kΩ	±1%	5mA
10 x 100Ω	±1%	30mA	10 x 100kΩ	±1%	1.8mA
10 x 1kΩ	±1%	18mA	10 x 1MΩ	±1%	0.5mA

538629

Mfrs.	Order Code	1+
List No.		
930152	171-8663	359.02

Decade Box, RM6-N2



The RM6-N is a space saving 6 decade resistance box covering the range 1 ohm to 1 Mega ohm. An additional 1 kilo ohm resistor is available at the terminals enabling the user to make a simple divider. The RM6-N incorporates 0.6 watt resistors with a specified accuracy of ±1%. The maximum permissible voltage is 250 V dc. Designed for durability and ease of maintenance, the case is high impact

polystyrene and the size is only 190 x 140 x 70 mm. The RM6- N2 constitute an ideal tool for use in all electrical and electronic laboratories or workshop environments offering a wide range of values with minimum cost.

Key Features:

- 6 decades
- Range 1 ohm to 1 Mega ohm
- Accuracy 1%

Dimensions:

190mm x 140mm x 70mm (W H D) approx

RM6-N2 Specifications			RM6-N2 Specifications		
Decades	Accuracy	Maximum Current	Decades	Accuracy	Maximum Current
10 x 1Ω	±1%	250mA	10 x 1kΩ	±1%	25mA
10 x 10Ω	±1%	250mA	10 x 10kΩ	±1%	7.5mA
10 x 100Ω	±1%	75mA	10 x 100kΩ	±1%	3.5mA

538630

Mfrs.	Order Code	1+
List No.		
930155	171-8664	475.10

Resistance Box 0.01Ω to 1MΩ

1051



The 1051 is a wide range low ohm resistance box designed for general laboratory work including platinum resistance thermometry.

- **Switch Contacts:** Special attention has been given to the reliability of operation. A special multiple gold contact arrangement ensures low contact resistance and continued operation even if a contact fails.

- **Safety Terminals:** Fully compatible with 4mm shrouded plugs, as well as standard plugs, bare wires, and spade terminals.
- **Clear Visual Indication:** To enhance reading the setting, the 1051 has colour coded digits as shown in the above image; Kohms (red), ohms (white), and 0.1 ohms (yellow).
- **Added Protection:** The 1051 comes fitted with an ergonomic rubber boot providing increased protection and durability. The boot has a textured grip for comfortable handling and a raised edge so the 1051 angles slightly upward when resting horizontally. This improves visibility as well as gripping the surface allowing no movement when thumb-wheel switches are pressed. It is easily removable if required.

Range / Ω	0.01	0.1	1	10	100	1k	10k	100k
Accuracy / %	±10	±5	±1	±0.5	±0.1	±0.1	±0.1	±0.1
Max Current / A	1	1	1	0.3	0.1	33m	10m	3m

339583

Mfrs.	Order Code	1+	2+	5+
Description				
Resistance Box	1051.	505-8302	1,390.29	1,335.42

Decade box, RM8



The model RM8 decade resistance box offers a very wide range 0.01 ohm to 1 Mega ohm in a compact and versatile unit. The low decade steps of 0.01 ohm enable very high resolution, when simulating resistance values and the power rating is 1.0 watt per coil. The RM8 uses double pole switching to minimize the effects of contact resistance. The lower value decades (0.01 and 0.1 ohm) are manufactured from Manganin resistance wire and the other decades from selected metal film resistors. This offers good stability combined with excellent load and temperature coefficients. Housed in a hardwood case with metal panel the size is only 254 x 145 x 80mm and the connections are with 4mm binding posts that will accept spade or banana plugs.

Key Features

- 8 decades
- Wide range 0.01 ohm to 1 Mega ohm
- Accuracy 0.1%
- Exceptional value for money
- Compact size
- Power rating 1W / coil

Dimensions:

254mm x 145mm x 80mm (W H D) approx

RM8 Specifications			RM8 Specifications		
Decades	Accuracy	Maximum Current	Decades	Accuracy	Maximum Current
10 x 100kΩ	±0.1%	0.003A	10 x 10Ω	±0.5%	0.3A
10 x 10kΩ	±0.1%	0.01A	10 x 1Ω	±1%	1.0A
10 x 1kΩ	±0.1%	0.033A	10 x 0.1Ω	±5%	1.0A
10 x 100Ω	±0.1%	0.1A	10 x 0.01Ω	±10%	1.0A

538631

Mfrs.	Order Code	1+
List No.		
930144	171-8665	1,395.60

Capacitance and Resistance Decade Boxes

TEK903 & TEK905



Resistance: The TEK903 is a very reliable decade resistance box with high quality rotary switches providing in-line readouts. Ideal for laboratory, educational and calibration applications. The extra terminal forms an accurate potential divider. **Capacitance:** The TEK905 is a 5 decade capacitance box giving a useful range of capacitance values.

TEK903 - Resistance		TEK905 - Capacitance	
1% Grade 0.6W per resistor		±5% Grade 100V DC	
Ranges	10 - 100 - 1k - 10k - 100k - 1M per step ±1% (variable from 10Ω to 10Ω ±1%)	Ranges	10pF - 1nF - 10nF - 100nF - 1μF - 3μF ±5% (variable from 100pF to 3μF ±5%)
Dimensions	306 x 70 x 80mm	Dimensions	306 x 70 x 80mm
Weight	404g	Weight	425g

Mfrs.			Price Each		
Description	List No.	Order Code	1+	3+	5+
Resistance	TEK903	505-8004	408.54	377.22	351.11
Capacitance	TEK905	505-8016	511.89	473.33	438.76

341612

Decade boxes 006/8



A versatile range of resistance decade boxes available in 6 & 8 decades. High Accuracy and wide range 0.001 ohm to 11 Mega ohm are combined in a compact lightweight metal case. The switches have gold plated contacts to ensure a low contact resistance and negligible thermal E.M.F. Some models are particularly suited to Pt100 simulation with resolution as low as 0.001 ohm (0.0025°C).

Key Features

- High accuracy 0.01% and high performance
- Suitable for Pt100 and transducer simulation
- 6 and 8 Decades
- Long term stability ± 20 ppm/year
- Low temperature co-efficient ± 3 ppm/°C to + 85 °C
- Negligible thermal E.M.F.'s
- Gold-plated switch contacts and solid copper input terminals
- Light weight / small size
- With certificate of conformity
- In-house test figures optional

Dimensions:

350mm x 100mm x 80mm (W H D) approx (all models)

006/8 Specifications					
Model	No. Decades	Total Resistance	Resolution	Subtable for Pt100 Simulation	Resolution °C when Simulating Pt100
006-A	6	1,112.11Ω	0.001	●	0.0025
006-B	6	1,112.10Ω	0.01	●	0.025
008-B	8	1,111,112.1Ω	0.01	●	0.025
008-C	8	11,111,111Ω	0.1	●	

538627

Mfrs.		Price Each	
List No.	Order Code	1+	
930165	171-8659	2,963.96	
930166	171-8660	2,966.65	
930169	171-8661	3,816.98	
930170	171-8662	4,019.42	

Current Probes

AC Current Probe



- Extends the current ranges for all multimeters
- 200A AC current
- Clamp-on adaptor with voltage output

Range 200A
Output 1mV/A
Sensitivity Accuracy $\pm 2\%$
1A/mV DC $\pm 2\%$

W=70 H=190 D=40mm. Weight 200g

414751.403922

		Price Each		
Description	Order Code	1+	10+	25+
AC Current Probe	100-3036	43.29	41.00	38.34

AC/DC Current Clamp Adaptor

72-6174



Connects to any DMM with 10MΩ or greater input impedance

- Measures AC and DC current
- Frequency response to 400Hz
- Zero adjustment and overload protection
- 30mm jaw opening
- Power On and LO BAT indicator
- CE marked, meets IEC-1010-1
- Includes test leads and manual

AC current range 0 to 600A (50Hz-400Hz)
DC current range 0 to 600A
Output 1mV/A
Power requirements 9V battery (not included)

H=30, W=70, L=177.8

Basic Accuracy $\pm (3.0\% + 2A)$
 $\pm (2\% + 2A)$

230711

Mfrs.		Price Each			
List No.	Order Code	1+	+	+	+
72-6174	356-2529	215.24	--	--	--
		1+	12+	24+	+
PP3 9V Battery	378-5786	10.28	8.24	7.42	--

AC/DC Current Clamp

Fluke i30s



A current clamp based on Hall Effect technology for use in measurement of both DC and AC current. The i30s may be used in conjunction with oscilloscopes and other suitable recording instruments for accurate non-intrusive current measurement.

- Maximum conductor diameter 19 mm
- 2m cable with BNC connector

AC Current		Range	Accuracy
General Specifications		20 A	1% rdg + 2mA
Output Sensitivity		100mV/A	
Frequency Range		DC to 100kHz	
Max. Current		30A AC RMS	
Max. Working Voltage		300V AC RMS	
Max. Conductor Diameter		19mm	
Cable Length		2m	
Safety		CAT III 300V	
Battery life		309V Alkaline hours typical from battery	
Weight		250g	

460577.460569

Mfrs.		Price Each			
Description	List No.	Order Code	1 +	3 +	+
Current Clamp	i30S	132-7557	774.00	735.30	--
			Price Each		
Standard Calibration Charge			S	Ⓢ	
			N	Ⓢ	

AC/DC DMM Current Clamps





- AC and DC Current measurement
- 30mm jaw openings
- 400A range
- Hall sensor operation
- 4mm shrouded safety plug connections with 1.6m lead
- Zero error adjustment
- 60hr battery life (9V PP3 battery supplied)
- IEC1010 CAT III 600V rating
- i1010 Additional Features:
- 600/1000A ranges

Two high quality current clamps for use with any DMM with 10MΩ inputs.

	I410	I1010
AC/DC Current Range	1A to 400A	1A to 600A/1A to 1000A
Lowest Measureable Current	0.5A	
Basic Accuracy	3.5%	2%
Working Voltage (max.)	600V	
Conductor Size (max.)	30mm or 2x 25mm	
Output Level	1mV/A	

248512

		Price Each	
Mfrs. List No.	Order Code	1+	3+
I410	431-4232	362.00	334.85
I410-KIT + Carry Case	491-7250	440.00	407.00
I1010	431-4256	589.00	544.83
I1010-KIT + Carry Case	491-7261	628.00	580.90
		Price Each	
Standard Calibration Charge		S	
UKAS Calibration Charge		N	

Current Probes - continued

Current Probe

i310s



The i310s current probe is based on Hall Effect technology for use in measurement of both DC and AC current. The i310s may be used in conjunction with oscilloscopes and other suitable recording instruments for accurate non-intrusive current measurement.

- i310s connects to oscilloscopes via safety BNC, to multimeters via BNC-4mm adaptor supplied
- Dual range 30/300 A
- Wide bandwidth - 20kHz (-3dB)
- Output sensitivity of 10/1 mV / A
- 10 k Ω Load Impedance
- Accuracy of +/- 1% of reading $\pm 50/300$ mA
- Maximum jaw conductor 19mm (0.75 in)

- Battery life - 30 hours with low battery indicator
- Superior noise rejection for power electronics applications
- Typical applications include inverters, switch mode power supplies, industrial controllers requiring current measurement and/or waveform analysis, automobile diagnostics.

Safety Standards

- BS EN 61010-1: 2001, BS EN 61010-2-032: 2002, BS EN 61010-031: 2002
- 300 V_{RMS}, Category III, Pollution Degree 2
- Use of the probe on uninsulated conductors is limited to 300 V AC_{RMS} or DC and frequencies below 1kHz

EMC Standards

- BS EN 61326 : 1998 + A1, A2, & A3

488176.502130

Mfrs. List No.	Order Code	Price Each		
		1+	3+	5+
I310S	144-1502	672.32	652.15	632.58
		Price Each		
Standard Calibration Charge		S	2	
UKAS Calibration Charge		N	2	

AC Current Clamp

Fluke i2000 flex

FLUKE



W=69 H=116 D=30mm. Weight 180g

An AC current probe utilizing the Rogowski principle. It can be used to measure currents up to 2000A when used in conjunction with multimeters, recorders or data loggers. The flexible and lightweight measuring head allows quick and easy installation in hard to reach areas.

- Three ranges: 20A, 200 A & 2000 A, 1 mV, 10 mV & 100 mV/A output
- Ideal for current measurement on thick and hard to reach conductors without breaking the circuit
- 0.5m cable to shrouded banana plugs

AC Current

General Specifications

	Ranges	Accuracy
Output Sensitivity	20A, 200A, 2000A	1.0%
Frequency Range	100mV, 10mV, 1mV per A	
Max. Current	10Hz to 20kHz	
Max. Working Voltage	2500A AC RMS	
Max. Conductor Diameter	600V AC RMS	
Cable Length	178 mm	
Safety	0.5m	
Battery life	CAT III 600V	
	200 hours typical from 2x AA batteries	

460561.460559

Description	Mfrs. List No.	Order Code	Price Each		
			1+	3+	5+
Current Clamp	I2000 FLEX	132-7553	656.31	636.62	617.51
		Price Each			
Standard Calibration Charge		S	2		
NATA Calibration Charge		N	2		

Current Clamp Meters

Clamp Meter Selection Guide

FLUKE

	321	322	333	334	335	336	337
True RMS readings					AC	AC	AC
Current AC	400A	40A/400A	400A	600A	600A	600A	999.9A
Current DC						600A	999.9A
Voltage AC	400V/600V	400V/600V	600V	600V	600V	600V	600V
Voltage DC		400V/600V	600V	600V	600V	600V	600V
Resistance	400 Ω	400 Ω	600 Ω	6000 Ω	6000 Ω	6000 Ω	6000 Ω
Frequency							400Hz
Continuity Beeper	●	●	●	●	●	●	●
Display Hold	●	●	●	●	●	●	●
In-Rush				100ms	100ms	100ms	100ms
Min/Max							●
Backlight				●	●	●	●
Jaw Opening	25mm	25mm	30mm	30mm	30mm	42mm	42mm

374384

Mfrs. List No.	Order Code	Price Each*
FLUKE 321	389-0510	213.71
FLUKE 322	389-0521	238.86
FLUKE 333A	369-3053	295.00
FLUKE 334A	369-3065	412.34
FLUKE 335A	369-3077	462.63
FLUKE 336A	369-3089	688.91
FLUKE 337A	369-3090	725.00

* For more price breaks see main product pages

Low Current AC/DC Clamp Meter

AMPROBE



The compact size of these two meters make them ideal for taking general measurements on small conductors. Their excellent accuracy and resolution offer exceptional performance.

- Measures AC and DC current into the low milliamp range up to 40A
- Auto Zero DC for correct measurement every time
- High 1 mA current resolution for quick circuit comparison on sensor and control circuits B Auto power off function
- Jaw opening 20 mm
- Safety acc. EN 61010, CAT III/300 V

525717

Mfrs. List No.	Order Code	Price Each	
		1+	3+
LH41A	167-1220	1,041.86	963.74

200A Mini Clamp Meter

CM51

MARTINDALE



The Martindale CM51 is a low cost 200A mini clamp meter with autoranging, display hold and auto power down. This small current clamp will fit into your shirt pocket for maximum convenience. The small jaws make it easy to use and the autoranging 200A AC capability accurately covers the majority of applications.

- 200A range
 - 24mm jaw capacity
 - Compact size 150 x 52 x 24mm
- | | |
|---------------|--|
| Display | 3 1/2 digit LCD display with annunciators |
| AC A | 10mA to 200A, autoranging (2 ranges) (40Hz to 500Hz) |
| Max conductor | 27mm \varnothing |
| Overvoltage | Category II, 300V |
| Dimensions | 150 x 52 x 24mm |
| Weight | 110g |
| Includes | Battery, carry case and user manual |

339549

Mfrs. List No.	Order Code	Price Each		
		1+	3+	5+
MARCM51	505-7930	247.67	228.70	212.28
		Price Each		
Standard Calibration		S	2	
NATA Calibration		N	2	

Mini Digital Clamp Meter



- Large 4000 count LCD display
- 1mA, high resolution
- Wide measuring range from small to large currents
- Diode check and Continuity buzzer
- 12.5mm jaw capacity
- Data Hold and Max hold functions
- Auto power off
- Safety Category: CATIII 600V

Includes: 9V battery, test leads and carry case

Function	Range	Basic Accuracy	Best Resolution
DC Current	4A, 80A	$\pm(2.5\%+4d)$	1mA
AC Current	4A, 80A	$\pm(2.5\%+5d)$	1mA
DC Voltage	400mV - 600V	$\pm(1.5\%+3d)$	0.1mV
AC Voltage	400mV - 600V	$\pm(2.0\%+4d)$	0.1mV
Resistance	400 Ω - 40M Ω	$\pm(1.5\%+2d)$	0.1 Ω
Frequency	5Hz - 10MHz	$\pm(1.2\%+3d)$	0.001Hz
Duty Cycle	5% - 99.9%	$\pm(1.2\%+3d)$	0.1%

Physical Specifications

Power	1x 9V PP3
Dimensions (WxHxD)	70 x 210 x 37mm
Weight	200g

480638.465569

Price Each				
Model	Order Code	1+	3+	5+
3340	143-0687	170.54	154.73	142.83
Price Each				
Standard Calibration Charge		S		
NATA Calibration Charge		N		

Clamp Meter with Temperature

72-7222



Perfect for general purpose applications including HVAC and appliance repair, this compact clamp meter measures AC/DC voltage, AC current, resistance and temperature.

- 1999 count autoranging display
- 10M Ω input impedance
- Diode test and Continuity buzzer
- Max hold and Data hold
- Sleep mode and Low battery indicator
- Powered from 2x AAA batteries (included)
- Supplied with zipper case, test leads, owners manual

Range	Accuracy
DC Voltage 200mV, 2V, 20V, 200V, 600V	$\pm(0.8\%+1d)$
AC Voltage 2V, 20V, 200V, 600V	$\pm(1.2\%+5d)$
AC Current 2A, 20A, 200A, 400A	$\pm(1.5\%+5d)$
Resistance 200R, 2kR, 20kR, 200kR, 2MR, 20MR	$\pm(1.0\%+2d)$
Temperature -40°C to 1000°C	$\pm(1.0\%+3d)$

W=76 H=210 D=30mm.
Weight 220g

448299.460895

Price Each				
Mfrs. List No.	Order Code	1+	+	+
72-7222	128-3639	72.19	--	--
Price Each				
Standard Calibration Charge		S		

Clamp Meters with Frequency

72-7224 and 72-7226



W=90 H=260 D=45mm.
Weight 530g

Perfect for general purpose applications, this compact clamp meter measures AC/DC voltage, AC/DC current, resistance, frequency and duty cycle.

- 3999 count autoranging display
- 10M Ω input impedance
- 25mm clamp diameter
- Relative mode
- Diode test and Continuity buzzer
- Data hold
- Sleep mode and Low battery indicator
- Powered from 1x 9V battery (included)
- Supplied with zipper case, test leads, owners manual

Additional Features: Model 72-7226

- True RMS AC measurements

Range	Accuracy
DC Voltage 400mV, 4V, 40V, 400V, 600V	$\pm(0.8\%+1d)$
AC Voltage 4V, 40V, 400V, 600V	$\pm(1.0\%+5d)$
DC Current 40A, 400A	$\pm(2.0\%+3d)$
AC Current 40A, 400A	$\pm(2.5\%+5d)$
Resistance 400R, 4kR, 40kR, 400kR, 4MR, 40MR	$\pm(1.0\%+2d)$
Frequency 10Hz to 100MHz	$\pm(0.1\%+3d)$
Duty Cycle 0.1% to 99.9%	

448301.460896

Price Each				
Mfrs. List No.	Order Code	1+	+	+
72-7224	128-3640	110.12	--	--
72-7226	128-3641	157.74	--	--
Price Each				
Standard Calibration Charge		S		

Mini Current Clamp Meter

72-6614



A compact multi-function clamp meter featuring AC/DC voltage and current, temperature, capacitance, resistance and frequency measurement. Clear controls and a large LCD display provide an ideal solution for a range of measurement applications.

- Auto/manual ranging
- AC/DC voltage and current measurement
- Temperature, Capacitance, resistance and frequency measurement
- High accuracy and resolution
- Large 3.75 digit, 3999 count LCD display
- Min/Max and relative function
- Data hold
- 23mm jaw capacity
- Audible continuity tester
- Meets IEC1010 CAT II 600V
- Supplied with 2x AA batteries, K-type thermocouple, test leads, carry case and user instructions



Collaborative e-community

In addition to our best in class online store element14 also integrates a collaborative e-community and technology portal for design engineers.



www.element14.com

Current Clamp Meters - continued

Mini Current Clamp Meter - continued

72-6614 - continued

AC/DC Current	Range 40A, 200A	Max Resolution 10mA	Basic Accuracy $\pm(1.5\% \pm 2 \text{ digits})$
DC Voltage	600V	0.1mV	$\pm(1.5\% \pm 3 \text{ digits})$
AC Voltage	600V	1mV	$\pm(1.5\% \pm 5 \text{ digits})$
Resistance	40 Ω to 40M Ω	0.1 Ω	$\pm(1.5\% \pm 2 \text{ digits})$
Capacitance	4nF to 4 μ F	1pF	$\pm(3\% \pm 2 \text{ digits})$
Temperature	-40°F to 1800°F	0.1°F	$\pm(0.5\% \pm 4^\circ\text{F})$
Frequency	100Hz to 100kHz	0.01Hz	$\pm(0.5\% \pm 2 \text{ digits})$

337214

Mfrs.	List No.	Order Code	1+	+
72-6614		490-8302	407.32	--
			Price Each	
Standard Calibration			S	
NATA Calibration			N	

Mini True RMS AC/DC Clamp Meter

72-6185



- High accuracy and resolution
- Large 3 1/2 digit, 3999 count LCD with bargraph
- Frequency
- Max/Min, auto zero
- Display hold
- Overload protection
- CE marked
- Includes two 1.5V 'AA' batteries, carrying case and owners manual

AC current range	4A, 400A	Jaw opening	23mm
DC current range	4A-400A	Dimensions	63.5 (L) x 184.15 (W) x 38.1 (H)
Frequency	40Hz to 1KHz		

231087

Mfrs.	List No.	Order Code	1+	+
72-6185		342-1545	307.71	--
			Price Each	
Standard Calibration			S	
NATA Calibration			N	

AC/DC TRMS 600A Clamp Meter



- Measures non-linear load current
- True RMS reading
- Autoranging for frequency measurement
- Data Hold button, holds the display reading for all functions and ranges
- Measures frequency through jaws or test leads
- Low battery indicator
- DC current (Zero adjustment button)
- Peak Hold, converts and displays the peak value for AC volts and amps readings
- Jaw opening 40 mm
- Carrying case included
- Safety acc. EN 61010, CAT III/600 V

525708

Mfrs.	List No.	Order Code	1+	+
AC68C		167-1213	606.51	588.32



Free Freight

We know that free freight is important to you. Ask us about our free freight offer today.



1300 361 005



au.element14.com

Digital Clamp Meter 2606

STEINEL


- AC/DC current - 400A/1000A ranges
- Autoranging
- Resistance measurements
- Capacitance measurements
- Frequency measurements
- Continuity & diode testing
- Battery status indicator
- Includes robust handy carry case
- Approved to Cat III/1000V to AS/NZS 61010-1

AC/DC Voltage	0.4-1000 V ($\pm 0.5\%$ of the reading)
AC/DC Current	Up to 1000A ($\pm 1.5\%$ of the reading)
Jaw Opening Capability	57mm
Resistance	0.4-40 MR ($\pm 1\%$ of the reading)
Capacitance Measurement	4nF-40 μ F ($\pm 1.5\%$ of the reading)
Frequency	0.1-40 kHz ($\pm 0.1\%$ of the reading)
Power Supply	9V
Weight	540g
Dimensions (mm)	277x102x49

374032

Mfrs.	Type	List No.	Order Code	1+	5+	10+
2606	9427370000		507-0703	390.77	380.65	372.77

Clamp-On Multimeters

ACD-14 PLUS and ACD-14 TRMS PLUS



- 3 1/2 digits, 4000 counts, dual LCD displays
- True RMS (TRMS) measurement (ACD-14 TRMS PLUS only)
- Dual Displays - Permits simultaneous reading of Amperage & Voltage
- μ A measurement for testing Flame Sensors
- Capacitance to 3000 μ F
- Temperature with Type-K Thermocouple
- AC and DC Voltage to 600V
- AC Current to 400A
- Resistance to 40M Ω
- Continuity buzzer
- Frequency measurement
- Diode test
- Hold and Maximum reading functions
- In rush current

- Accommodates conductors up to 26mm (1") in diameter
- Auto ranging
- Auto power off and low battery indication

- Rubber over-moulded case
- Overload protected
- Powered by 2 x 3V button cells (CR2032)
- Safety: CE, cULus, CAT III 600V

Supplied with test leads, carrying case, bead type K thermocouple with banana plug, user manual

	Ranges	Accuracy
AC Voltage	4V, 40V, 400V, 600V	$\pm(1.5\% + 5)$
DC Voltage	400mV, 4, 40, 400, 600V	$\pm(0.3\% + 4)$
AC Current	40A, 400A, 600A	$\pm(1.5\% + 8)$
DC Current	N/A	
Resistance	400 Ω , 4, 40, 400k Ω , 4, 40M Ω	$\pm(1\% + 4)$
Capacitance	500nF, 5, 50, 500, 3000 μ F	$\pm(3.5\% + 6)$
Frequency	10Hz to 100kHz	$\pm(0.5\% + 4)$
Temperature	-20°C to 537°C	$\pm(3\% + 3^\circ\text{C})$

488735.502920

Mfrs.	List No.	Order Code	1+	3+	+
ACD-14 PLUS		146-1581	252.72	233.75	--
ACD-14 TRMS PLUS		146-1582	389.41	360.21	--
			Price Each		
Standard Calibration			S		
NATA Calibration			N		



New products added weekly

700 new products added online every week!



au.element14.com



1300 361 005

Find it fast online at **au.element14.com**

Clamp-On Multimeters

ACDC-100 and ACDC-100 TRMS



Supplied with test leads, carrying case, batteries and user manual

	Ranges
AC Voltage	400mV, 4, 40, 400, 600V
DC Voltage	400mV, 4, 40, 400, 600V
AC Current	400A, 800A
DC Current	400A, 1000A
Resistance	400Ω, 4, 40, 400kΩ, 4, 10MΩ
Capacitance	500nF, 5, 50, 500, 3000μF

- True RMS (TRMS) and display backlight (ACDC-100 TRMS only)
- Resistance and Capacitance ranges
- Auto and manual ranging
- Relative zero mode
- Auto power off
- Data hold
- MAX capture function for inrush current measurements (30ms response)
- Large, easy to read LCD display
- Diode test
- Audible continuity
- Accommodates conductors up to 50mm in diameter
- 'Third hand' - test probe holder
- Rubber over-moulded case with built-in probes storage
- Powered by 2 x AAA batteries
- Safety CAT III 600V

Accuracy * (TRMS Version)

±(1.5%+4)
±(0.5%+3)
±(1.5%+5)
±(1.5%+4)
±(0.6%+4)
±(3.5%+6)

488733.502918

Price Each

Mfrs. List No.	Order Code	1+	3+	5+
ACDC 100	146-1577	464.99	451.03	437.50
ACDC 100 TRMS	146-1578	469.05	454.96	441.28

Price Each

Standard Calibration	S	☎
UKAS Calibration	N	☎

1000A Current Clamp Meter



A digital current clamp meter with extensive multimeter features and functions.

- 4000 count LCD
- Full icon display with backlight
- Analogue bargraph
- Auto / manual range selection
- AC/DC current measurement
- AC/DC voltage, resistance, frequency measurement
- TRMS AC voltage measurement
- Peak/Min/Max modes and data hold
- Continuity buzzer and diode test
- 56mm jaw size
- Sleep mode and low battery warning
- Supplied with test leads, 9V battery, tool box and user manual

	Range
DC Voltage	400mV, 4V, 40V, 400V, 600V
AC Voltage	400mV, 4V, 40V, 400V, 600V
DC Current	40A, 1000A
AC Current	40A, 1000A
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ
Frequency	4kHz, 40kHz, 400kHz, 4MHz, 40MHz
Input Impedance	10MΩ
Safety	IEC1010 600V CATII/300V CAT III
Dimensions	105x286x45mm (WxHxD)
Weight	533g

Accuracy
±(0.8%+1)
±(1.2%+5)
±(1.5%+8)
±(2%+8)
±(1%+2)
±(1%+3)

510040.509496

Price Each

Description	Order Code	1+	5+
Clamp Meter	156-3721	288.85	270.24



Innovative packaging options

New innovative packaging options available from element14 including peel packaging and biodegradable anti-static bags.



1300 361 005



au.element14.com

2000A AC Digital Clamp Multimeter



The AC-15 clamp meter for when you need to measure high current. Measures up to 2000A AC. Plus it measures AC and DC voltage, resistance and offers audible continuity. Additional feature is a built in non-contact voltage detector. Choose the True RMS version when working in noisy AC environments. Large digital display.

- TRMS & Backlight Screen
- Measurements: AC/DC Voltage up to 600V, AC Current up to 2000A, Resistance, Frequency and Capacitance
- Non-contact Voltage Level Detection
- Audible continuity
- AutoTect™ feature automatically selects DCV, ACV or Resistance
- Auto and manual ranging
- Auto power off
- Data hold
- Carrying case, test leads, batteries (installed) and manual included
- 'Third hand' - test probe holder
- Jaw opening 45 mm
- Safety acc. EN 61010, CAT III/600 V

525714

Mfrs.

List No.

Order Code

Price Each

	1+	3+
ACD-15 TRMS-PRO	407.79	377.21

Industrial TRMS clamp meters

ACD - 3300/3400 IND



- Measures up to 750VAC / 1000VDC
- Measures up to 1000 ACA
- Frequency, Resistance, Capacitance and Duty cycle measurement
- Data and Peak hold
- Audible continuity
- auto and manual ranging
- Auto power off
- Backlight
- Diode test
- Duty cycle
- accommodates conductors up to 2" (51mm) in diameter
- Safety Cat IV 600V, Cat III 1000V
- Test leads, battery (installed), type-K thermocouple and Carrying case included



		171-9023	171-9024
		ACD-3300	ACD-3400
AC Voltage	Range	660.0mV - 750V	660.0mV - 750V
	Accuracy	±1.5% rdg + 8 dgts	±1.5% rdg + 8 dgts
DC Voltage	Range	660.0mV - 1000V	660.0mV - 1000V
	Accuracy	±0.5% rdg + 2 dgts	±0.5% rdg + 2 dgts
AC current (T RMS)	Range	66.00A - 1000A	66.00A - 1000A
	Accuracy	±2.0% rdg + 10 dgts - ±3.5% rdg + 10 dgts	±2.0% rdg + 10 dgts - ±3.5% rdg + 10 dgts
Resistance	Range	660.0Ω - 66.00MΩ	660.0Ω - 66.00MΩ
	Accuracy	±(1.0% rdg + 5 dgts) - ±(3.5% rdg + 5 dgts)	±(1.0% rdg + 5 dgts) - ±(3.5% rdg + 5 dgts)
Frequency	Range	66.00 Hz - 1.000 MHz	66.00 Hz - 1.000 MHz
	Accuracy	±0.1% rdg + 3 dgts	±0.1% rdg + 3 dgts

540751

Mfrs.

List No.

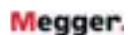
Order Code

Price Each

	1+
ACD-3300	694.96
ACD-3400	972.94

Multi-core AC Digital Clamp Meter

MMC850



A unique solution to current measurement in multi-core cables, without the need to split cores. Simply clamp the MMC850 to a multicore cable and read the current flowing. Conventional current clamp meters can only measure current in a single core cable, requiring multicore cables to be split before a core can be measured. Unlike conventional clamp meters, the MMC850 has a complex array of Planar magnetic sensor coils to calculate the current flowing in the conductors of multicore cables with either 2 or 3 cores. The convenience and potential time saving from using the multi-core clamp is considerable. A single button switches the clamp between multi-core and single core operation, ensuring the MMC850 is the only clamp meter you need to carry. The MMC850 has a tough and lightweight clamp head, allowing good access to awkward locations and cables.

W=94, H=227, D=44.5mm

Current Clamp Meters - continued

Multi-core AC Digital Clamp Meter - continued

MMC850 - continued

- Single, two or three core cable measurement
- Current measurement to 200A on single core and 100A on multiple cores
- 0.1A resolution
- Flat or round section cables
- No need to split wires
- Cable centralising clamp for best accuracy
- Backlit display
- Suitable for supply frequencies from 45Hz to 400Hz
- IEC 61010-1 CATIII 600 V

419244.428559

Description	Mfrs. List No.	Order Code	Price Each		
			1+	3+	5+
Clamp Meter	MMC850-EN	108-6233	826.23	809.71	793.49

Clamp Meter with Bottom Display 61-760 Series



The 760 series brings function and ease-of-use together. The 61-764 is great for basic current measurements, but also has an array of features such as backlit display and auto power off. The 61-766 also offers True RMS and frequency measurement, and the 61-768 is ideal for those who work with DC motors and circuits.

- Measures up to 600AAC
- TightSight™ bottom display
- Voltage-presence warning on all functions
- Tapered jaws with hook tip
- Peak, Hold, Max and Min
- Audible continuity
- Auto power off (selectable)
- Low battery indicator
- **61-766 extra features**
 - True RMS
 - Capacitance
 - Frequency
- **61-768 extra features**
 - 600A DC current measurements

	Range and Resolution			Accuracy
	61-764	61-766	61-768	
AC current	400.0 / 600 A	40.00 / 400.0 / 600 A	400.0 / 600 A	1.7%
DC current	-	-	400.0 / 600 A	1.5%
AC voltage	-	400.0m / 4.000 / 40.00 / 400.0 / 750V	-	1.2%
DC voltage	-	400.0m / 4.000 / 40.00 / 400.0 / 750V	-	0.5%
Resistance	-	400 / 4k / 40k / 400k / 4M / 10MΩ	-	1.0%
Capacitance	-	4μ / 40μ / 400μ / 4mF	-	3.0%
Frequency	-	0.02k to 0.04kHz	-	0.1%

381619.381845

Description	Mfrs. List No.	Order Code	Price Each	
			1+	+
Clamp Meter	TIGHTSIGHT764	851-9781	305.78	--
Meter + True RMS	TIGHTSIGHT766	851-9790	351.27	--
Meter + DC Measurements	TIGHTSIGHT768	851-9803	415.70	--

Testboy® 120 Non-Contact Magnetic Field Tester



- Magnetic field tester
- For rapid and precise inspection of relays, contactors, electromagnetic switches and valves
- Self test via permanent magnet
- Integrated high performance LED torch
- Approved to Cat II/1000V to AS/NZS 61010-1

Display	Visual	IP Rating	IP44
Measuring Range	All magnetic fields	Weight	45g
Power Supply	2 x 1.5 V AAA	Dimensions (mm)	160x25

374372

Tester Type	Mfrs. List No.	Order Code	Price Each		
			1+	3+	5+
Magnetic Field	Testboy 120	766-8557	50.10	48.47	46.56

Fluke 320 Series Clamp Meters



- Precise measurements better than 2% basic accuracy
- Measures ac current to 400A with 0.1A or 100mA resolution
- 400A current range with 0.01A or 10 mA resolution (Model 322)
- Measures ac volts to 600V with 0.1V resolution to 400V
- Measures dc volts to 600V with 0.1V resolution to 400V (Model 322)
- Resistance to 400 Ohms with 0.1Ω resolution continuity test function

		389-0510	389-0521
		FLUKE 321	FLUKE 322
Aac	Range	0 to 400A	0 to 400A
	Accuracy	1.8% ± 5 counts(50/60Hz)	1.8% ± 5 counts(50/60Hz)
		3% + 5 counts (60 Hz - 400 Hz)	3% + 5 counts (60 Hz - 400 Hz)
Vac	AC Response	Averaging	Averaging
	Range	0 to 400V, 400 to 600V	0 to 400V, 400 to 600V
	Accuracy	1.2% ± 5 counts (50/400Hz)	1.2% ± 5 counts (50/400Hz)
Vdc	AC Response	Averaging	Averaging
	Range	-	0 to 400V, 400 to 600V
	Accuracy	-	1% ± 5 counts
Ω	Range	0 to 400Ω	0 to 400Ω
	Accuracy	1% ± 5 counts	1% ± 5 counts
	Continuity	≤30Ω	≤30Ω
Display Hold		Yes	Yes
Dimensions		184 x 62 x 35	
Dimensions		227gms	

Operating Temperature: -10°C to +50°C
Battery Life: 2 x AAA carbon zinc

Safety Rating: IEC 1010-2-031, 600V CAT III

232271

Mfrs. List No.	Order Code	Price Each	
		1+	+
FLUKE 321	389-0510	213.71	--
FLUKE 322	389-0521	238.86	--
Standard Calibration Charge		S	☎
NATA Calibration Charge		N	☎

Clamp Meter Selection Guide



	321	322	333	336	337
True RMS readings				AC	AC
Current AC	400A	40A/400A	400A	600A	999.9A
Current DC				600A	999.9A
Voltage AC	400V/600V	400V/600V	600V	600V	600V
Voltage DC		400V/600V	600V	600V	600V
Resistance	400Ω	400Ω	600Ω	6000Ω	6000Ω
Frequency					400Hz
Continuity Beeper	●	●	●	●	●
Display Hold	●	●	●	●	●
In-Rush				100ms	100ms
Min/Max					●
Backlight				●	●
Jaw Opening	25mm	25mm	30mm	42mm	42mm

374384

Mfrs. List No.	Order Code	Price Each
FLUKE 321	389-0510	213.71
FLUKE 322	389-0521	238.86
FLUKE 333A	369-3053	295.00
FLUKE 336A	369-3089	688.91
FLUKE 337A	369-3090	725.00

Fluke 365 True-rms AC Clamp Meters



The Fluke 365 is a new, innovative Fluke clamp meter, offering a thin, small jaw design that makes it easy to get around tightly packed wires. The detachable jaw on a flexible lead makes access to wires and viewing the display easier than ever. The Fluke 365 measures current up to 200A ac and dc with true-rms measurement.

Measurement Capability

- 200 A ac and dc current measurement with fixed Jaw
- 600 V ac and dc voltage measurement
- True-rms ac voltage and current for accurate measurements on non-linear signals
- 6000 Ω resistance measurement to with continuity detection

Features

- Detachable jaw makes accessing wires and viewing the display easier
- Built in flashlight/torch allows for easy illumination and identification of wires
- CAT III 600V safety rating
- Compact design fits in your hand and can be used while wearing personal protective equipment.
- State of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement.
- Three year warranty
- Soft case

	Range	Resolution	Accuracy
Fluke 365			
AC Current	200 A	0.1 A	2% \pm 5 digits
DC Current	200 A	0.1 A	2% \pm 5 digits
AC Voltage	600 V	0.1 V	2% \pm 5 digits
DC Voltage	600 V	0.1 V	2% \pm 5 digits
Resistance	6000 Ω	0.1 Ω	1% \pm 5 digits
True-rms		X	
Continuity		X	
Hold		X	
Backlight		X	
Flashlight/torch		X	
Wire Capacity		17 mm	
Safety Rating		CAT III 600V	

610417

Mfrs.	Order Code	Price Each
List No.		1+
FLUKE 365	182-7181	495.00

Fluke 373 True-rms AC Clamp Meter



Measurement Capability

- 600 A ac current measurement with fixed Jaw
- 600 V ac and dc voltage measurement
- True-rms ac voltage and current for accurate measurements on non-linear signals
- Resistance measurement to 6000 Ω with continuity detection
- 1000 μ F capacitance measurement

Features

- State of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement.
- CAT IV 300V, CAT III 600 V safety rating
- Three year warranty
- Soft carrying case

The new Fluke 373 clamp meters offers improved performance perfect for many ac only current measurement situations. With true-rms ac voltage and current measurements, the Fluke 373 read up to 600A ac and 600V ac or dc The Fluke 373 is the direct replacement for the Fluke 333A clamp meter and can also replace the Fluke 334A and 335A for those users that do not require the inrush feature.

	Range	Resolution	Accuracy
Fluke 373			
AC Current	600 A	0.1 A	2% \pm 5 digits
AC Voltage	600 V	0.1 V	1.5% \pm 5 digits
DC Voltage	600 V	0.1 V	1% \pm 5 digits
Resistance	6000 Ω	0.1 Ω	1% \pm 5 digits
Capacitance	1000 μ F	1 μ F	1.9% \pm 2 digits
True-rms		X	
Continuity		X	
Hold		X	
Backlight		X	
Wire Capacity		750 MCM	
Safety Rating		CAT III 600V, CAT IV 300V	

610415

Mfrs.	Order Code	Price Each
List No.		1+
FLUKE 373	182-7180	333.00

Express checkout

With no need to re-enter your details, returning customers can now buy products even faster - **order online today at au.element14.com**



Fluke 374 & 375 True-rms AC/DC Clamp Meters



Fluke 375

Measurement Capability

- 600 A ac and dc current measurement with fixed Jaw
- 2500 A ac current measurement with iFlex flexible current probe (sold separately)
- 600 V ac and dc voltage measurement
- True-rms ac voltage and current for accurate measurements on non-linear signals
- Frequency measurement to 500 Hz with both Jaw and iFlex (Fluke 375 only)
- Resistance measurement to 60 k Ω (Fluke 375) or 6000 Ω (Fluke 374) with continuity detection
- Min, max, average and inrush recording to capture variations automatically
- 500mV dc measurement range to interface with other accessories (Fluke 375 only)
- 1000 μ F capacitance measurement

Features

- iFlex flexible current probe expands the measurement range to 2500 A ac while providing increased display flexibility, ability to measure awkward sized conductors and improved wire access.
- CAT IV 600V, CAT III 1000 V safety rating
- Integrated low pass filter (Fluke 375 only) and state of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Proprietary inrush measurement technology to filter out noise and capture motor starting current exactly as the circuit protection sees it.
- Ergonomic design fits in your hand and can be used while wearing personal protective equipment.
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement.
- Three year warranty
- Soft carrying case

	Range	Resolution	Accuracy
Fluke 374 & 375			
AC Current via Jaw	600 A	0.1 A	2% \pm 5 digits
AC Current via iFlex (optional)	2500 A	0.1 A	3% \pm 5 digits
DC Current	600 A	0.1 A	2% \pm 5 digits
AC Voltage	600 V	0.1 V	1.5% \pm 5 digits
DC Voltage	600 V	0.1 mV (375)	1% \pm 5 digits
Resistance	6000 Ω (374) 6000 Ω (375)	0.1 Ω (374)	1% \pm 5 digits
Frequency (375 only)	500 Hz	0.1 Ω	0.5% \pm 5 digits
Capacitance	1000 μ F	0.1 Hz	1% \pm 4 digits
True-rms		X	
Continuity		X	
Hold		X	
Backlight		X	
Min/Max		X	
Inrush		X	
Low Pass Filter			Fluke 375 only
18 in iFLEX Flexible Current Probe			Accessory
10 in iFLEX Flexible Current Probe			Accessory
Wire Capacity			750 MCM or 2-500 MCM
Safety Rating			CAT III 1000V, CAT IV 600V

610381

Mfrs.	Order Code	Price Each
List No.		1+
FLUKE 375	182-7176	615.00
FLUKE 374	182-7177	449.00

Fluke 376 True-rms AC/DC Clamp Meter with iFlex



The new Fluke 376 Clamp Meter offers improved performance perfect for a wide range of current measurement situations. With true-rms ac voltage and current measurements, the Fluke 376 can read up to 1000V and 1000A in both ac and dc modes. Additionally, the Fluke 376 includes the new iFlex flexible current probe expanding the measurement range to 2500 A ac while providing increased display flexibility, ability to measure around awkward sized conductors and improved wire access. The Fluke 376 is the direct replacement for the Fluke 337A clamp meter.

Measurement Capability

- 1000 A ac and dc current measurement with fixed Jaw
- 2500 A ac current measurement with iFlex flexible current probe
- 1000 V ac and dc voltage measurement
- True-rms ac voltage and current for accurate measurements on non-linear signals
- Frequency measurement to 500 Hz with both Jaw and iFlex
- 60 k Ω resistance measurement to with continuity detection
- Min, max, average and inrush recording to capture variations automatically
- 500mV dc measurement range to interface with other accessories
- 1000 μ F capacitance measurement

Features

Current Clamp Meters - continued

Fluke 376 True-rms AC/DC Clamp Meter with iFlex - continued

- iFlex flexible current probe expands the measurement range to 2500 A ac while providing increased display flexibility, ability to measure awkward sized conductors and improved wire access.
- CAT IV 600V, CAT III 1000 V safety rating
- Integrated low pass filter and state of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Proprietary inrush measurement technology to filter out noise and capture motor starting current exactly as the circuit protection sees it.
- Ergonomic design fits in your hand and can be used while wearing personal protective equipment.
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement.
- Three year warranty
- Soft carrying case

Fluke 376	Range	Resolution	Accuracy
AC Current via Jaw	1000 A	0.1 A	2% ± 5 digits
AC Current via iFlex	2500 A	0.1 A	3% ± 5 digits
DC Current	1000 A	0.1 A	2% ± 5 digits
AC Voltage	1000 V	0.1 V	1.5% ± 5 digits
DC Voltage	1000 V	0.1 mV	1% ± 5 digits
Resistance	60000 μ	0.1 Ω	1% ± 5 digits
Frequency	500 Hz	0.1 Hz	0.5% ± 5 digits
Capacitance	1000 μF	1 μF	1% ± 4 digits
True-rms		X	
Continuity		X	
Hold		X	
Backlight		X	
Min/Max		X	
Inrush		X	
Low Pass Filter		X	
18 in iFlex Flexible Current Probe		Included	
10 in iFlex Flexible Current Probe		Accessory	
Wire Capacity		750 MCM or 2-500 MCM	
Safety Rating		CAT III 1000V, CAT IV 600V	

Mfrs.		Price Each
List No.	Order Code	1+
FLUKE 376	182-7175	725.00

Fluke 381 Remote Display True-rms AC/DC Clamp Meter with iFlex



The new Fluke 381 does everything you would expect from a clamp meter, and then lets you remove the display for even more flexibility. Now one technician can do jobs that used to require two people; clamp the Fluke 381 around a conductor, remove the display and walk across the room to operate controls or remove protective equipment, all while watching real-time readings. The new iFlex flexible current probe (included) expands the measurement range to 2500 A ac while providing increased display flexibility, ability to measure awkward sized conductors and improved wire access.

Measurement Capability

- 1000 A ac and dc current measurement with fixed Jaw
- 2500 A ac current measurement with iFlex flexible current probe
- 1000 V ac and dc voltage measurement
- True-rms ac voltage and current for accurate measurements on non-linear signals
- Frequency measurement to 500 Hz with both Jaw and iFlex
- 60 kΩ resistance measurement to with continuity detection
- Min, max, average and inrush recording to capture variations automatically

Features

- Wireless technology allows the display to be carried up to 30 ft. away from the point of measurement for added flexibility without interference with measurement accuracy
- iFlex flexible current probe expands the measurement range to 2500 A ac while providing increased display flexibility, ability to measure awkward sized conductors and improved wire access.
- CAT IV 600V, CAT III 1000 V safety rating
- Integrated low pass filter and state of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Proprietary inrush measurement technology to filter out noise and capture motor starting current exactly as the circuit protection sees it.
- Ergonomic design fits in your hand and can be used while wearing personal protective equipment.
- The removable magnetic display can be conveniently mounted where it is easily seen
- Radio transmitter automatically turns off when the display is connected to the meter
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement.
- Three year warranty
- Soft carrying case

Fluke 381	Range	Resolution	Accuracy
AC Current via Jaw	1000 A	0.1 A	2% ± 5 digits
AC Current via iFlex	2500 A	0.1 A	3% ± 5 digits
DC Current	1000 A	0.1 A	2% ± 5 digits
AC Voltage	1000 V	0.1 V	1.5% ± 5 digits
DC Voltage	1000 V	0.1 V	1% ± 5 digits
Resistance	60000 Ω	0.1 Ω	1% ± 5 digits
Frequency	500 Hz	0.1 Hz	0.5% ± 5 digits
True-rms		X	
Continuity		X	
Hold		X	
Backlight		X	

Min/Max	X
Inrush	X
Low Pass Filter	X
Removable wireless display	X
18 in iFlex Flexible Current Probe	Included
10 in iFlex Flexible Current Probe	Accessory
Wire Capacity	750 MCM or 2-500 MCM
Safety Rating	CAT III 1000V, CAT IV 600V

Mfrs.		Price Each
List No.	Order Code	1+
FLUKE 381	182-7174	799.00

Electrical / HVAC Test Kit



Fluke 62/322/1AC
IR Thermometer, Electrical Tester and Voltage Detector Kit.

Lit includes:

- Fluke 62 mini IR Thermometer
- Fluke T5-600 Voltage, Continuity and Current Tester
- Fluke 1AC-II Voltage Detector
- Nylon carrying case

Mfrs.		Price Each			
Description	List No.	Order Code	1+	3+	5+
Electrical Test Kit	62/322/1AC	132-7564	563.20	546.30	529.90
			Price Each		
Standard Calibration Charge			S	☎	
NATA Calibration Charge			N	☎	

MilliAmp Process Clamp Meter



Fluke 771



W=59 H=212 D=38mm. Weight 260g

Measure 4-20 mA signals without breaking the loop with this new, compact clamp meter for PLC and control systems analogue I/O. The detachable clamp with extension cable allows you to take measurements in tight locations, and the built-in spot light illuminates hard to see wires in dark enclosures.

- Measure mA signals for PLC and control system analogue I/O
- Measure 4 to 20 mA output signals from transmitters without breaking the loop
- Best in class 0.2% accuracy
- Resolution and sensitivity to 0.01 mA
- Hold function captures and displays changing measurements
- Dual backlight display with both mA measurement and percent of 4 to 20 mA span
- Measurement Spotlight illuminates hard to see wires in dark enclosures

- Detachable clamp with extension cable for measurements in tight locations
- Measure 10 to 50 mA signals in older control systems using the 99.9 mA range
- Automatic power off after 15 minutes and 2 minute automatic off for backlight and spotlight

Process Loop	Range	Accuracy
Older Systems	4mA - 20mA	0.2% rdg + 5 counts
Battery life	21mA to 99.9 mA	1% rdg + 5 counts
	20 hours typical from 2x AA batteries	

460588.460578

Description	Mfrs. List No.	Order Code	1+	3+	+
Process Clamp Meter	771	132-7558	869.00	825.55	--

Standard Calibration Charge	S	Price Each
NATA Calibration Charge	N	Price Each

Milliamp Process Clamp Meters

Fluke 772 / 773



- Measure 4 to 20 mA signals without "breaking the loop"
- Source 4 to 20 mA signals for testing control system I/O or I/Ps
- Stimulate 4 to 20 mA signals for testing control system I/O
- Measure 4 to 20 mA signals with in-circuit measurement
- Simultaneously measure mA in-circuit with 24 V loop power for powering and testing transmitters
- Source mA output signals in a linear ramp or 25% step output
- Automatically change the 4 to 20 mA output for remote testing
- Power saving features, auto-off, backlight timeout extend battery testing



		171-3809	171-3810
		Fluke - 772	Fluke - 773
mA measurement	Range and Resolution	0 - 24.00 mA	0 - 24.00 mA
	Accuracy	0.2% + 2 counts	0.2% + 2 counts
mA source	Range	0 - 24.00 mA	0 - 24.00 mA
	Accuracy	0.2% + 2 counts	0.2% + 2 counts
mA simulate	Range	0 - 24.00 mA	0 - 24.00 mA
	Accuracy	0.2% + 2 counts	0.2% + 2 counts
Voltage source*	Range		0 - 10.00 V dc
	Accuracy		0.2% + 2 counts
Voltage measure*	Range		0 - 30.00 V dc
	Accuracy		0.2% + 2 counts

* Voltage source and Voltage measure only apply to 773

540760

Mfrs. List No.	Order Code	1+	Price Each
FLUKE-772	171-3809	1,215.00	
FLUKE-773	171-3810	1,740.00	

Multimeters - Analogue

Analogue Multimeter

AM8C



- Quick responding multimeter for home, car, boat and workshop
- High sensitivity taut band movement
- 5 functions/15 ranges
- Small compact size for portability
- Battery Test Function
- Special ranges to test household batteries
- Fused input
- Zero Adjust for Ohms
- Protective holster and battery included
- Designed to EN61010-1 300V Cat II

Specification	Ranges	Accuracy
DC Voltage	2.5V, 10V, 50V, 150V, 300V	±5%
AC Voltage	50V, 150V, 300V (50-60Hz)	±5%
DC Current	0.5mA, 10mA, 250mA	±5%
Resistance	20kR, 2MR	±5%
Battery Test	1.5V, 9V	±5%

Note: This instrument has integral test leads and GS38 compliant leads cannot be connected. Use of an alternative instrument is recommended for applications where GS38 compliant leads (fused test leads) are required.

489614

Mfrs. List No.	Order Code	1+	3+	+
AM8C	146-6447	45.95	42.50	--

Standard Calibration Charge	S	Price Each
NATA Calibration Charge	N	Price Each

Analogue Multimeter

METRAhit 1A and 2A



- Voltage measurement
- Current measurement
- Resistance measurement

AC / DC Voltage	0 to 500V
Input Resistance	AC: 4kΩ / DC: 20kΩ
AC / DC Current	0 to 5A (MetraHit 2A is 15A)
Resistance	1Ω to 1MΩ (4 ranges)
Level	-15 to +66dB (6 ranges)
Battery	1.5 V IEC LR 6 (AA type)

W=92, H=126, D=45mm
Weight = 0.25kg

412289

Mfrs. List No.	Order Code	1+	Price Each
MetraHit 1A	939-9437	509.09	
MetraHit 2A	939-9445	624.70	

Multimeters - Digital

Pen-Type Multimeter with Voltage Detect



- 1999 count LCD display
- Auto or manual ranging
- Audible and visual non-contact voltage detection
- Continuity and diode test
- Data and MAX hold
- Auto power off
- Safety Category: IEC1010-1 CATIII 600V

Function	Max. Range	Basic Accuracy
DC Voltage	600V	±(0.7%+2d)
AC Voltage	600V	±(0.8%+3d)
Resistance	20MΩ	±(1.0%+1d)

Physical Specifications

Power	2x AAA batteries
Dimensions (WxHxD)	38 x 208 x 29mm
Weight	110g

Includes: soft carry case/holster, probe test lead and alligator test lead.

468341.467962

Order Code	1+	5+	10+
133-9600	47.34	42.98	41.08

Probe Style DMM

DM 73C



196 x 29 x 35mm

The DM73C has the following feature set:

- 3400 counts digital display
- Analog bargraph
- 0.5% basic accuracy
- AC/DC Voltage measurements up to 600V
- Resistance measurements up to 34MΩhm
- Audible continuity test
- Diode test
- Data Hold
- Auto power off
- Ground lead with alligator clip
- EN61010-1 CAT III 300V / CAT II 600V

Multimeters - Digital - continued

Probe Style DMM - continued

DM 73C - continued

Functions	Maximum	Max.resolution	Accuracy
Voltage DC	600V	1mV	0.5% + 4
	300V	1mV	
Voltage AC	600V	0.1V	1.5% + 8
	300V	0.1V	
Resistance	34MΩ	1Ω	1.2% + 4
	4.2MΩ	1Ω	

Mftrs.			Price Each	
List No.	Order Code	1 +	3 +	+
DM73C	146-6453	126.35	116.88	- -
			Price Each	
	Standard Calibration Charge	\$	0	
	NATA Calibration Charge	N	0	

Compact Digital Multimeter



Includes: carry pouch, batteries and user manual.

- 3½ digit LCD display
- Integrated test leads with neat stowaway design
- Diode test and audible continuity test
- Data hold
- Low battery indication and overload protection

Function	Max. Range	Basic Accuracy
DC Voltage	600V	$\pm(0.5\% + 3d)$
AC Voltage	600V	$\pm(0.8\% + 4d)$
DC Current	400mA	$\pm(2.0\% + 3d)$
AC Current	400mA	$\pm(3.0\% + 4d)$
Resistance	40M Ω	$\pm(1.0\% + 3d)$
Frequency	100kHz	$\pm(0.5\% + 3d)$
Capacitance	100 μ F	$\pm(3.0\% + 3d)$

Physical Specifications

Power	2x SR44
Dimensions (WxHxD)	70 x 120 x 18mm
Weight	170g

	Price Each		
Order Code	1+	10+	25+
133-9601	25.73	23.78	22.12

Pocket DMM with Bargraph

72-4040



- 3½ digit, 3200 count display with analogue bargraph
- Autoranging
- Data hold, range hold
- Diode test and continuity tester
- Auto power off
- Overload protection
- Includes battery, test leads and owners manual

H=108, W=57, D=19mm

The 72-4040 is a small pocket multimeter supplied with a folding vinyl case and integral test leads

DC voltage	3V to 450V	Resistance	300R to 30MR
AC voltage	3V to 450V		

Mftrs.			Price Each
List No.	Order Code	1 +	+
72-4040	342-1491	71.76	--
			Price Each
	Standard Calibration Charge	S	0
	NATA Calibration Charge	N	0

Digital Multimeter with Phase Rotation

MM47



The MM47 is an ideal electricians multimeter. It has been designed to satisfy all the needs of a working electrician by including audible continuity, phase rotation, frequency and temperature measurement as well as the basic electrical functions. Current ranges can be provided by using a suitable clamp adaptor.

Display	3½ digit LCD display with automatic polarity and zero
AC Voltage	1mV to 600V (3 ranges)
DC Voltage	100µV to 600V (4 ranges)
Ohms	100mΩ to 2000MΩ
Frequency	10Hz - 40kHz autorange 1Hz resolution
Phase Rotation	
Indicator	80 - 480V, 45 to 450Hz
Temperature	-20 to 750°C, -4 to 1400°F (K-Type Probes)
Capacitance	0.01µF to 2mF (4 ranges)
Over Voltage	
Dimensions	147 x 70 x 39mm
Includes	Protective holster, battery, test leads, K-Type probe and user manual

Mftrs.			Price Each
List No.	Order Code	1 +	3 + 5 +
MARMM47	505-7851	250.18	245.13 233.75
			Price Each
Standard Calibration Charge		\$	0
NATA Calibration Charge		N	0

Palm Size Digital Multimeter

72-7765



H=137, W=76, D=35mm

72-7765	
DC Voltage	
Range	400mV, 4V, 40V, 400V, 500V
Accuracy	±(0.8% + 1)
AC Voltage	
Range	4V, 40V, 400V, 500V
Accuracy	±(1.2% + 3)
DC Current	
Range	400μA, 4000μA, 40mA, 400mA, 4A, 10A
Accuracy	±(1% + 2)
AC Current	
Range	400μA, 4000μA, 40mA, 400mA, 4A, 10A
Accuracy	±(1.5% + 5)
Resistance	
Range	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ
Accuracy	±(1% + 2)
Input Impedance	10MΩ

Mftrs. List No.	Order Code	1 +	+	+	+
72-7765	743-0558	41.60	--	--	--
		Price Each			
Standard Calibration Charge		S	0		
NATA Calibration Charge		N	0		

Palm Size Digital Multimeters

72-7770



H=137, W=76, D=35mm

DC Voltage	Range	Accuracy
AC Voltage	200mV, 2V, 20V, 200V, 500V	±(0.5%+2)
DC Current	200V, 500V	±(1.2%+10)
Resistance	2000μA, 20mA, 200mA, 10A	±(1%+2)
Input Impedance	200Ω, 2kΩ, 20kΩ, 200kΩ, 20MΩ, 200MΩ	±(0.08%+2)
	10MΩ	10MΩ
454606.454595		
		Price Each
Mftrs. List No.	Order Code	1 + + + +
72-7770	743-0566	22.42 -- -- -- --
		Price Each
Standard Calibration Charge		\$
NATA Calibration Charge		N

Pocket Size DMM 72-7935



W=58 H=108 D=12mm. Weight 62g

- 3999 digit
- AC/DC voltage measurement
- Resistance measurement
- Capacitance measurement
- Frequency measurement
- Auto ranging
- Duty cycle
- Diode check
- Continuity buzzer
- Relative mode
- Data hold
- Full icon display
- Sleep mode
- Low battery display
- Meets the IEC1010 CAT II 300V safety standard

AC Voltage	Range 4V/40V/400V/500V	Accuracy ±(1.2% + 3)
DC Voltage	400mV/4V/40V/400V/500V	±(0.8% + 1)
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ	±(1% + 2)
Capacitance	4nF/40nF/400nF/4μF/40μF/200μF	±(4% + 3)
Frequency	10Hz - 100kHz	±(0.5% + 3)
Power	3V Battery (CR2032)	

Supplied with: test lead, battery, manual, vinyl holder.

414619.381283

Description	Mfrs. List No.	Order Code	1+	+	+	+
Pocket DMM	72-7935	918-3647	39.13	--	--	--
			Price Each			
Standard Calibration Charge	S					
NATA Calibration Charge	N					

Digital Multimeter 72-7925



W=83 H=172 D=38mm. Weight 310g

AC Voltage	Range 2V/20V/200V/750V	Accuracy ±(0.8% + 3)
DC Voltage	Range 200mV/2V/20V/200V/1000V	Accuracy ±(0.5% + 1)
AC Current	Range 2mA/200mA/20A	Accuracy ±(1% + 3)
DC Current	Range 2mA/200mA/20A	Accuracy ±(0.8% + 1)
Resistance	Range 200Ω/2kΩ/20kΩ/2MΩ/20MΩ	Accuracy ±(0.8% + 10)
Capacitance	Range 2nF/200nF/20μF	Accuracy ±(4% + 3)
Temperature	Range -40 to +1800°F	Accuracy ±(2% + 8)
Frequency	Range 2kHz/20kHz	Accuracy ±(1.5% + 5)
General	Power 9V Battery (6F22)	

- 1999 digit display
- AC/DC voltage measurement
- AC/DC current measurement
- Resistance measurement
- Capacitance measurement
- Temperature measurement (°F only)
- Frequency measurement
- Diode measurement
- Continuity buzzer
- Transistor
- Sleep mode
- Low battery display
- Meets the IEC1010 CAT II 600V safety standard

Supplied with: test lead, battery, manual, point contact temperature probe, holster.

414620.403321

Description	Mfrs. List No.	Order Code	1+	+	+	+
Digital Multimeter	72-7925	918-3663	72.07	--	--	--
			Price Each			
Standard Calibration Charge	S					
NATA Calibration Charge	N					

Digital Multimeter 72-7930



W=88 H=179 D=39mm. Weight 62g

AC Voltage	Range 2V/20V/200V/1000V	Accuracy ±(0.8% + 3)
DC Voltage	Range 200mV/2V/20V/200V/1000V	Accuracy ±(0.5% + 1)
AC Current	Range 2mA/200mA/20A	Accuracy ±(1% + 3)
DC Current	Range 2mA/200mA/20A	Accuracy ±(0.8% + 1)
Resistance	Range 200Ω/2kΩ/20kΩ/2MΩ/20MΩ	Accuracy ±(0.8% + 1)
Capacitance	Range 2nF/200nF/100μF	Accuracy ±(4% + 3)
Temperature	Range -40 to 538°C	Accuracy ±(1% + 3)
Frequency	Range 2kHz/20kHz	Accuracy ±(1.5% + 5)
General	Power 9V Battery (6F22)	

- 1999 digit display
- AC/DC voltage measurement
- AC/DC current measurement
- Resistance measurement
- Capacitance measurement
- Temperature measurement (°F only)
- Frequency measurement
- Diode test
- Continuity buzzer
- Transistor
- Data hold
- Full icon display
- Sleep mode
- Low battery display
- Meets IEC1010 safety standards CAT III 600V and CAT II 1000V

Supplied with: test lead, battery, manual, test clip, multi-purpose socket, holster.

414621.381284

Description	Mfrs. List No.	Order Code	1+	+	+	+
Digital Multimeter	72-7930.1	918-3655	88.93	--	--	--
			Price Each			
Standard Calibration Charge	S					
NATA Calibration Charge	N					

Digital Multimeters 72-7720 and 72-7725



H=165, W=83, D=32mm



H=165, W=83, D=32mm

Full function multimeter offers a variety of ranges for every service application. Rugged overmolded housing stands up to the daily rigors of field service use, and large backlit LCD display is easily read from several feet away. Measures AC/DC voltage, AC/DC current, resistance and capacitance, the 72-7725 also measures frequency and temperature. 3-1/2 digit, 1999 count display features 7/8" digits for easy at-a-glance reading.

- Continuity buzzer
- Data hold
- Full icon display
- Sleep mode
- Low battery display
- Included standard test leads, plus separate short leads for accurate capacitance checking
- Includes standard 9V battery and owners manual
- Meets 1000V CATII standards
- 72-7725 extra features**
 - Temperature measurement (°C / °F)
 - Frequency measurement

	72-7720	72-7725
DC Voltage		
Range	200mV, 2V, 20V, 200V, 1000V	200mV, 2V, 20V, 200V, 1000V
Accuracy	±(0.5% + 1)	±(0.5% + 1)
AC Voltage		
Range	200mV, 2V, 20V, 200V, 750V	2V, 20V, 200V, 750V
Accuracy	±(0.8% + 3)	±(0.8% + 3)
DC Current		
Range	20μA, 2mA, 200mA, 20A	20mA, 200mA, 20A
Accuracy	±(0.8% + 1)	±(0.8% + 1)

Multimeters - Digital - continued

Digital Multimeters - continued

72-7720 and 72-7725 - continued

AC Current		
Range	200μA, 2mA, 20mA, 200mA, 20A	20mA, 200mA, 20A
Accuracy	±(1%+3)	±(1%+3)
Resistance		
Range	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ, 200MΩ	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ, 200MΩ
Accuracy	±(0.8%+1)	±(0.8%+1)
Capacitance		
Range	2nF, 20nF, 2μF, 100μF	20nF, 200nF, 2μF, 100μF
Accuracy	±(4%+3)	±(4%+3)
Temperature		
Range		-40 - 1000°C, -40 - 1832°F
Accuracy		±(1%+3)
Frequency		
Range		2kHz - 20kHz
Accuracy		±(1.5%+5)
Input Impedance	10MΩ	10MΩ

347433.403296

Mfrs. List No.	Order Code	1 +	+	+
72-7720	743-0574	68.35	--	--
72-7725	743-0582	81.52	--	--
		Price Each		
Standard Calibration Charge		S		
NATA Calibration Charge		N		

Autoranging Multimeters

72-7735, 72-7740 and 72-7745



H=171, W=86, D=38mm



H=171, W=86, D=38mm



H=171, W=86, D=38mm

Full function multimeters that offer a variety of ranges for every service application. Rugged overmolded housing stands up to the daily rigors of field service use, and large LCD display is easily read from several feet away. Measures AC/DC voltage, AC/DC current, resistance, capacitance, frequency, temperature (72-7740 and 72-7745 only) and duty cycle. 3-3/4 digit, 3999 count display features 3/4" digits and numerous on-screen icons, for easy at-a-glance reading.

- Switchable auto/manual range
- Diode check
- Continuity buzzer
- Data hold
- Full icon display
- Relative mode
- Low battery display
- Included standard test leads, plus separate short leads for accurate capacitance checking
- Comes complete with standard 9V battery and owners manual
- Meets 600V CATIII, and 1000V CATII standards

72-7735 extra features

- RS232C

72-7740 extra features

- Sleep mode
- Temperature measurement (°C only)
- Thermocouple temperature probe

72-7745 extra features

- True RMS
- RS232C
- Display backlight
- Temperature measurement (°C only)
- Thermocouple temperature probe

DC Voltage	Gamme	Précision
AC Voltage	400mV, 4V, 40V, 400V, 1000V	±(0.8%+1)
Courant CA	4V, 40V, 400V, 750V	±(1%+5)
Résistance	400μA, 4000μA, 40mA, 400mA, 4A, 10A	±(1%+2)
Capacité	400μA, 4000μA, 40mA, 400mA, 4A, 10A	±(1.5%+5)
Température (72-7740 et 72-7745)	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ	±(1%+2)
Fréquence	40nF, 400nF, 4μF, 40μF, 100μF	±(3%+5)
	-40°C - 1000°C	±(1%+3)
	10Hz - 10MHz	±(0.1%+3)

347434.403297

Mfrs.	Order Code	1 +	+	+
72-7735	743-0590	109.31	--	--
72-7740	743-0604	118.71	--	--
72-7745	743-0612	166.78	--	--

Multimeters with Analogue Bargraph

72-7755 and 72-7760



H=203, W=102, D=44mm



H=203, W=102, D=44mm

Rugged professional grade multimeter offers a complete set of ranges for every service application, including frequency and temperature (72-7755 only). Optical RS-232 interface allows datalogging with a PC, while safely keeping components isolated. Rugged moulded housing includes a specially designed holster to stand up to the daily rigours of field service use. Large backlit LCD display is easily read from several feet away. Measures AC/DC voltage, AC/DC current, resistance, capacitance, temperature (72-7755 only), RPM (72-7755 only) and frequency. 3-3/4 digit, 3999 (extended accuracy of a 7999 count display for 72-7760) count backlit display features 7/8" digits and numerous on-screen icons, for easy at-a-glance reading

- Switchable auto/manual range
- Diode check
- Continuity buzzer
- Min/max mode
- Relative mode
- Data hold
- Sleep mode
- Included standard test leads, plus separate short leads for accurate capacitance checking
- Includes 4' opto-coupled RS-232 cable with female DB9 connector and datalogging software

- Comes complete with standard 9V battery and owners manual
- Meets 600V CATIII, and 1000V CATII standards

72-7755 extra features

- RPM measurement
- Temperature measurement (°C only)
- Includes thermocouple temperature probe

72-7760 extra features

- True RMS AC measurement
- Peak/min/max mode
- Max/min/average mode

	72-7755	72-7760
DC Voltage		
Range	400mV, 4V, 40V, 400V, 1000V	80mV, 800mV, 8V, 80V, 800V, 1000V
Accuracy	±(0.8%+1)	±(0.05%+10)
AC Voltage		
Range	4V, 40V, 400V, 750V	800mV, 8V, 80V, 800V, 1000V
Accuracy	±(1%+5)	±(0.8%+20)
DC Current		
Range	400μA, 4000μA, 40mA, 400mA, 10A	80mA, 800mA, 8A, 10A
Accuracy	±(1%+2)	±(0.2%+40)
AC Current		
Range	400μA, 4000μA, 40mA, 400mA, 10A	80mA, 800mA, 8A, 10A
Accuracy	±(1.5%+5)	±(0.5%+40)
Resistance		
Range	400Ω, 4KΩ, 40KΩ, 400KΩ, 4MΩ, 40MΩ	800Ω, 8KΩ, 80KΩ, 800KΩ, 8MΩ, 80MΩ
Accuracy	±(1%+2)	±(0.3%+40)
Capacitance		
Range	4nF, 40nF, 400nF, 4μF, 40μF, 400μF, 4mF, 40mF	1nF, 10nF, 100nF, 1μF, 10μF, 100μF
Accuracy	±(4%+3)	±(2%+3)
Temperature		
Range	-40°C~1000°C	
Accuracy	±(1%+3)	
Frequency		
Range	4kHz, 40kHz, 400kHz, 4MHz, 40MHz, 400MHz	1kHz, 10kHz, 100kHz, 1MHz
Accuracy	±(0.1%+3)	±(0.02%+1)
RPM		
Range	40k RMP	
Accuracy	±(0.1%+3)	
Input Impedance	10MΩ	10MΩ

347436.403298

Mfrs.	Order Code	1 +	+	+
72-7755	743-0639	184.04	--	--
72-7760	743-0647	327.88	--	--

Spotted an error?



Now you can update our product information online. Simply search for the order code at au.element14.com and look for this logo to notify us of an error.

Autoranging Multimeter with RS-232

72-7750



H=171, W=86, D=38mm

- Comes complete with standard 9V battery and owners manual
- Meets 600V CATIII, and 1000V CATII standards

DC Voltage	Resistance
Range 600mV, 6V, 60V, 600V, 1000V	Range 600Ω, 6kΩ, 60kΩ, 600kΩ, 6MΩ, 60MΩ
Accuracy ±(0.5%+3)	Accuracy ±(1%+2)
AC Voltage	Capacitance
Range 600mV, 6V, 60V, 600V, 1000V	Range 6nF, 60nF, 600nF, 6μF, 60μF, 600μF, 6mF
Accuracy ±(1%+2)	Accuracy ±(3%+5)
DC Current	Temperature
Range 60mA, 600mA, 10A	Range -40°C - 1000°C
Accuracy ±(1.2%+3)	Accuracy ±(1%+3)
AC Current	Frequency
Range 60mA, 600mA, 10A	Range 6kHz, 60kHz, 600kHz, 6MHz, 60MHz
Accuracy ±(2%+5)	Accuracy ±(0.05%+3)
	Input Impedance 10MΩ

347435

Mfrs.	Order Code	1+	25+	100+	+
List No.					
72-7750	743-0620	150.56	146.02	141.78	--

TRMS Multimeter with USB Interface

72-7730



W=93 H=200 D=40mm. Weight 384g

Full function multimeter offers a variety of ranges for every service application, the accuracy of a 19,999 count display, and an optically isolated USB interface. It measures AC/DC voltage, AC/DC current, resistance, capacitance, temperature, frequency and duty cycle. Triple display features 12mm primary digits and dual 6mm secondary displays, plus an analogue bargraph and numerous on screen icons.

- True RMS measurement
- AC+DC measurement
- Selectable auto/manual range
- Data logging and data recall
- Peak hold and Data hold
- Max/min mode and Relative modes
- 4 - 20mA current loop measurement
- Dual level backlit display
- 600V CAT4 and 1000V CAT 3
- Supplied with 100mm opto-coupled USB cable, Data logging software, Standard test leads, Short clip leads for accurate capacitance measurements, Alligator clip adaptors, 9V battery, Soft case and detailed instruction manual



	Range	Accuracy
DC Voltage	200mV, 2V, 20V, 200V, 1000V	± (0.05% + 5d)
AC Voltage	2V, 20V, 200V, 1000V	± (0.6% + 40d)
DC Current	200μA, 2mA, 20mA, 200mA, 10A	± (0.1% + 15d)
AC Current	200μA, 2mA, 20mA, 200mA, 10A	± (1.8% + 15d)
Resistance	200R, 2kR, 20kR, 200kR, 2MR, 20MR	± (0.4% + 20d)
Capacitance	20nF, 200nF, 2μF, 20μF, 200μF, 2mF, 20mF	± (1.2% + 20d)
Temperature	-40°C to 1000°C	± (1.0% + 30d)
Frequency	20Hz, 200Hz, 2kHz, 20kHz, 200kHz, 2MHz, 20MHz, 200MHz	± (0.1% + 15d)
Duty Cycle	10% to 90%	± (1.0% + 30d)
Current Loop	4-20mA displays 0 - 100%	± (1% + 50d)
Input Impedance	10MR (2.5GΩ on 200mV range)	

448303.460892

Mfrs.	Order Code	1+	+	+	+
List No.					
72-7730	128-3642	275.30	--	--	--

Standard Calibration Charge	\$
-----------------------------	----

TRMS Multimeter with USB Data Logging



- 40,000 count LCD display with bargraph
- Full icon display and dual backlight
- TRMS measurement
- Autoranging / manual range selection
- AC/DC voltage and current measurement
- Resistance and capacitance measurement
- Frequency and duty cycle measurement
- °C/°F temperature measurement (K type probes)
- 4-20mA measurement (0-100%)
- Min/Max/Relative modes
- Data and peak hold
- Continuity buzzer and diode test

- USB interface and datalogging (software supplied)
- Sleep mode and low battery warning
- Supplied with 9V battery, carry bag, USB lead, temperature probe, test leads, test clips and user manual

Model: Model: 72-7732

A high performance, intelligent multimeter with a USB interface and 9999 record datalogging. The multimeter also has extensive measurement functions, high accuracy and TRMS measurement.

Range	Accuracy
DC Voltage 400mV, 4V, 40V, 400V, 1000V	±(0.025%+5)
AC Voltage 4V, 40V, 400V, 1000V	±(0.4%+30)
DC / AC Current 400μA, 4000μA, 40mA, 400mA, 10A	±(0.1%+15)
Resistance 400Ω, 4KΩ, 40KΩ, 400KΩ, 4MΩ, 40MΩ	±(0.3%+8)
Capacitance 40nF, 400nF, 4μF, 40μF, 400μF, 4mF, 40mF	±(1%+20)
Temperature	±(1%)
Frequency 40Hz to 400MHz	±(1%+30)
Data Logging 9999 Records	
Input Impedance 10MΩ	
Dimensions 93x200x40mm (WxHxD)	
Weight 384g	

510034.509485

Description	Order Code	Price Each
	156-3719	446.07

Pocket Digital Multimeters

PM5X Series



- Small meter with a large measurement capability
- Large oversize LCD display
- AutoTect™ directs the meter to know if its measuring AC Volts, DC Volts or Resistance
- VoltTect™ built-in non-contact voltage detector
- Complete user protection with full CAT III safety ratings

Very compact digital multimeters that will easily fit in a shirt pocket. They are only 1cm thick and weigh 85g. Each powerful DMM is fully auto-ranging, has an oversized easy-to-read LCD display and is loaded with measurements, functions and features.

	PM51A	PM53A	PM55A
Resolution (counts)	4000	6000	6000
Fully auto ranging	●	●	●
Diode test	●	●	●
Continuity with beeper	●	●	●
AutoTect auto function switch	●	●	●
VoltTect non-contact voltage detector	●	●	●
Holster/Carrying case	●	●	●

PM51A Ranges and Accuracy	Accuracy
DC voltage	±(1.0% + 2 digits)
400mV	± (2.0% + 2 digits)
4V, 40V, 400V	±(2.5% + 4 digits)
600V	± (2.0% + 5 digits)
AC voltage	±(3.0% + 5 digits)
4V, 40V, 400V (50 - 60Hz)	±(3.5% + 5 digits)
4V, 40V, 400V (60 - 500Hz)	± (3.5% + 6 digits)
600V (50 - 500Hz)	±(1.5% + 6 digits)
Capacitance*	± (1.0% + 4 digits)
500nF, 5μF, 50μF, 500μF, 3000μF	±(1.5% + 4 digits)
Resistance	±(2.5% + 4 digits)
400Ω	± (0.5% + 4 digits)
4kΩ, 40kΩ, 400kΩ	
4MΩ	
40MΩ	
Frequency	
400Hz - 1MHz	

PM53A and PM55A Ranges and Accuracy	Accuracy
DC voltage	±(0.5% + 3 digits)
6V	± (1.0% + 5 digits)
450V (PM53 only)	±(1.2% + 5 digits)
600V (PM55 only)	1.5% + 5 digits (hi-Z only)
AC voltage	± (1.5% + 5 digits)
6V, 60V, 450V (50 - 60Hz)	

Multimeters - Digital - continued

Pocket Digital Multimeters - continued

PM5X Series - continued

PM53A and PM55A Ranges and Accuracy

	Range	Accuracy
Capacitance (PM53) *	100nF, 1μF, 10μF, 50μF, 500μF, 3000μF	± (3.5% + 6 digits)
Capacitance (PM55) *	100nF, 1μF, 10μF, 100μF, 2000μF	± (3.5% + 6 digits)
Resistance	600Ω (PM55 only)	± (2.0% + 6 digits)
	6kΩ	± (1.5% + 6 digits)
	60kΩ, 600kΩ	± (1.0% + 4 digits)
	6MΩ	± (2.0% + 4 digits)
Frequency (PM53)	100 Hz, 1 kHz, 10 kHz, 400 kHz, 1 MHz	± (0.5% + 4 digits)
Frequency (PM55)	10 Hz - 999.9 Hz	± (0.5% + 4 digits)
DC current	400μA	± (1.5% + 3 digits)
	2000μA	± (1.2% + 3 digits)
AC current	400μA	± (2.0% + 3 digits)
	2000μA	± (1.5% + 4 digits)

489624.503781



38XR-A

The XR series of multimeters is designed for electronic, electrical, plant maintenance and HVAC use. Three models are true-rms: 34XR-A, 37XR-A and 38XR-A. Two are average responding, 30XR-A and 33XR-A. All five meters have a Magne-Grip Holster with magnetic hanging strap that secures the meter to a convenient steel surface, freeing both hands for work.

30XR-A: Has all the basic functions for automotive, residential and education applications.

33XR-A: Gives the contractor and field service technician all the essential measurement functions they need in a rugged package.

34XR-A: True RMS with temperature and backlight. Ideal for contractors and field service technicians.

37XR-A: True RMS meter for electronics troubleshooting at the bench or job site. The highest accuracy meter in the XR series.

38XR-A: True RMS digital multimeter with optical PC interface.

All models come with the following included accessories:

- Test leads with threaded alligator clips (TL36)
 - Magne-Grip™ Holster with magnetic hanging strap
 - 9 V battery, spare fuse, operators manual
- In addition the 33XR-A, 34XR-A and 38XR-A include:**
- Temperature adaptor (XR-TA)
 - Type K thermocouple probe (TP255)

Model	30XR-A	33XR-A	34XR-A	37XR-A	38XR-A
True RMS			●	●	●
Auto-ranging			●	●	●
Bright Blue Backlight			●	●	●
Min/Max		●	●	●	●
Average		●	●	●	●
Relative & Peak Hold		●	●	●	●
Data Hold		●	●	●	●
Range Hold		●	●	●	●
Auto Power Off		●	●	●	●
RS232 PC Interface			●	●	●
LCD Digits	1999	3999	3999	10000	10000
LCD Bargraph	--	41-segment	41-segment	41-segment	41-segment
Basic Accuracy	1%	0.7%	0.5%	0.1%	0.25%
Measurement Ranges					
AC Voltage	600V	750V	750V	750V	750V
DC Voltage	600V	1000V	1000V	1000V	1000V
AC/DC Current	10A	10A	10A	10A	10A
Resistance	20MΩ	4MΩ	40MΩ	40MΩ	40MΩ
Capacitance	200μF	4mF	400μF	400μF	400μF
Temperature	--	-20 to 1000°C	-20 to 1000°C	-20 to 1300°C	--
Frequency	--	0 - 40 MHz	0 - 40 MHz	0 - 40 MHz	0 - 40 MHz
Duty Cycle	--	0 - 90%	0 - 90%	0 - 90%	0 - 90%
dBm	--	--	--	-13 to +50 dBm	-13 to +50 dBm
Loop Current (4 - 20mA dc)	--	--	--	--	0 - 100%
Inductance	--	--	--	40 H	--
Non-Contact Voltage Detect	70 to 600V ac	--	--	--	--
Battery Test	1.5V, 9V	--	--	--	--
Logic Test	--	--	--	TTL & CMOS	--
Audible Continuity Test	●	●	●	●	●
Diode Test	●	●	●	●	●
Safety Category	300V CATIII	600V CATIII	600V CATIII	600V CATIII	600V CAT IV
	600V CATII	1000V CATII	1000V CATII	1000V CATII	1000V CAT III
Warranty	1 year	1 year	3 years	3 years	3 years

489627

Pocket-Sized Digital Multimeter

DM9C



- High-resolution, 4000-count autoranging
- 7 functions/23 ranges
- Battery Test Function with Go/NoGo LED indicator
- Industry standard test leads, safety rated
- Protective holster and battery included
- CAT II 600 V rated

W=78 H=140 D=50mm. Weight 215g

	Range	Accuracy
DC Voltage	400mV, 4V, 40V, 400V, 600V	± (0.8% + 3d)
AC Voltage	4V, 40V, 400V, 600V	± (1.3% + 5d)
DC Current	40, mA, 400mA, 10A	± (1.5% + 3d)
AC Current	40, mA, 400mA, 10A	± (1.5% + 3d)
Resistance	400R, 4kR, 40kR, 400kR, 4MR, 40MR	± (1.5% + 3d)
Continuity Test	<60Ω	
Diode test	0.5mA / 3.2V dc	

489630.502924

Mfrs.		Price Each		
List No.	Order Code	1+	3+	+
DM9C	146-6449	102.24	94.57	--
Price Each				
Standard Calibration Charge	S			

Digital Multimeters

XR Series



30XR-A

W=92 H=196 D=60mm.
Weight 400 - 426g

34XR-A



37XR-A

W=92 H=196 D=60mm.
Weight 450g

Compact Digital Multimeters

XP Series



5XP-A



35XP-A

Compact digital multimeters providing superior features and accuracy in a smaller form factor. The XP series features unique functions such as Voltect™ non-contact voltage (NCV) detection, temperature and Magne-Grip™ holster that frees both hands.

- VolTech™ non-contact voltage detection lets you instantly detect dangerous AC voltage
- Magne-Grip™ holster with magnetic strap frees both hands for work
- Battery Test (5XP-A only)
- Continuity Test
- Diode Test
- Min/Max and Data Hold
- CAT II 600V
- 2000 count resolution provides precise measurements
- Supplied with 5 language manual, holster, test leads and battery



35XP-A Additional features:

- TTL logic test for digital circuits
- Autoranging
- Integrated tilt stand for easy bench top use
- Temperature measurement capability to 1000°C/1832°F is good for HVAC and industrial applications
- Capacitance for testing motor run/test capacitance
- Frequency lets you test and verify control systems
- Cat III 300V, Cat II 600V & Cat I 1000V

	Range	Accuracy
DC Voltage	200mV, 2V, 20V, 200V, 1000V	±(1% rdg + 1 dgt) (5XP)
AC Voltage	200mV, 2V, 20V, 200V, 750V Resolution = 100µV	±(1.5% rdg + 5 dgt) Input Impedance = 10MΩ
DC Current	200µA, 2mA, 20mA, 200mA 2A (15XP only)	±(1.5% rdg + 1 dgt) ±(2% rdg + 3 dgt)
AC Current	200µA, 2mA, 20mA, 200mA 2A (15XP only) Resolution = 0.1µA	±(2% rdg + 5 dgt) ±(2.5% rdg + 5 dgt)
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ 2MΩ 20MΩ Resolution = 100mΩ	±(1% rdg + 4 dgt) ±(1.5% rdg + 4 dgt) ±(2% rdg + 5 dgt)

489618.503203

Mfrs. List No.	Order Code	1+	3+	+
5XP-A	146-6466	102.24	94.57	--
35XP-A	146-6468	203.32	188.07	--
		Price Each		
Standard Calibration Charge		S		

Heavy Duty Handheld Digital Multimeter HD160C



The HD160C is designed for professional use in harsh environments. The meter is rugged and reliable in everyday heavy use applications. The meter is made using waterproof construction to prevent dirt, grime and moisture from entering the case. Built of tough, fire retardant thermoplastic resistant to grease and chemical spills, with all sensitive components shock-mounted for a drop resistant to at least 8ft. HD160C has an extended voltage measurement capability of 1500V dc and 1000V ac. The extended voltage ranges can withstand transients up to 12kV.

- Measures up to 1500 Vdc and 1000 Vac
- Rugged autoranging meter with **true rms**
- 4 digit LCD display, 9999 counts, with annunciators, menu features and 41 segment bargraph
- CAT IV 1000 V rated
- Special sealing for environment and water resistance - IP67 rated
- Constructed with drop-resistant housing and PCB mounting
- Measures **capacitance, temperature and frequency**
- 10,000 count resolution with bar graph
- Magne-Grip™ holster, frees both hands for work
- Digi-Glo™ bright backlight
- Continuity buzzer
- Typically 150 hours operation with 9V alkaline battery
- Auto power-down

Supplied with heavy duty CAT IV 1000V test leads with threaded alligator clips (TL1500), battery (in instrument), hex wrench in holster, holster with Magne-Grip flex strap, type K thermocouple probe (TP255), temperature adaptor (TA-1A) and user manual

	Maximum	Max. Resolution	Best Accuracy
DC Voltage	1500V	0.1mV	±(0.1% + 5)
AC Voltage	1000V	0.1mV	±(1.2% + 10)
DC Current	2A	0.01µA	±(0.5% + 5)
AC Current	2A	0.01µA	±(2.0% + 10)
Resistance	40MΩ	0.1Ω	±(0.5% + 8)
Capacitance	400µF	0.01nF	±(3.0% + 10)
Temperature	-20°C to 1300°C	1°C	±(1.0% + 3°C)
Frequency	10MHz	0.01Hz	±(0.1% + 5)

488730.503499

Mfrs. List No.	Order Code	1+	3+	+
HD160C	146-1571	729.41	674.72	--
		Price Each		
Standard Calibration		S		
NATA Calibration		N		

Digital Multimeters

AVO300 Series



W=82 H=182 D=55mm.
Weight 375g

Tough compact instruments designed for the contracting electrician, but are also suitable for a wide range of applications and users. Both instruments offer a range of measurement modes for AC and DC applications, resistance and current measurement. The AVO300 series multimeters have tough rubber armoured cases offering the maximum amount of protection from the extreme use found in modern industrial environments. They draw on extensive experience of Megger engineers in designing safe reliable instruments for the electrical industry. Neither of the instruments are burdened with functions that never get used. This keeps the instruments simple to operate without the continued need to refer to the user manual.

- Designed for Electricians
- Fully auto ranging
- Large display characters
- Separate battery and fuse cover
- Data hold and Min/Max store
- IEC 61010-1 CATIII 600 V



	AVO300	AVO310		AVO300	AVO310
Fast continuity buzzer	●	●	Tough rubber armoured case	●	●
Auto-ranging	●	●	Integral stand / hanger	●	●
Data Hold	●	●	Probe holder	●	●
Max / Min	●	●	Auto power down	●	●
Backlight	●	●	Battery low warning	●	●

	Measurement Ranges	Resolution	Accuracy
DC Voltage	400mV, 4V, 40V, 400V, 1000V	0.1mV, 1mV, 10mV, 100mV, 1V	0.8% ± 2 digits
AC Voltage	400mV*, 4V, 40V, 400V, 1000V	0.1mV, 1mV, 10mV, 100mV, 1V	1.0% ± 5 digits
DC Current	400µA, 4mA, 40mA, 400mA, 10A	400µA, 4mA, 40mA, 400mA, 10A	1.0% ± 3 digits
AC Current	400µA, 4mA, 40mA, 400mA, 10A	400µA, 4mA, 40mA, 400mA, 10A	1.5% ± 5 digits
Resistance	400R, 4kR, 40kR, 400kR, 4MR, 40MR	0.1R, 1R, 10R, 100R, 1kR, 10kR	0.8% ± 2 digits
Diode Test	0.3mA / 1.5V (AVO300) 1mA / 3V (AVO310)	1mV 1mV	+10% ± 5 digits +10% ± 5 digits

Continuity **AVO300:** <10Ω to 30Ω. 0.3mA. **AVO310:** <35Ω. 1.5mA.
* AVO310 only

419230.428558

Description	Mfrs. List No.	Order Code	1+	3+	5+
DMM	AVO300-EN	108-6231	319.12	312.73	306.47
DMM	AVO310-EN	108-6232	356.96	349.80	342.80
Test Leads	6220-779	108-6237	92.16	85.13	81.37
Fused Test Leads	6220-789	108-6238	146.82	136.18	130.12

Digital Multimeters

HM Series

digimess®



The digimess® HM series is a comprehensive range of low cost general purpose hand held digital multimeters including 2000, 4000, & 6000 count models. As well as standard DC/AC volts, DC/AC current & resistance ranges, all models in the HM series include temperature, capacitance, diode test, continuity test & data hold. Additional features depending on the specific model include true rms, back lit LCD displays, frequency, duty cycle, max/min/rel value & transistor HFE (using the supplied multi-function adaptor). All units are supplied with integral rubber holsters, test leads, batteries, K type thermocouples & operating manuals. HM300 also includes a moulded carrying case, RS232 cable & software.

HM200	501-9850
No. of counts	2000
DC volts	200mV, 2V, 20V, 200V, 600V,
Accuracy	0.7%
AC volts	200mV, 2V, 20V, 200V / 600V
Accuracy	0.8% / 1.0%
DC Current	200µA, 2000µA, 20mA, 200mA / 2A, 10A
Accuracy	1.2% / 2.0%
AC Current	200µA, 2000µA, 20mA, 200mA / 2A / 10A
Accuracy	1.5% / 3.0%
Resistance	200, 2k, 20k, 2M, 20M
Accuracy	1.0%
Capacitance	20nF, 200nF, 2µF, 20µF, 200µF, 1000µF
Accuracy	4.0%
Frequency	N/A
Temperature	-20°C to 0°C 5.0%, 0°C to 400°C 1.0%, 400°C to 1000°C 2.0%
Miscellaneous	Data hold, max value, auto range, continuity, diode test, HFE, back lit LCD display, auto power off, multi-function adaptor for HFE, temperature & capacitance
Safety	IEC1010 CAT III 600V
Dimensions & Weight	158x74x31mm, 220g

Multimeters - Digital - continued

Digital Multimeters - continued

HM Series - continued

HM200	501-9850
No. of counts	4000
DC volts	400mV / 4V, 40V, 400V, 1000V,
Accuracy	1.0% / 0.5%
AC volts	400mV / 4V, 40V, 400V, 1000V
Accuracy	3.0% / 1.0%
DC Current	400µA, 4000µA, 40mA, 400mA, 4A, 10A
Accuracy	1.5%
AC Current	400µA, 4000µA, 40mA, 400mA, 4A, 10A
Accuracy	1.5%
Resistance	400, 4k, 40k, 400k, 4M / 40M
Accuracy	0.5% / 1.5%
Capacitance	50nF, 500nF, 5µF, 50µF, 100µF
Accuracy	3.0%
Frequency	50Hz, 500Hz, 5kHz, 50kHz, 100kHz 0.1% duty cycle
Temperature	-55°C to 0°C 9.0%, 1°C to 4000°C 2.0%, 401°C to 1000°C 2.0%
Miscellaneous	Data hold, rel value, auto/manual range, continuity, diode test, auto power off, wrong connection protection, multi-function adaptor for temperature & capacitance

Safety

IEC1010 CAT III 600V
IEC1010 CAT II 1000V

Dimensions & Weight

185x85x38mm, 380g

HM300	501-9862
No. of counts	6000
DC volts	600mV, 6V, 60V, 600V / 1000V
Accuracy	0.5% / 0.8%
AC volts	600mV / 6V, 60V, 600V / 700V
Accuracy	1.0% / 0.8% / 1.0%
DC Current	600µA, 6000µA / 60mA, 600mA / 10A
Accuracy	0.8% / 1.2% / 1.5%
AC Current	600µA, 6000µA / 60mA, 600mA / 10A
Accuracy	1.0% / 1.5% / 2.0% TRMS
Resistance	600, 6k, 60k, 600k, 6M / 60M
Accuracy	1.0% / 1.5%
Capacitance	6nF / 60nF, 600nF, 6µF / 60µF, 600µF, 6mF
Accuracy	2.0% / 1.0% / 1.5%
Frequency	6kHz, 60kHz, 600kHz, 6MHz, to 10MHz 0.1%, 60MHz
Temperature	-40°C to -20°C ±2°C, -19°C to 350°C 0.5%, 351 to 1000°C 2%
Miscellaneous	Data hold, max/min value, auto/manual range, trms, continuity, diode test, back lit LCD display, auto power off, RS232 cable and software*, moulded carry case

Safety

IEC1010 CAT III 1000V

Dimensions & Weight

195x92x43mm, 380g

* Logic Driver not compatible with Windows XP

339426.343946

Mfrs.		Price Each		
List No.	Order Code	1+	2+	5+
HM100	501-9849	119.67	113.60	109.80
HM200	501-9850	202.17	192.06	185.73
HM300	501-9862	326.00	309.57	299.45

117 Electrician's Multimeter



The Fluke-117 has the features and functions professional electricians need to get their job done. The Fluke-117 is the ideal meter for demanding settings like commercial buildings, hospitals, and schools. The ergonomic compact design make it easy to hold and use one-handed. Rely on the Fluke 117 to make your everyday measurements - up to 600 volts ac or dc, 40 MΩ, diode test and exceptionally fast continuity.

Note: 117 features are not available in all models.

Fluke-117 Key Features / Benefits:

VoltAlert - Non-contact voltage detection

- Sense the presence of ac voltage without carrying a second tool
- Quickly determine proper grounding with visual indicator
- Auto-V - Automatic volts detection
- Automatically determine AC/DC voltage---eliminating guesswork
- Correctly displays the voltage measurement without extra steps

LoZ - Low input impedance

- Reduces chance of false readings due to ghost voltage with variable impedance design
- Safer troubleshooting in high-energy 3-phase distribution panel with IEC 61010 ratings
- In capacitance mode too (with power-up enabled) - great for Telecoms

Other Fluke 117 features:

- Min/Max/Average to record signal fluctuations
- 20A measurements (30 seconds momentary, 10A continuous)
- CAT III 600 V safety rated
- Three-year Manufactures product warranty

449454

Mfrs.		Price Each		
Description	List No.	Order Code	1+	+
Electrician's Multimeter	FLUKE 117	127-1875	295.00	--

116 HVAC Multimeter with Thermometer



The new Fluke-116 HVAC Multimeter with built-in thermometer helps HVAC installers, contractors and technicians to quickly troubleshoot problems with HVAC equipment and flame sensors.

Fluke-116 HVAC Key Features / Benefits:

Measure superheat and subcooling.

- Measure key temperatures and pressures. Use the Fluke 116 with a Fluke Velcro Pipe Clamp thermocouple (included in kit) and the optional PV350 pressure module to determine superheat and sub-cooling values.
- Detect problems like a clogged filter drier, under-charge, overcharge, faulty metering device or improper airflow, liquid line restriction or insufficient water flow.

Troubleshoot the defrost control on a heat pump

- Check the temperature of the air coil
- Confirm when the defrost cycle starts and ends

Take temperature surveys

- Test out compressor heads, oil sumps, evaporator

coils and suction lines, plus discharge lines, condenser coils and the liquid line

Microamps measurement for testing flame sensors

- When a furnace flame will not stay lit, the Fluke 116 microamps measurement troubleshoots the flame rod circuit.

- LoZ reduces chance of false readings due to ghost voltage

Other Fluke 116 features include:

- Large display and white LED backlight to work in poorly lit areas
- Compact ergonomic design/one handed operation
- CAT III 600V safety rated

449294

Mfrs.		Price Each		
Description	List No.	Order Code	1+	3+
HVAC Multimeter	FLUKE 116	127-1877	349.00	322.83

Fluke 113 Digital Multimeter



The new 113 Digital Multimeter has the features needed to repair most electrical problems. This meter is simple to use. With features such as VCHEK™, from Fluke, which includes added measurement functions, backlight, conformance to the latest safety standards, and a much larger display that's easier to view, this new meter is a must-have for the utility user's toolbox.

Fluke 113 Digital Meter Includes:

Fluke 113 digital multimeter
TL75 test leads
One 9V battery
Printed user manual

L=167.1, W=85.1, D=46, Weight=404g

- VCHEK™ LoZ low impedance measurement function to simultaneously test for voltage or continuity
- True-rms for accurate ac measurements on non-linear loads
- A large backlit display allows for easy visibility in low-lit areas
- Record signal fluctuations using the min / max function
- Diode test for testing general-purpose germanium, silicon, and power diodes
- Integral holster with probe holders for easy storage
- Auto and Manual ranging for added user functionality
- Meets Measurement Category CAT III 600V and Category IV 300V standards for a higher level of safety
- The optional TPAK magnetic hanger allows the user hands-free flexibility

Measuring Range	Resolution	Temperature
Capacitance 1µF to 999µF	Capacitance 1µF to 1nF	Operating Range -10°C to +50°C
Resistance 600R to 60kR	Resistance 0.01R to 0.1R	Storage Range -40°C to +60°C
Voltage 6V to 600V	Voltage 0.001V to 0.1V	
Test Diode Range 2V		
Maximum Voltage 600V		
Display 3 3/4-digits, 6000 counts, updates 4/sec		
Relative Humidity 95 % to 30 °C, 75 % to 40 °C, 45 % to 50 °C		
Battery Type 9 Volt Alkaline, ANSI 1604A / IEC 6F22		
Battery Life Alkaline: 300 hours typical, without backlight		
Shock 1 Meter drop per IEC 61010-1-2001		
Vibration Per MIL-PRF-28800 for Class 2 instrument		
Safety UL 61010-1 (2004) and IEC/EN 61010-1 2nd Edition for measurement Category III, 600 V, EMC EN61326-1.		

* Between any terminal and earth ground

509931

Mfrs.		Price Each		
List No.	Order Code	1+	3+	+
FLUKE 113	157-8321	254.81	--	--
Accessories				
TL223.. Test Lead Set	431-4219	113.00	104.53	--
C50 Case	424-006	56.00	51.80	--
TPAK Magnetic Hanger	302-9578	62.00	57.35	--

TRMS Digital Multimeters 114 and 115



W=84 H=167 D=46mm. Weight 550g

The **114 Electrical Multimeter** is ideal for electrical troubleshooting and straightforward "go/no-go" testing in residential/commercial electrical testing. It has all the basic functions plus a special feature to prevent false readings caused by ghost voltage.

The **115 Field Service Multimeter** is optimised for electrical and electronic testing in field service, industrial, and applications where more than basic functionality (such as measurement of ac/dc current) simplifies working.

- True RMS AC measurements
- Large 6000 count display with white LED backlight
- Analogue bargraph
- Auto/Manual ranging
- MIN/MAX/AVG functions
- Data Hold
- Low battery indication
- Compact case with removable holster
- CAT III 600 V
- 400 hours operation from supplied 9V alkaline battery
- Supplied with user manual and TL75 test leads

Feature	114	115
AutoVolt: automatic ac/dc selection	●	●
LoZ: low input impedance to prevent ghost voltages	●	●
AC/DC Voltage Measurements	●	●
AC/DC Current Measurements	●	●
Resistance / Continuity	●	●
Frequency and Capacitance	●	●
Diode Test	●	●

	Maximum	Max. Resolution	Best Accuracy	
			114	115
DC Voltage	600V	1mV	±(0.5%+2)	±(0.5%+2)
AC Voltage	600V	1mV	±(1.0%+3)	±(1.0%+3)
DC Current	10A	1mA	±(1.0%+3)	±(1.0%+3)
AC Current	10A	10mA	±(1.5%+3)	±(1.5%+3)
Resistance	40MΩ	0.1Ω	±(0.9%+1)	±(0.9%+1)
Capacitance	10mF	1nF	±(1.9%+2)	±(1.9%+2)
Frequency	50kHz	0.01Hz	±(0.1%+2)	±(0.1%+2)

447402.460900

		Mfrs.	Price Each			
Description	List No.	Order Code	1+	3+	+	
TRMS DMM	114	127-4598	225.00	--	--	
TRMS DMM	115	127-4599	255.00	--	--	

		Price Each			
Accessories					
Carry Case	C50	424-006	56.00	51.80	--
Magnetic Hanger	TPAK	302-9578	62.00	57.35	--
Test Lead Set	TL223..	431-4219	113.00	104.53	--

		Price Each			
Standard Calibration Charge		S			
UKAS Calibration Charge		N			

Request a Quote

Got a target price in mind?
Challenge our quotes team today!

1300 361 005

au-quotes@element14.com

FLUKE



HVAC Multimeter 116



W=84 H=167 D=46mm. Weight 550g

The Fluke 116 was specifically designed for the HVAC professional. It has everything needed in an HVAC meter including temperature and microamp measurements to quickly troubleshoot problems with HVAC equipment and flame sensors. Use the Fluke 116 to test motor start and run capacitors up to 10,000 microfarads. Rely on the Fluke 116 to make your everyday measurements - up to 600 volts ac or dc, 40 MΩ, diode test and exceptionally fast continuity.

	Maximum	Max. Resolution	Best Accuracy	
DC Voltage	600V	1mV	±(0.5%+2)	±(0.5%+2)
AC Voltage	600V	1mV	±(1.0%+3)	±(1.0%+3)
Resistance	40MΩ	0.1Ω	±(0.9%+1)	±(0.9%+1)
Capacitance	10mF	1nF	±(1.9%+2)	±(1.9%+2)
Frequency	50kHz	0.01Hz	±(0.1%+2)	±(0.1%+2)

447432.460901

		Mfrs.	Price Each			
Description	List No.	Order Code	1+	3+	+	
HVAC Multimeter	116	127-4601	349.00	322.83	--	

		Price Each			
Accessories					
Carry Case	C50	424-006	56.00	51.80	--
Magnetic Hanger	TPAK	302-9578	62.00	57.35	--
Test Lead Set	TL223..	431-4219	113.00	104.53	--

		Price Each			
Standard Calibration Charge		S			
UKAS Calibration Charge		N			

Digital Multimeter with non-contact voltage 117



W=84 H=167 D=46mm. Weight 550g

- True RMS AC measurements
- Large 6000 count display with white LED backlight
- Analogue bargraph
- VoltAlert™ Technology for integrated non-contact voltage detection
- Current measurement 20A (30 seconds momentary; 10A continuous)
- Resistance, continuity, frequency and capacitance measurements
- LoZ: low input impedance to eliminate ghost (stray) voltage to make more accurate measurements
- AutoVolt: automatic ac/dc selection
- Auto/Manual ranging
- MIN/MAX/AVG functions
- Data Hold
- Low battery indication
- Diode Test
- Compact case with removable holster
- CAT III 600 V

The ideal meter for demanding settings like commercial buildings, hospitals and schools. The compact design makes it easy to hold and use one-handed. Integrated VoltAlert™ Technology allows testing for non-contact voltage directly from the meter to help get the job done faster.

FLUKE



Multimeters - Digital - continued

Digital Multimeter with non-contact voltage - continued

117 - continued

- 400 hours operation from supplied 9V alkaline battery
- Supplied with user manual and TL75 test leads

The **Electrician's Combo kit** (117/322) pairs the new Fluke 117 DMM with a Fluke 322 clamp meter and is the perfect solution to meet the demands of Electrical Professionals. The combo kit includes:

- 117 True-rms digital multimeter with non-contact voltage detection
- 322 Compact clamp meter (600V ac/dc, 400A ac, 400Ω)
- 4 mm lantern tip probe and test lead set
- ToolPak Magnetic Meter Hanging Strap
- C115 Deluxe carrying case with shoulder strap

	Maximum	Max. Resolution	Best Accuracy
DC Voltage	600V	1mV	±(0.5%+2)
AC Voltage	600V	1mV	±(1.0%+3)
DC Current	10A	1mA	±(1.0%+3)
AC Current	10A	10mA	±(1.5%+3)
Resistance	40MΩ	0.1Ω	±(0.9%+1)
Capacitance	10mF	1nF	±(1.9%+2)
Frequency	50kHz	0.01Hz	±(0.1%+2)

447497.460902

Mfrs.		Price Each			
Description	List No.	Order Code	1+	3+	+
Multimeter	117	127-4602	295.00	--	--
Combo Kit	117/322 KIT	127-4603	425.00	--	--
Accessories					
Carry Case	C50	424-006	56.00	51.80	--
Magnetic Hanger	TPAK	302-9578	62.00	57.35	--
Test Lead Set	TL223..	431-4219	113.00	104.53	--
			Price Each		
Standard Calibration Charge			S		
UKAS Calibration Charge			N		

Digital Multimeter

Fluke 77 Series IV

FLUKE


Versatile meters for field service or bench repair. Simple to use and has significant improvements over Fluke's original 70 Series with more measurement functions, conformance to the latest safety standards, and a much larger display that's easier to view.

- Large 6000 count display with 33 segment bar graph
- Rated at 10 Amps continuous (20A for 30 seconds)
- Backlight for work in dim areas
- Min / Max to record signal fluctuations
- Ergonomic overmolded housing with integrated probe holders
- Auto and Manual ranging
- IEC61010-1 1000V CATIII and 600V CATIV rated

W=90 H=185 D=43mm. Weight 420g

	Range	Resolution	Accuracy
AC Voltage	6V - 1000V	0.1mV	± (0.3% + 1 digits)
DC Voltage	600mV - 1000V	1.0mV	± (2.0% + 2 digits)
AC Current	60mA - 10A	0.01mA	± (1.5% + 2 digits)
DC Current	60mA - 10A	0.01mA	± (2.5% + 2 digits)
Resistance	600Ω - 50MR	0.1Ω	± (0.5% + 1 digits)
Capacitance	1nF - 9999μF	1nF	± (1.2% + 2 digits)
Frequency	99.9Hz - 99.9kHz	0.01 Hz	± (0.1% + 1 digits)
Battery life	400 hours typical		

460557.460540

Mfrs.		Price Each			
Description	List No.	Order Code	1+	3+	+
Digital Multimeter	77IV	132-7552	485.00	448.63	--
			Price Each		
Standard Calibration Charge			S		
NATA Calibration Charge			N		

Digital Multimeters

170 Series

FLUKE


H=183, W=90, D=43

The three models of the new 170 Series are the new benchmarks for the general-purpose multimeters. There three models: the 175, 177 and the 179 set the standard with a combination of precision, features, ease-of-use, safety and reliability.

All models offer true RMS AC voltage and current readings, 6000-count resolution, min-max-average recording, as well as frequency and capacitance ranges. Despite all of these and many other useful features, the 170 Series remains easy to use. The ergonomic case with integrated holster protects the units in rough and tough environments. To change the batteries, the case does not have to be opened as access to the batteries is through an easy to open battery door. All inputs are protected to **EN61010-1 CAT IV 600V/CAT III 1000V**. The Fluke 170 Series is supplied with TL75 test leads, installed 9V battery and user manual and comes with Fluke's unique lifetime warranty.

	175	177	179
Features			
True-rms measurements	●	●	●
Digital display counts, updates 4 times per second	●	●	●
Display backlight	●	●	●
Analog bargraph/segments, updates 40 times per second	●	●	●
Auto and manual ranging	●	●	●
Display hold and auto hold	●	●	●
Min-max-average recording mode with min/max alert	●	●	●
Temperature readings (bead thermocouple probe included)	●	●	●
Smoothing mode allows filtering of rapidly changing inputs	●	●	●
Audible continuity and diode test	●	●	●
Test lead alert warns for improper connection of test leads	●	●	●
Unsafe voltage alert warns for voltages above 30V	●	●	●
Low battery indication	●	●	●
Ergonomic case with integrated holster	●	●	●
Easy battery exchange without opening the complete case	●	●	●
Selectable sleep mode preserves battery life	●	●	●
Warranty	Lifetime	Lifetime	Lifetime
EN 61010-1 safety rating on all inputs	CAT III 1000V CAT IV 600V	CAT III 1000V CAT IV 600V	CAT III 1000V CAT IV 600V

Accuracies are best accuracies for each function

Battery life	Alkaline, 200 hrs typical
Weight	420g
Warranty	Lifetime

228196

		Price Each			
Mfrs. List No.	Order Code	1+	3+	+	
FLUKE 175	355-8678	349.00	--	--	
FLUKE 177	355-8680	399.00	--	--	
FLUKE 179	355-8691	460.00	--	--	
C101 Carry Case	947-9783	89.00	82.33	--	
Standard Calibration Charge		S			
NATA Calibration Charge		N			

Electronics Combo - Fluke 179/EDA2 Kit

FLUKE


Rugged 1000 V CAT III multimeter with backlight and industrial strength test lead probe kit in a lightweight, soft case to hold your meter and your accessories. Includes TL224 SureGrip™ silicone test leads, TL910 electronic test probes, AC280 SureGrip™ heavy duty hooks clips, an 80BK integrated temperature probe and ToolPak™, meter hanging accessory.

179/EDA2 Kit includes:

- Fluke 179 True-rms Digital Multimeter
- Fluke C35 Soft Case
- TL910 Electronic Test Probes
- TL224 SureGrip™ Silicone Test Leads
- AC280 SureGrip™ Heavy Duty Hook Clips
- Fluke 80BK Integrated Temperature Probe
- ToolPak™ Meter hanging accessory to position and hold meter to steel surfaces
- Limited lifetime warranty on the multimeter, 1-year on all accessories

242751

Mfrs.		Price Each			
List No.	Order Code	1+	3+	+	
179/EDA2	128-9674	499.00	--	--	
		Price Each			
Standard Calibration Charge		S			
NATA Calibration Charge		N			

Industrial Electricians Combo - Fluke 179/1AC-II Kit



Rugged 1000 V CAT III Fluke-179 multimeter with industrial strength test lead probe kit plus a non-contact voltage detector in a compact lightweight soft case. Includes AC220 SureGrip™ Alligator Clips, TP220 SureGrip™ Test Probes, TL224 SureGrip™ Silicone Test Leads and ToolPak, magnetic meter-hanger.

*product may differ with image shown

- 179/1AC-II Kit Includes:
- Fluke C35 Soft Case
 - ToolPak Magnetic Meter Hanger
 - AC220 SureGrip™ Alligator Clips
 - TP220 SureGrip™ Test Probes

- TL224 SureGrip™ Silicone Test Leads
- Fluke 1AC-A Non-Contact Voltage Detector (Australian Version)
- Limited lifetime warranty on the multimeter, 1-year on all accessories

242748

Mfrs. List No.	Order Code	1+	+	+
179/1ACII	128-9677	499.00	--	--

116/62 HVAC Technician's Combo Kit



For the complete solution to HVAC troubleshooting the extra value-packed HVAC Technician's Combo Kit, provides the ability to troubleshoot and solve problems more efficiently by providing all the needed accessories an HVAC professional would need in a compact carry case.

Includes:

- Fluke-116 HVAC Multimeter with Temperature and Microamps
- Fluke 62 Infrared Thermometer
- TL75 Hard Point Test Lead Set
- ToolPak Magnetic Meter Hanging Strap
- New! C115 Deluxe carrying case with shoulder strap
- New! Velcro Pipe clamp Thermocouple
- Fluke 80BK Integrated Temperature Probe
- Fluke 80AK Thermocouple Adapter
- 3-year product warranty on Fluke-116 DMM, 2-year warranty on Fluke-62 IR Thermometer and 1-year warranty on accessories

449300

Description	Mfrs. List No.	Order Code	1+	+	+
HVAC Technician's Combo Kit	FLUKE 116/62	127-1879	525.00	--	--

117/322 Electrician's Combo Kit



This combo kit pairs the new Fluke 117 DMM with a Fluke 322 clamp meter for productive and effective troubleshooting in one total solution, including the new C115 durable soft carrying case for protection and easy meter transportation.

Includes:

- Fluke 117 True-RMS digital multimeter with non-contact voltage detection
- 322 Compact clamp meter
- ToolPak Magnetic Meter Hanging Strap
- C115 deluxe soft carrying case with shoulder strap
- TL75 Hard Point test lead set
- 3-year warranty on Fluke-117 DMM; 2-year warranty on Fluke-322 Clamp meter and 1 year on accessories

449290

Description	Mfrs. List No.	Order Code	1+	+	+
Electrician's Combo Kit	FLUKE 117/322	127-1876	425.00	--	--

Fluke 27 II & 28 II Multimeters



The NEW Fluke 27 II and 28 II digital multimeters define a new standard for operating in harsh conditions with the features and accuracy to troubleshoot most electrical problems. Both meters have IP 67 (waterproof and dustproof) rating, extended operating temperature range of -15 °C to +55 °C (5 °F to 131 °F, -40 °C for up to 20 minutes) and 95 % humidity, and have been designed and tested to withstand a 3 m (10 ft) drop. The new Fluke 20 Series Multimeters are built to work in the toughest environments.

- Measure up to 1000 V ac and dc
- Measure up to 10 A (20 A for 30 seconds)
- 10,000 µF capacitance range
- Frequency to 200 kHz
- Extended ac voltage bandwidth-15 Hz to 20 kHz (28 II), 40 Hz to 30 kHz (27 II)
- Built in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument (28 II)
- Resistance, continuity and diode test
- Min/Max and average recording to capture variations automatically
- Peak min-max (28 II)
- Unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment (28 II)

Product Specifications:

	Fluke 27 II	Fluke 28 II
Agency Approvals: CSA, C-US, C-Tick, TUV Counts	Average Responding 6000	True-rms 6000 / 19,999
Voltage: 1000 V AC/DC	●	●
Current: 10 A AC/DC	●	●
Resistance: 50 MΩ	●	●
Continuity / Diode	●	●
Capacitance: 10,000 µF	●	●
Frequency 200kHz	●	●
Min/Max/Average, Hold, Auto and Manual Range	●	●
Peak Min/Max	●	●
Temperature: -40 °C to +1090 °C (Display °C or °F)	●	●
Low Pass Filter for working on variable speed drives	●	●
Safety Rating	●	●
Battery life	●	●
	CAT III 1000 V CAT IV 600 V	800 Hrs.

Fluke 27 II & 28 II Multimeters Include: Getting Started Manual (Printed), AA Batteries installed, Test leads, AC72 Alligator clips, 80BK-A Temperature Probe (Fluke 28-II), CD-ROM (16 language user manual & technical notes and application images)

549348

Mfrs. List No.	Order Code	Price Each
FLUKE-27-II	177-2093	775.00
FLUKE-28-II	177-2094	795.00

Digital Multimeter 80 Series V



Multimeters - Digital - continued

Digital Multimeter - continued

80 Series V - continued



The new Fluke 80 Series V has improved measurement functions, troubleshooting features, resolution and accuracy to solve more problems on motor drives, in plant automation, power distribution, and electro-mechanical equipment. The 80 Series V operates very similar to the classic 80 Series, but with more problem solving power, safety, convenience and impact protection.

- True-RMS voltage and current for accurate measurements on non linear signals
- Large display with analog bargraph and 2 level bright white backlight
- Auto and manual ranging for maximum flexibility
- Relative mode to remove test lead resistance from low ohms measurements
- Min-Max-Average recording with Min/Max Alert to capture variations automatically
- Touch Hold to capture stable readings avoiding noisy signals
- Audible continuity, diode test and duty cycle
- Input Alert
- Classic design with new removable holster with built in test lead and probe storage
- Improved selectable sleep mode for long battery life
- Easy battery and fuse exchange without opening the complete case

87V extra features:

- Selectable filter for accurate voltage and frequency measurements on motor drives
- Built-in thermometer
- Peak capture to record transients as fast as 250µs

Fluke 87V/E Industrial Electrician Combo Kit includes:

- 0.5 m heat resistant silicone test leads
- Removeable test probes with 4mm of exposed metal for use on industrial circuits
- Retractable long reach alligator clips
- Magnetic hanger to position and hold meter to steel surfaces
- Temperature probe
- Durable carrying case

H80M Holster

- Yellow holster for all 80 series DMMs (new as well as old)
- Hanging magnet
- Hook and loop straps
- General purpose hanger

Functions	83V			87V		
	Maximum range	Max resolution	Accuracy	Max resolution	Accuracy	
Voltage DC	1000V	0.1mV	±(0.1%+1)	10µV	±(0.05%+1)	
Voltage AC	1000V	0.1mV	±(0.5%+2)	10µV	±(0.7%+2)	
Current DC	10A	0.1µV	±(0.4%+2)	0.01µ	±(0.2%+2)	
Current AC	10A	0.1µV	±(1.2%+2)	0.01µ	±(1.0%+2)	
Resistance	50MΩ	0.1Ω	±(0.4%+1)	0.01Ω	±(0.2%+1)	
Conductance	60nS	0.01nS	±(1.0%+10)	0.001nS	±(1%+10)	
Capacitance	9999µF	0.01nF	±(1.0%+2)	0.01nF	±(1%+2)	
Frequency	>200kHz	0.01Hz	±(0.005%+1)	0.01Hz	±(0.005%+1)	
Temperature	-200 to 1090°C			0.1°C	1.0%	
80BK temperature probe	-40 to 260°C				2.2°C or 2%	347687

Mfrs.		Price Each			
List No.	Order Code	1+	3+	+	
83V	736-3486	699.00	646.58	--	
87V	736-3494	799.00	739.08	--	
87V/E2. Kit	125-0927	925.00	--	--	
H80M Holster	800-2223	67.00	61.98	--	
C101 Carry Case	947-9783	89.00	82.33	--	

Fluke 80V Series

FLUKE



- 0.05% DC Accuracy
- Built in thermometer lets you carry one less tool
- Large display digits na d2 level bright white backlight
- 10,000 uF capacitance range for components and motor caps
- MIN/MAX/AVG with peak capture to record transients as fast as 250
- Improved sleep mode for long battery life

Mfrs. List No.	Order Code	Price Each
87V/E2.	125-0927	925.00

Digital Logging Multimeters

Fluke 287 & Fluke 289

FLUKE



H=254 W=194 D=76mm. Weight 1kg



High performance industrial logging multimeters. Log data and display it graphically on the large display.

- Large 50,000 count 320x240 dot matrix display
- Logging function with TrendCapture for easy review of logged data
- Multiple readings per display
- True RMS measurements (AC and AC+DC)
- Info button for convenient on-board help
- Optical USB Communications interface for easy data transfer
- Internal memory allows up to 180 hours of logging
- Current measurement to 20A (30 seconds), 10A continuous
- Peak capture (records transients as fast as 250µs)
- Min/Max and Average functions with Time Stamp
- Protected to IP54
- All inputs are protected to EN61010-1 CAT III 1000V / CAT IV 600V
- UL, CSA and TUV listed

Fluke 289 Additional Features:

- Low pass filter for motor drive measurements
- Low impedance function prevents false "ghost voltage" readings
- 50Ω range for motor winding and low ohm measurements

Function	Measuring Ranges	Resolution	Accuracy
VDC	1000V	1µV	± (0.025%+5d)
VAC	1000V	1µV	± (0.4%+40d)
ADC	10A	0.01µA	± (0.15%+2d)
AAC	10A	0.01µA	± (0.7%+5d)
Resistance	500MR	0.01Ω	± (0.05%+2d)
Conductance	50nS	0.01nS	±(1.0%+10d)
Capacitance	100mF	0.001nF	± (1.0%+5d)
Frequency	1MHz	0.01Hz	± (0.005%+1d)
Temperature	-200°C to 1350°C	0.1°C	(1% + 1°C)

Accuracies are best accuracies for each function.

Supplied with TL71 silicone test leads, probe holder, 6x AA batteries (installed) and manual

289FVF - FlukeView Combo Kit: contains Fluke 289 and accessories as above plus; alligator clips, 80BK thermocouple, FlukeView forms software, data cable and a soft carry case.

TLK287 Test Lead Kit is designed for electronics designers, test and service technicians. The kit includes: spring tipped probes, micro-grabbers, mini alligator clips, leads and couplers.

TLK289 Test Lead Kit is designed for high-end industrial users.

The kit includes: SureGrip alligator clips, SureGrip grabbers, SureGrip hook clips, Suregrip industrial test probes, magnetic hanger, temperature adaptor with K-type thermocouple, soft carry case. Rated to 1000V CAT III.

477767.501419

Mfrs.		Price Each			
Description	List No.	Order Code	1+	3+	+
Multimeter	287	142-2691	999.00	--	--
Multimeter	289	142-2692	1,050.00	971.25	--
FlukeView Combo Kit	289/FVF	142-2693	1,195.00	1,105.38	--
Test Lead Kit	TLK287	150-3745	219.00	202.58	--
Test Lead Kit	TLK289	150-3746	219.00	202.58	--
Soft Case	FLUKE C280	177-2099	60.00		

Price Each			
Standard Calibration Charge	S		
UKAS Calibration Charge	N		

Fluke 233 Remote Display Digital Multimeter



The first Fluke digital multimeter with a detachable display is here. The 233 wireless remote DMM allows maintenance professionals to address an age-old problem - display positioning. The new Fluke 233 can be used for even the most common meter measurements and is especially suited for those situations where display viewing is challenging.

- True-rms ac voltage and current for accurate measurements on non-linear signals
- Measure up to 1000 V ac and dc
- Measure up to 10 A (20 A for 30 seconds)
- 10,000 μ F capacitance range
- Frequency to 50 kHz
- Built in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument
- Resistance, continuity and diode test

Wireless Range 30 Ft CAT III 1000 V CAT IV 600 V Size (H x W x L) cm 5.3 x 9.3 x 19.3 Weight 604 g

Fluke 233 Remote Display Multimeter Includes: Getting Started Manual (Printed), AA Batteries installed, Test leads, AC72 Alligator clips, 80BK-A Temperature Probe, CD-ROM (user manual & technical notes and application images)

549344

Mfrs.	Order Code	Price Each
List No.	1+	
FLUKE 233	177-2092	550.00

Insulation Multimeters

Model 1577 / 1587



W=275 H=200 D=100mm. Weight 3 kg

Combining a digital insulation tester with a full-featured, true RMS digital multimeter in a single, compact, handheld unit, which provides maximum versatility for both troubleshooting and preventative maintenance. Whether you work on motors, generators, cables, or switch gear, the Fluke 1587/1577 Insulation Multimeters are ideally suited to help you with your tasks and at a cost that is far less than buying the two products.

- Large backlit display for easy reading
- Auto power off
- EN61010-1 1000V CAT III / 600V CAT IV
- Input alert warns of incorrect connections
- Three year warranty
- Rugged utility hard case

Includes: hard case, test leads, crocodile clips, temperature probe (1587 only) and remote test probe.

Accessories:

- TPAK Magnetic Hanger (302-9578)

Multimeter Features

True RMS voltage and current measurement
Auto and manual ranging
Selectable filter for accurate measurements on motor drives
MIN / MAX recording
Diode Test
Temperature, capacitance and frequency measurement

Insulation Features

User selectable test voltages for many applications
Special remote control probe for easy and safe measurements
Auto discharge of capacitive voltage for added user protection
Live circuit detection prevents insulation tests if >30V is detected

Insulation Specifications	1577	1587
Measurement Range	0.1M Ω to 600M Ω	0.01M Ω to 2G Ω
Test Voltages	500V, 1000V	50V, 100V, 250V, 500V, 1000V
Test Voltage Accuracy	+20%, -0%	+20%, -0%
Short-circuit Test Current	1mA nominal	1mA nominal
Auto Discharge	Discharge time <0.5s for C = 1 μ F or less	
Maximum Capacitive Load	Up to 1 μ F load	Up to 1 μ F load

Other Functions	Maximum	Resolution	Accuracy
			1577 1587
DC Voltage	1000V	1 mV	$\pm(0.2\%+2d)$ $\pm(0.09\%+2d)$
AC Voltage	1000V	0.1 mV	$\pm(2\%+3d)$ $\pm(1\%+3d)$
DC Current	400 mA	0.01 mA	$\pm(1\%+2d)$ $\pm(0.2\%+2d)$

Other Functions	Maximum	Resolution	Accuracy
			1577 1587
AC Current	400 mA	0.01 mA	$\pm(2\%+2d)$ $\pm(1.5\%+2d)$
Resistance	50 M Ω	0.1 Ω	$\pm(1.2\%+2d)$ $\pm(0.9\%+2d)$
Capacitance	9999 μ F	1 nF	$\pm(1.2\%+2d)$ $\pm(0.1\%+1d)$
Frequency	99.99 kHz	0.01 Hz	$\pm(1\%+10\text{ digits})$
Temperature	-40 - 537 $^{\circ}$ C	0.1 $^{\circ}$ C	415767.429121

Description	Order Code	1+	3+	+
1577 Insulation Multimeter	948-7484	999.00	924.08	--
1587 Insulation Multimeter	948-7492	1,200.00	--	--
TPAK Magnetic Hanger	302-9578	62.00	57.35	--

Standard Calibration Charge	S	
NATA Calibration Charge	N	

Voltage Tester with LED Flashlight

LVD1



A portable flashlight with exclusive dual-sensitivity voltage detector, delivered in a 5 piece eye catching counter display.

- Bright white flash light illuminates working area
- Blue indicator means you're close
- Red indicator means you're at the source
- Detects voltage from 40V ac upwards
- Comes with a versatile clip to secure light to a pocket, hat or even a panel door

Voltage range 40V to 300V a.c.
Operating temperature to $^{\circ}$ C
Bulb life 100 000 hours
Power 1x battery (supplied)

H=22, W=18, D=74mm Weight=75g

339575.409236

Mfrs.	Order Code	1+	3+	+
List No.				
LVD1	800-2207	53.00	49.03	--

Instrument Holsters, Cases and Bags



A range of holsters, cases and bags for FLUKE instruments.

H110 Holster: Snap-on yellow holster with integral stand and probe/lead storage. Accepts the FLUKE ToolPak™ accessory for hanging.

H5 Holster: A rugged fabric holster with belt loop and lead storage.

C12A Soft Case: Zipped carry case with inside pocket and belt loop.

C50 Soft Case: Zipped carry case with inside pocket, belt loop and inside meter strap.

C90 Soft Case: Zipped carry case with padding and inside pocket.

C125/C781 Soft Case: Zipped carry case with detachable external accessory pouch.

C100 Hard Case: A tough polypropylene meter and accessory case.

C550 Tool Bag: A rugged test tool bag with manufactured from ballistic cloth and a steel reinforced frame. Includes a large pocket with 25 compartments.

Description	Mfrs. List No.	FLUKE Compatibility
Holster	H5	T3/T5
Soft Carry Case	C12A	10/12, 7-300/7-600, 705/707
Soft Carry Case	C50	110/111/112, 73/75 III, 27, 50S/50D, 51/52/53/54 II
Soft Carry Case	C90	175/177/179, 83/85/87 III, 73/77 III, 712/714/715/717, 50S/50D
Soft Carry Case	C125	183/185/187/189, 867B, 39/41B/123, 718/724/725
Soft Carry Case	C781	183/185/187/189, 867B, 39/41B/123, 718, 741B/743B/744
Tool Bag	C550	For multiple meters and accessories

Multimeters - Digital - continued

Instrument Holsters, Cases and Bags - continued

Mfrs. List No.	Order Code	Price Each
Holster H5.	874-164	48.79
Holster H6	828-3931	67.00
Soft Carry Case C12A	432-7720	44.00
Soft Carry Case C50	424-006	56.00
Soft Carry Case C90	424-018	55.00
Soft Carry Case C125	428-3650	62.00
Soft Carry Case C781	431-3914	103.00
Soft Carry Case FLUKE C280	177-2099	60.00
Tool Bag C550	428-3685	144.00

248378

Meter and Accessory Case

C1600



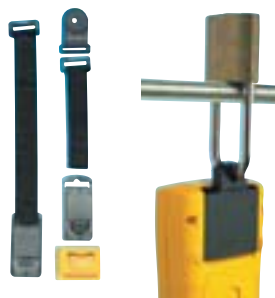
The C1600 is a general purpose carrying case that houses Fluke Test tools and accessories. It is large enough to fit additional tools that the engineer may wish to carry to the job.

- Deep interior large enough to hold and protect your gear and leaves room for accessories and other essentials
- Rubber gasket in lid seals out dust and keeps contents dry
- Lift out tray keeps everything organised
- Snap open compartment on top of lid for easy access to small parts
- Includes five hook and loop straps for test leads
- Lockable for added security
- Large carry handle for added comfort

339466

Mfrs. List No.	Order Code	1+	3+	+
C1600.	491-7224	88.00	81.40	--

ToolPak™ DMM Accessoires



ToolPak™

A multimeter hanging solution supplied as a kit which includes: 2x universal hanger clips, 2x lengths of hook and loop type straps and a strong magnetic insert. The components can be combined to meet most hanging requirements. Compatibility: Attaches to the back of the FLUKE 110/170/180 Series and 20/70 III series.

248370

Description	Order Code	1+	3+
ToolPak™	302-9578	62.00	57.35

Fluke Electronic Accessories



A range of electronic accessories designed for low energy test and measurement applications. These small, compact probes and leads are ideally suited for use with meters by an electronic technician or engineer to install, test, troubleshoot, and maintain low voltage and low current electronic equipment.

The **TL40** retractable tip test lead set is the ideal product to measure on hard to reach test points. The extra hard probe tips with sharp needlepoint tips can be adjusted to desired length from 0 to 76mm. **EN 61010-2-031 CAT II, 150V, 3A**

The **TL910** electronic test probes have a slender design that is comfortable to hold and allows accessibility to hard to reach test points. It comes with 5 sets of replaceable tips that includes 3 sets of spring loaded gold plated and 2 sets of stainless steel tips. **EN 61010-2-031 CAT IV, 600V:CAT III, 1000V, 3A**

TL75 is a pair of hard point test leads

The **TP920** test probe adapter kit offers 3 sets of push-on adapters and includes:

- 1 set of IC test clips adapters for probing integrated circuit leads without shorting adjacent leads
- 1 set of sharp, probe tip extenders for probing hard to reach test points
- 1 set of medium-sized alligator clips
- **EN 61010-2-031 CAT II, 300V/3A(5A For Croc. Clips)**

A multi-stacking, 4 mm banana plug patch cord is available.

The **TL970** hook and pincer test lead kit is a handy all-in-one kit that includes 3 pairs of 36-inch long, red and black, multi-stacking, 4 mm banana plug test leads terminated with 3 different style connectors:

- Mini-hooks that attach to component leads up to 1.5 mm diameter (also offered separately as TL940 mini-hook test leads).
- Mini-pincers for connecting to SMD devices and discrete component leads and opens to 23 mm (also offered separately as TL950 mini-pincer test leads).
- Micro-hooks that attach to component leads up to 1 mm diameter (also offered separately as TL960 Micro-Hook Test Leads).
- 30 V rms/5A (micro hooks 3A)

The **BP980** dual banana plug kit is a set of 5 pairs of red and black double 4 mm banana plugs with 3.17 mm diameter holes with set screws for mounting wires and components. 30 V rms/15A

The **H900** test lead holder offers a test lead hanging solution. This heavy duty holder has a durable and distinctive yellow powder coat finish with 10 slots that can hold a variety of test leads up to 0.320" in diameter.

232273

Mfrs. List No.	Order Code	1+	3+
TL40	389-0545	67.00	61.98
TL75	201-285	34.00	31.45
TL910	389-0557	105.00	97.13
TP920	389-0570	65.00	60.13
TL940	389-0612	36.00	33.30
TL960	389-0636	45.00	41.63
TL970	389-1290	149.00	137.83
H900	389-1318	36.00	33.30

Stray Voltage Adapter Test Lead Kit

TL225 SureGrip™



Eliminates false readings due to stray or ghost voltages caused by the capacity between wires. This is achieved by ensuring that there is a lower impedance across the input terminals of the meter. The low impedance is achieved without compromising the safety of the electrician.

- Ensures the meter has a low input impedance that eliminates stray voltages
- On energized wires, the meter will indicate the real voltage
- On non-energized circuits the meter will read close to zero (even if there are stray voltages)
- Can be used with all modern meters with standard input spacing
- Operating range 200 V to 1000 V AC
- **EN61010-1 CATIII 1000V, CATIV 600 V**
- One year warranty

Kit includes: SV225 Stray Voltage Eliminator, TL224 SureGrip™ Silicone Test Lead Set (right to straight), TP220 SureGrip™ Test Probe Set and C75 Accessory Case.

416655

Type	Order Code	1+	3+	+
TL225 Test Lead Set	101-8362	171.00	158.18	--

Multimeter Soft Carry Cases



A range of soft cases with zips for hand-held meters.

Available in three sizes:

Internal Dimensions (WxHxD):

Small: 150x100x35mm

Medium: 170x100x35mm

Large: 190x110x50mm

248859

Size	Order Code	1+	10+
Small	428-3879	18.95	18.33
Medium	428-3880	21.61	20.73
Large	428-3892	18.33	17.56

High Voltage Probe

FLUKE



Extends measurement to 6,000V DC or peak AC. Division ratio is 1,000 to 1. For use with an instrument having 10MΩ input impedance. Accuracy: ±1.0% DC; ±1% to 500 Hz AC; ±2% 500Hz to 1 kHz AC. Input Resistance: 75MΩ, nominal.

233705

Mfrs.		Price Each
List No.	Order Code	
FLUKE 80K-6	781-952	179.00

High Voltage Probe

72-3040

TENMA



The Tenma multiplier probe adapts most 10Mohm multimeters into a high voltage meter.

Maximum Working Voltage	40KV DC or AC Peak 28KV DC RMS (Hz)
Division Ratio	1000:1
Input Resistance	1000M Ohm
Accuracy	DC: ± 1% (1KV to 20KV), 2% (20KV to 40KV) AC: ±5 % (1KV to 28KV RMS, 50/60Hz)

337085

Mfrs.		Price Each
List No.	Order Code	1+ +
72-3040	490-8351	124.35 --

High Voltage Probe

To BS EN61010 40kV



Overall length=280
Handle length=95

- Suitable for measuring EHT rails
- Maximum input voltage 40kVdc or pk ac at 1000:1 division ratio
- Suitable for most multimeters (input resistance 10M)
- Moulded hard guard
- Hook style tip for hand free operation
- Supplied with 2m connection lead, terminated in 4mm plugs

BS EN61010 to 40kV dc or peak to ac to earth

Secondary voltage is derived from an over voltage category II primary supply

Input resistance	MΩ	Working voltage	40kVdc or pk ac, up to 300Hz 28kV RMS
Division ratio	1000:1±1% into 10MΩ 1000:1±6% into 1MΩ	Operating temperature	0°C to +50°C
Accuracy DC volt	±2% (1kV to 20kV) ±3% (20kV to 40kV)		

222348

Mfrs.		Price Each
List No.	Order Code	1+ 5+ 10+ 25+
TT-HVP 40	329-1285	234.86 233.24 230.04 194.98

Thermocouple Adaptor

80AK

FLUKE



- Adapts Type-K thermocouple mini-connector to dual banana plug inputs
- Suitable for low voltage applications (below 30V AC, 60V DC)

382569

Mfrs.		Price Each
List No.	Order Code	1+ 3+
80AK-A	335-7053	38.00 35.15

Tachometer Probe

A2108

compact



The Multimeter Probe will convert any digital multimeter into an accurate optical tachometer quickly and easily. This probe measures rpm optically or by using the optionally available Contact Adaptor, contact rpm & linear rate in metres/minute only can be measured. The A2108 is an ideal instrument for economic general purpose rpm checking with a more than adequate specification via any digital or analogue multimeter.

RPM overall range	60 to 60,000 rpm
2 ranges	6000 to 60,000 rpm
Resolution	±1 rpm
Accuracy	±1% fsd analogue output
Response time	Time between pulses - max. 1 m/s
Light source - LED Models	Red Visible LED
Optical Range	1 metre
Light source - Laser Models	1 mw 635nm Class II
Optical Range	2 metres
Voltage output	0-6 vdc both ranges
Connections	Coiled cable with 2 x 4mm plugs fitted

347189.410673

Mfrs.		Price Each
Description	List No.	Order Code 1+ 2+ +
Tachometer	A2108	506-1775 386.06 383.01 --

Multimeters - Application Specific

Intrinsically Safe Digital Multimeter

87V-Ex

Ex

FLUKE

True RMS



W=98 H=201 D=52mm.
Weight 624g

The Fluke 87V Ex is an intrinsically safe version of the most popular meter in the world: the Fluke 87V. It has measurement functions, troubleshooting features, plus the resolution and accuracy to solve problems on motor drives, in plant automation, power distribution and electromechanical equipment. Additionally, it has an intrinsically safe rating and ATEX certification for use in hazardous areas.

The 87V Ex has been developed for use both inside and outside hazardous zones without compromising performance or safety:

- Inside the zone it is a fully ATEX-certified DMM
- Outside the zone it can be used just like a standard Fluke 87V with full performance
- Unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment.

- ATEX safety rating for use in Zone 1 and Zone 2
- Large display with analog bargraph and 2 level bright white backlight
- Built-in thermometer
- True-RMS voltage and current for accurate measurements on non linear signals
- Selectable filter for accurate voltage and frequency measurements on motor drives
- 4½-digit mode for precise measurements (20,000 counts)
- Min-Max-Average recording with Min/Max Alert to capture variations automatically
- Touch Hold to capture stable readings avoiding noisy signals
- Peak capture to record transients as fast as 250µs
- Relative mode to remove test lead resistance from low ohms measurements
- Auto and manual ranging for maximum flexibility
- Input Alert provides audible warning against wrong use of input jacks
- Audible continuity, diode test and duty cycle
- Improved selectable sleep mode for long battery life
- Easy battery and fuse exchange without opening the complete case
- Conducting holster with built in test lead and probe storage

Functions	Maximum range	Max resolution	Accuracy
Voltage DC	1000V	10µV	±(0.05%+1)
Voltage AC	1000V	10µV	±(0.7%+2)
Current DC	10A	0.01µ	±(0.2%+2)
Current AC	10A	0.01µ	±(1.0%+2)
Resistance	50MΩ	0.01Ω	±(0.2%+1)
Conductance	60nS	0.001nS	±(1%+10)
Capacitance	9999µF	0.01nF	±(1%+2)
Frequency	>200kHz	0.01Hz	±(0.005%+1)
Temperature	-200 to 1090°C	0.1°C	1.0%
80BK temperature probe	-40 to 260°C		2.2°C or 2%

Safety Specifications
ATEX Safety Rating
Agency Approvals
Measurements in Ex Area
Electrical Safety Rating

Ex II 2 G EEx ia IIC T4
ZELM 05 ATEX 0274; CSA, TUV
Voltage ≤ 65V, Current ≤ 5A
EN61010-1 CATIV 600V, CATIII 1000V

Multimeters - Application Specific - continued

Intrinsically Safe Digital Multimeter - continued

87V-Ex - continued

Includes: DMM with red holster, TL75 test leads, AC72 alligator clips, 80BK temperature probe, 9V battery (installed), printed user manual, CD-ROM.

417251

Mfrs.			Price Each		
List No.	Order Code	1+	3+	+	
87V-EX	105-7381	1,999.00	1,849.08	--	
Price Each					
Standard Calibration Charge	S				
NATA Calibration Charge	N				

Digital Bench Multimeters

8808



W=217 H=88, D=297mm. Weight 2.1 kg

5.5 digit precision multimeter which delivers a wide variety of measurement functions, including volts, ohms, and amps, plus frequency - all at superior accuracy and resolution with a basic V dc accuracy of 0.015%.

- **Measure sensitive leakage current:** includes two low impedance low current ranges for measuring sensitive leakage currents (i-Leakage).
- **Perform routine manufacturing functional tests with consistency:** Use setup keys (S1 - S6) for fast access to repetitive measurements. Operators no longer need to press multiple buttons to make routine measurements.
- **Eliminate production mistakes:** has a limit compare mode with built in display enunciators that clearly show whether a test is within or out of limits.
- **Perform 4-wire measurements with only two leads:** Patented split terminal jacks for 2x4 Ohms function allow you to perform precise 4-wire low ohms measurements with only two leads instead of four.
- Continuity / Diode Test
- Limit Compare functions
- dBm, dB, Min, Max functions
- RS-232 interface (USB interface version available 150-3748)
- Supports programming in simplified ASCII

	Ranges	Resolution	Accuracy
DC Voltage	200mV to 1000V	1µV	0.015%
AC Voltage	200mV to 750V	1µV	0.2%
DC Current	200µA to 10A	1nA	0.02%
AC Current	20mA to 10A	100µA	0.3%
Resistance	200Ω - 100MΩ	1mΩ	0.02%
Frequency	20Hz to 1MHz	0.1mHz	0.01%

Included Accessories:

LCI Line Power Cord, TL71 Test Lead Set, Spare Line Power fuse, Programmers Manual / User Manual on CD-ROM, FVF-BASIC FlukeView Forms Software Basic Version.

Prices where indicated by a **†** are subject to change. Please call your local sales office or visit www.farnell.com for the latest prices.

526391

Mfrs.			Price Each		
Description	List No.	Order Code	1+	3+	+
Bench DMM	8808 AU	167-4933	1,625.0000	1,267.5000	--
DMM with SW and USB Cable	8808/SU				
AU	167-4934		2,066.0000	1,810.7882	--



Local re-reeling service

Only buy what you need and improve your assembly efficiency with element14's re-reeling service, now available in Australia.

For more information please see:



1300 361 005



au.element14.com

Digital TRMS Wattmeter

PX110 and 120



The PX 120 and PX 110 feature a wide measuring range high sensitivity, so are ideally suited for both general teaching and vocational training. Their ability to measure RMS values in AC + DC (or TRMS) enables them to carry out measurements in the 4 quadrants on signals which are disturbed and polluted by harmonics. The only difference between the two models is that the PX 120 measures powers using the three-phase three balanced wire system, whereas the PX 110 is reserved for single-phase networks.

- DC or AC TRMS networks: balanced single-phase (PX 110) or three-phase (PX 120)
- Voltage, current, active/reactive/apparent powers and power factor measurements
- High degree of sensitivity
- Simple and quick implementation with direct access keys
- Numerous automatic functions: current range switching, HOLD, filtering, starting current, etc.
- Excellent readability: 3 quantities displayed simultaneously with a digit height of 14 mm
- Digital transmissions protected by infrared communication interface
- Mains power supply (optional)

General Characteristics

Interfaces and software	Yes
Operating temperature	0°C to +50°C
Storage temperature	-40°C to +70°C
Power supply	6x 1.5V LR6 batteries

General Characteristics

Autonomy	40 hours
Dimensions (HxWxD)	211 x 108 x 60mm
Weight	835g
Safety IEC61010	600V, Cat III, pollution level 2

Technical Characteristics

	Range	Resolution	Accuracy AC / DC
Active power	10W to 6kW	0.1W - 1W	1%R±2 digits/2%R±3 digits
Apparent/reactive power	10W to 6kW	0.1W - 1W	2%R±2 digits
Power factor	1	0.01	3%R±2 digits
Voltage	0.5 to 600V RMS	100mV	0.5%R±2 digits/1%R±3 digits
Current	10mA - 10A RMS	1mA - 10mA	0.5%R±2 digits/1%R±3 digits
Starting current	5A - 65A (peak)	100mA	10%R±2 digits

339418.410674

Mfrs.			Price Each		
Description	List No.	Order Code	1+	+	+
1 Phase Wattmeter	PX0110	411-0134	1,278.21	--	--
3 Phase Wattmeter	PX0120	411-0146	1,974.18	--	--
Software package	HX0013	411-0158	576.19	--	--

Patrol Portable Appliance Tester



- Fully portable. Uses 6xAA alkaline batteries (typically 40 hours) or from 240V mains power
- Designed to meet the requirements of **AS/NZS-3760:2003** & tested to **IEC61010**, C-tick
- Simple one-button testing
- Test functions: Class 1, Class 2, Extension lead and EPOD's
- Includes: Extension lead adaptor, test lead (probe & clip), instruction manual & 10 test tags
- Weight 1.6kg (ex batteries)

372852

Mfrs.			Price Each		
List No.	Order Code	1+	+	+	+
CZ5000	530-5664	1,028.08	--	--	--

Multimeters - Bench

Dual Display Digital Multimeter

GDM-8245



A compact bench top digital multimeter with a clear LED display and RS-232 interface. The high resolution 50,000 count display provides accurate measurements across the meters test ranges.

- 50,000 count display
- AC/DC Voltage, AC/DC Current, Resistance, Capacitance, Frequency and Diode Test functions

- Dual display to indicate AC Voltage and Frequency, DC Voltage (ACV) and dBm or DC Voltage and AC Voltage ripple
- Manual or Auto-ranging
- 0.03% DC voltage accuracy
- AC voltage measuring frequency up to 100kHz
- 20A current range with up high energy fuse protection
- 1200V High voltage range
- AC true RMS or AC + DC true RMS

DC Voltage	Range	500mV, 5V, 50V, 500V, 1200V
	Accuracy	± (0.03% rdg + 4 digits), 1200V range ± (0.03% + 9 digits)
AC Voltage True RMS (AC or AC+DC True RMS)	Input Impedance	10MΩ
	Range	500mV, 5V, 50V, 500V, 1000V 5 ranges
DC Current	Accuracy	± (0.5% rdg + 15 digits)
	Range	500μA, 5mA, 50mA, 500mA, 2A, 20A
	Accuracy	500μA to 500mA: ± (0.2% rdg + 2 digits) 2A to 20A: ± (0.3% rdg + 2 digits)
AC Current True RMS (AC or AC+DC True RMS)	Range	500μA, 5mA, 50mA, 500mA, 2A, 20A
	Accuracy	500μA to 500mA: 45Hz to 2kHz± (0.5% rdg + 15 digits) 2kHz to 10kHz± (1% rdg + 15 digits); 10kHz to 20kHz ± (2% rdg + 15 digits) 20A to 20A: 45Hz to 2kHz± (0.5% rdg + 15 digits) 500Ω, 5kΩ, 50kΩ, 500kΩ, 5MΩ, 20MΩ 500Ω: ± (0.1% rdg + 4 digits) 5kΩ to 500kΩ: ± (0.1% rdg + 2 digits) 5MΩ: ± (0.2% rdg + 2 digits) 20MΩ: ± (0.3% rdg + 2 digits)
Resistance	Range	The one range can check the forward voltage of diode. Maximum forward voltage 1.5V, Open voltage 2.8V
	Accuracy	5nF, 50nF, 500nF, 5μF, 50μF ± (2% rdg + 4 digits)
Diode Test	Range	5nF, 50nF, 500nF, 5μF, 50μF
	Accuracy	± (2% rdg + 4 digits)
Capacitance	Range	mV range: >120mV (10Hz to 50kHz) <200mV (50kHz to 150kHz) 5V range: >1V (10Hz to 200kHz) 50V range: >1.2V (20Hz to 200kHz) 500V range: >12V (20Hz to 1kHz)
	Accuracy	<5Ω >60dB >90dB
Frequency	Input Level(Sine Wave)	AUTO RANGE
		MAX, MIN, dBm (63.8dBm to -97.7dBm), REL, HOLD Dual Display 0.4", 0.5", 7 segment LED display AC 230V ± 15%, 50/60Hz Power cord, Instruction manual, Test Lead 251x91x291mm, 2.6kg
Continuity Buzzer		
NMRR		
CMRR		
Operating Mode		
Others		
Display		
Power Source		
Accessories		
Dimensions / Weight		

Mfrs.		Price Each	
List No.	Order Code	1 +	10 +
GDM-8245	491-1738	670.24	650.14
		Price Each	
Standard Calibration Charge		S	2
UKAS Calibration Charge/NATA Calibration Charge		N	2

Digital Bench Multimeters

8845A and 8846A



W=217 H=88, D=297mm. Weight 3.6 kg

6.5 digit precision multimeters with the versatility to handle your most demanding measurements, on the bench or in a system. These meters are both high performance and feature rich, yet also remarkably easy to use.

Common Features:

- 6.5 digit resolution
- Basic DC Voltage accuracy of up to 0.0024%
- Dual display
- 2 x 4 ohms 4-wire measurement technique
- Fluke 45 and Agilent 34401A emulation
- Graphical display
- Trendplot™ paperless recorder mode, statistics, histogram
- 5000 measurement internal memory
- RS-232, IEEE-488 and Ethernet interfaces
- Transfer data to a PC with FlukeView Forms Basic software, the full version (FVF-UG) allows customisable forms
- CAT II 600 V

8846A Additional Features:

- Measures capacitance and temperature
- USB memory drive port
- Includes TL2X4W-PT 2x4 wire ohms test leads

	Ranges		Typical Accuracy (1 yr)		
	8845A	8846A	8845A	8846A	
DC Voltage	100mV/1V/10V/100V/1000V	100mV/1V/10V/100V/1000V	±(0.0035%+5ppm)	±(0.0025%+2ppm)	
AC Voltage	100mV - 750V	100mV - 1000V	±(0.06% rdg + 0.03% mg)	±(0.05% rdg + 0.005% mg)	
DC Current	100μA/1mA/10mA/100mA/1A/10A	100μA/1mA/10mA/100mA/1A/10A	±(0.05% rdg + 0.005% mg)	±(0.01% rdg + 0.04% mg)	
AC Current	100μA/1mA/10mA/100mA/1A/10A	100μA/1mA/10mA/100mA/1A/10A	±(0.01% rdg + 0.001% mg)	±(0.01% rdg)	
Resistance	100Ω - 100MΩ	10Ω - 1GΩ	±(1.0%rdg+0.5%mg)	±0.08°C	488987
Frequency	3Hz to 300kHz	3Hz to 1MHz			
Capacitance	1nF - 100mF				
Temperature		-200°C - 600°C			
		Mfrs.	Price Each		
Description	List No.	Order Code	1 +	3 +	+
Bench DMM	8845A AU	134-7845	2,087.00	--	--
Bench DMM	8846A AU	134-7847	2,925.00	--	--
Accessories					
4-Wire Short	884X-SHORT	127-4092	59.68	--	--
512MB USB Memory	884X-512M	127-4094	149.06	--	--
1GB USB Memory	884X-1G	127-4095	248.89	--	--
USB to RS232 Adaptor	884X-USB	127-4096	296.67	--	--
Ethernet Interface Cable	884X-ETH	127-4097	42.55	--	--
2m RS232 Cable	RS43	127-4098	90.00	85.50	--
2m IEEE488 Cable	Y8022	127-4099	562.00	533.90	--
FlukeView Forms SW Upgrade	FVF-UG	127-4100	208.73	--	--
FlukeView Forms SW with cable	FVF-SC4	127-4101	447.27	--	--

Digital Multimeter

Tektronix DMM4020



H = 88mm, W = 217mm, D = 297mm

The Tektronix DMM4020 5.5 digit bench multimeter offers a broad range of functions in one easy-to-use instrument. You can also use the DMM4020 to measure frequency, and to perform continuity and diode tests. This allows you to replace your counter, continuity tester, and DMM with one versatile instrument, saving bench space and cost.



Features & Benefits

- 5.5 Digit Resolution
- Basic VDC Accuracy of up to 0.015% (1 yr.)
- 200 mV to 1000 V Voltage Range, with up to 10 μV Resolution
- 200 μ to 10 A Current Range, with up to 1 nA Resolution
- 200 Ω to 100 MΩ Ohm Range, with up to 1 mΩ Resolution
- CAT I 1000 V, CAT II 600 V

Available Functions and Features

- Volts, Ohms, and Amps Measurements
- Diode and Continuity Testing
- Frequency Measurements
- 2 x 4 Ohms 4-wire Measurement Technique
- Dedicated DC Leakage Current Measurements
- Six Dedicated Buttons for Fast Access to Instrument Setups
- Limit Compare Mode for Pass/Fail Testing

Connectivity

- Front 2 x 4 Measurement Inputs
- RS-232 on Rear Panel for Quick PC Connectivity
- Includes USB to RS-232 Interface Adapter Cable
- Includes National Instrument's LabVIEW SignalExpress™ TE Limited Edition for Connecting Your Bench

DMM4020 Includes: Meter, TL710 test leads, spare line fuse, statement of cal practices, Warranty statement, Safety and Installation Guide, Connectivity Installation Manual, CD-ROM with user manual (English, French, Italian, German, Spanish, Simplified Chinese, Traditional Chinese, Korean, Russian, Japanese), RS-232 to USB Adapter Cable, National Instruments LabVIEW SignalExpress™ Tektronix Edition, Limited Edition Software. Euro and UK power cords.

Mfrs.		Price Each	
List No.	Description	Order Code	1 +
DMM4020	Digital Multimeter	177-1901	869.68
		Price Each	
Accessories			1 +
TL725	SMD Test Tweezers, 2 X 4 Wire Ohms	177-1904	146.25
196-3520-00	Test Leads, Standard TL710	177-1907	51.75
TL705	Test Leads, Precision, 2X4 Wire	177-1908	110.25
Y8846S	Rackmount Kit, Single	177-1909	213.75
Y8846D	Rackmount Kit, Dual	177-1910	220.50

Multimeters - Bench - continued

Digital Multimeter

Tektronix DMM4040 & DMM4050



DMM4040



DMM4050

Dimensions (HxWxD) = 88x217x297mm

Tektronix



New

The Tektronix DMM4050 and DMM4040 6.5 digit bench multimeters pack many different functions and analysis into one instrument, all with exceptional precision and performance.

With the unique dual display of the DMM4050/4040, you can measure two different parameters of the same signal from one test connection. To reveal signal quality issues like drift, intermittent transients, and stability, you can view the data as a real-time trend plot or a histogram with the DMM4050/4040's graphical display mode, or you can use measurement statistics to track how signal parameters are changing over time.

Features & Benefits

- 6.5 Digit Resolution
- Basic VDC Accuracy of up to 0.0024% (1 yr.)
- 100 mV to 1000 V Voltage Range, with up to 100 nV Resolution
- 100 μ A to 10 A Current Range, with up to 100 pA Resolution
- 10 Ω to 1 G Ω Ohm Range, with up to 10 $\mu\Omega$ Resolution
- CAT I 1000 V, CAT II 600 V

Available Functions and Features

- Volts, Ohms, and Amps Measurements
- Diode and Continuity Testing
- Frequency and Period Measurements
- Temperature and Capacitance Measurements (DMM4050)
- 2x4 Ohms 4-wire Measurement Technique
- TrendPlot™ Paperless Data Recorder Mode
- Measurement Statistics
- Histogram Mode

Connectivity

- Front and Rear 2x4 Measurement Inputs
- USB Host Port on Front Panel for Easy Storage of Measurement Data
- and Instrument Settings
- RS-232, LAN, and GPIB Ports on Rear Panel for Quick PC Connectivity
- Includes USB to RS-232 Interface Adapter Cable
- Includes National Instrument's LabVIEW SignalExpress™ TE Limited Edition for Connecting Your Bench

Memory

Model	Description
DMM4050/4040	10,000 measurements, internal, and up to 2 Gigabyte capacity with USB memory module (available separately) through front-panel USB port

DMM4050/4040 Includes: Meter, TL710 test leads, line cord, spare line fuse, statement of cal practices, Warranty statement, Safety and Installation Guide, CD-ROM with user manual (English, French, Italian, German, Spanish, Simplified Chinese, Traditional Chinese, Korean, Russian, Japanese), RS-232 to USB Adapter Cable, National Instruments LabVIEW SignalExpress™ Tektronix Edition, Limited Edition Software. Euro and UK power cords.

549342

Mfrs.		Price Each	
List No.	Description	Order Code	1+
DMM4040	Digital Multimeter Precision 35PPM	177-1902	1,278.21
DMM4050	Digital Multimeter Precision 24PPM	177-1903	1,559.85
Accessories		1+	
TL725	SMD Test Tweezers, 2 X 4 Wire Ohms	177-1904	146.25
TP750	Temperature Probe, 100 Ohm RTD (DMM4050 Only)	177-1906	735.75
196-3520-00	Test Leads, Standard TL710	177-1907	51.75
TL705	Test Leads, Precision, 2X4 Wire	177-1908	110.25
Y8846S	Rackmount Kit, Single	177-1909	213.75
Y8846D	Rackmount Kit, Dual	177-1910	220.50

Frequency Counters

3GHz Frequency Counter - Timer

TF930

TTT



The TF930 is a professional quality bench/portable frequency meter incorporating period, pulse width and totalise functions. It uses the advanced reciprocal measurement technique to provides high resolution regardless of input frequency. As well as frequency and period it can measure pulse width and has a totalise function. A USB interface for remote control and read-back is incorporated.

- VLF to 3000MHz frequency range
- Frequency, period, pulse width and totalise modes
- Reciprocal counting measurements
- Low pass filter, attenuator and trigger level control
- Large 10 digit LCD display with annunciators
- Rechargeable battery operation built-in, supplied with mains adapter/charger
- Low power consumption
- USB remote control

Frequency Measurement

	Input A	Input B
Frequency range	0.01Hz to 125MHz	80MHz to 3GHz
Resolution	10 ⁻⁷ Hz to 100Hz	1Hz to 10kHz
Accuracy	± (1 digit + timebase accuracy)	± (1 digit + timebase accuracy)

Period Measurement

	Input A
Period Range	8ns to 330ms
Resolution	10 ⁻⁷ ns to 1 μ s
Accuracy	± (1 digit + timebase accuracy)

Inputs

	Input A	Input B
Input impedance	1M Ω / 20pF	50 Ω nominal
Frequency range	3Hz to 125MHz	80MHz to 3GHz
Sensitivity	Sinewave 15mV rms 10Hz to 125MHz	15mV rms 80MHz to 2GHz 50mV rms 2GHz to 3GHz
Max. input voltage	30Vdc; 30V rms 50/60Hz reducing to 1V rms above 1MHz	30Vdc; 30V rms 50/60Hz
Coupling	AC	AC
Attenuator	Switchable 1:1 or 5:1	
Low pass filter	Switchable 50kHz	
Trigger level control	0 to 1.5V or 0 to 7.5V	

Count

Count range	>4,000,000,000 (232)
Frequency range	0.01Hz to 125MHz

Pulse width

Range/resolution	1us to 100 seconds/100ns
------------------	--------------------------

Timebase

Source	Internal 10MHz TCXO or external 10MHz
Temp. coefficient	Typically <±1ppm/°C over +5°C to +40°C range
Ageing	

General

AC line	110-240V external adapter for UK, Euro, US or Australia
Battery	Internal rechargeable. Typically 24 hours operation per charge
Safety and EMC	Complies with EN61010-1 and EN61326
Size:	257(W) x 224(D) x 88(H) mm
Weight	1.6kg

230686

Mfrs.		Price Each	
List No.	Order Code	1+	3+
TF930	167-0769	1,050.96	986.62

3GHz Frequency Counter - Handheld

PFM3000

TTT



- 3 Hz to > 3000 MHz in two overlapping ranges
- High input sensitivity over the full frequency range
- High impedance measurement up to 125 MHz
- Reciprocal counting technique gives superior resolution
- Period measurement from 3 Hz to 125 MHz
- Battery operation; handheld format with tilt-stand
- Push-to-measure function with auto power-down
- Large 8 + digit display with full range of annunciators
- Selectable measurement time; display hold function
- Noise filter for low frequency measurements



H = 178, W = 81, D = 30

The PFM3000 offers high sensitivity frequency measurement from 3Hz to more than 3GHz in two overlapping ranges. Period measurement is also provided from 8ns to 330ms. The PFM3000 uses a continuous reciprocal measurement technique to provide high resolution at all frequencies with rapid update.

Despite its wide frequency range the PFM3000 has a power consumption that enables it to operate for many hours from a PP3 size battery. A push-to-measure capability gives an instantaneous reading followed by an automatic power down after 15 seconds. This provides greatly extended battery life where continuous monitoring of the signal is not required.

Frequency measurement

	Input A:	Input B:
Frequency range	3Hz to 125MHz	Frequency range 80MHz to 3000MHz
Resolution	10 ⁻⁷ Hz to 100Hz	Resolution 1Hz to 10kHz
Measurement of accuracy is the sum of the timebase accuracy and measurement resolution plus one count.		

Period Measurement

Frequency range	5Hz to 25MHz
Resolution	100ns to 1 μ s
Accuracy	±(1 digit + timebase accuracy)

Inputs

	Input A:	Input B:
Input impedance	1M Ω /20pF	Input impedance 50 Ω nominal
Sensitivity	Sinewave - 15mVrms 10Hz-125MHz 10Hz to 20MHz	Sensitivity Sinewave - 15mVrms 80MHz-2GHz, 50mVrms to 3GHz 20MHz to 700MHz

Input A and Input B: 30Vdc; 30Vrms 50Hz/60Hz reducing to 1Vrms above 1MHz. Note that the inputs will not be damaged if subjected to an accidental short-term connection to a 50/60Hz line voltage not exceeding 250V rms.

Timebase

Crystal oscillator frequency	10MHz
Initial oscillator adjustment error	±2ppm
Oscillator temperature coefficient	Typically less than ±0.3ppm/°C 18°C
Oscillator ageing rate	+5ppm/year

Power Requirements

Internal

Battery type 9V PP3 alkaline
Battery life Typically 20 hours

General

Operating temperature range +5°C to +40°C
Operating humidity range 20% RH to 80% RH
Storage temperature range -20°C to +60°C
Weight 190g

509909

Mfrs. List No.	Order Code	Price Each	
		1+	+
PFM3000	160-1132	394.66	--
Price Each			
Standard Calibration Charge		\$	
NATA Calibration Charge		N	

Timer/Counter/Analysers

FCA3000 & FCA3100



Tektronix

New

Key Features and Functions:

- Graphical, multi-parameter timer/counter display
- High resolution down to 50 ps single shot (time)
- Measurements to 12 digits/sec (frequency)
- Fast USB/GPIB bus transfer speeds
- Super fast measurements (250k/s) to internal memory
- Zero-dead time frequency/period measurements
- Built-in statistics & math functions including on screen histogram, trend plot or Allan Deviation
- GPIB operates in either SCPI/GPIB or 53131A emulation mode, for plug-n-play replacement in existing your existing ATE systems
- Seamless PC connectivity through USB with NI SignalExpress™ Software
- TimeView™ Time Domain Analysis Software (option)
- Standard 3-year warranty

Highest performance and accuracy delivering the best value for your money!

Tektronix timer/counter/analysers are packed with performance and features at an affordable price. With a graphical display and single button analyse key, you can instantly view your measurements with histograms, trend plots or a wide choice of statistics displayed simultaneously on the display, including Allan Deviation. You'll also have the added benefit of multi-parameter measurements from one test connection, e.g., voltage measurements included with frequency. The instruments offer very high measurement speed and connectivity for your automated test system, including a convenient USB port. Measurements can be captured into internal memory at the rate of 250k/sec, or streaming block transfers through USB/GPIB up to 15k/sec. Remote programming is available through USB, and NI SignalExpress™ Basic Edition PC software is included. A trial version of TimeView™ Time Domain Analysis software is also included.

Feature	FCA3100 series	FCA3000 series
Frequency resolution	12 digits/sec	12 digits/sec
Time resolution	50 ps	100 ps
Voltage resolution	1 mV	3 mV
Minimum Pulse Width	1.6 ns	1.6 ns
Meas. Speed to internal memory	250k meas/sec 3.75M results	250k meas/sec 750k results
Talk only output (GPIB)	4k meas/sec	N/A
Individually triggered measurements	650/sec	500/sec
Block transfer speed	15k meas/sec	5k meas/sec
Freq/period, time, phase, volt, duty c, pulse, rise time	Yes	Yes
Graphic display of trend, histogram, modulation domain	Yes	Yes
Zero dead-time frequency/period measurements	Yes	via GPIB
Totalise, Time Interval Error	Yes	N/A
Programmable pulse output	Yes	N/A
Continuous measurements	Yes	N/A

TVA3000 TimeView™ Modulation Domain Analysis Software

Key Features and Functions

- View dynamic frequency changes over time
- Follow frequency changes every 4µs in real time
- Analyse VCO settling and PLL responses
- Powerful analysis: Statistical distribution (histogram), FFT analysis, smoothing
- Zero dead-time measurements
- Easily export your data to MS Excel for additional analysis
- Standard 3-year warranty

An MDA (Modulation Domain Analyser) could be thought of as a frequency sampler analogous to a digital oscilloscope that is a voltage sampler. An MDA displays frequency vs time, just like an oscilloscope displays voltage vs time. You could think of a Modulation Domain Analyser as a Frequency Scope. The signal to be characterised is connected to the front-end input of the FCA3000 or FCA3100 product, which samples the frequency (or time, or phase, or voltage if selected). The data is transferred to the PC and post-processed. All setting controls are made from the PC. Graphs can be printed on the PC-printer and settings and results are stored as ASCII-files, that are easily imported in various programs, e.g. MS-Excel for further analysis.

Included Accessories

Quick Start User Manual (English, Chinese, Japanese)
Multiple Language Documentation CD
TimeView™ Trial software
NI LabVIEW SignalExpress™ TE (Basic) Edition Software
Power cords
Calibration certificate

610192

Mfrs. List No.	Order Code	Price Each
FCA3000 Timer/Counter/Analyser 300MHz/100 ps	182-4794	2,838.06
FCA3100 Timer/Counter/Analyser 300MHz/50 ps	182-4795	4,397.91
TVA3000 TimeView™ Modulation Domain Analyser	182-5714	922.29

Function Generators

10MHz and 20MHz Function Generators

TG1000 & TG2000



W=260 H=88 D=235mm. Weight = 2kg

Direct digital synthesis (DDS) is a technique for generating waveforms digitally using a phase accumulator, a look-up table and a DAC. The accuracy and stability of the resulting waveforms is related to that of the crystal master clock. The DDS generator offers not only exceptional accuracy and stability but also high spectral purity, low phase noise and excellent frequency agility.

- 0.001Hz to 10MHz or 20MHz frequency range, 6 digits or 1mHz setting resolution
- 1ppm stability and better than 10 ppm absolute accuracy for one year.
- Sine, square, triangle, positive pulse and negative pulse waveforms.
- Low distortion, high spectral purity sine waves.
- Internal sweep, linear or logarithmic, phase continuous, Fmin to Fmax in one range.
- Modulations modes of gated, AM, FSK and tone switching; built-in trigger generator.
- 5mV to 20V pk-pk output from 50Ω to 600Ω; plus fixed level auxiliary output.
- Storage for up to nine complete instrument set-ups in non-volatile memory.
- Fully programmable via RS-232 or USB interfaces (not TG1000)




Frequency	<i>All waveforms are derived from a crystal clock using DDS</i>		
Frequency Range	1mHz to 10MHz (TG1000) or 20MHz (TG2000)		
Resolution	6 digits or 1mHz		
Accuracy	±10ppm for 1 year, 18°C to 28°C; ±1mHz below 0.2Hz		
Temp Coefficient	Typically <1ppm/°C outside 18°C to 28°C		
Waveforms	Range	Resolution	Output Level
Sinewave	1mHz - 10 or 20MHz	6 digits or 1mHz	5mV - 20V pk-pk from 50Ω
Squarewave	1mHz - 10 or 20MHz	6 digits or 1mHz	5mV - 20V pk-pk from 50Ω
Triangle	1mHz - 1MHz	6 digits or 1mHz	5mV - 20V pk-pk from 50Ω
Pulse	1mHz - 10 or 20MHz	6 digits or 1mHz	5mV - 20V pk-pk from 50Ω
Modulation Modes	<i>Continuous cycles of the selected waveform are output at the selected frequency</i>		
Continuous	<i>Non phase-coherent signal keying, output only ON when gate signal is HIGH</i>		
Gated	0.2Hz to Fmax. (all waveforms)		
Carrier	dc to 100kHz external, dc to 5kHz internal		
Trigger Rep. Rate	MAN TRIG key, internal gate generator, TRIG/GATE input, remote interface		
Gate Source	<i>Modes: Linear or logarithmic; single or continuous.</i>		
Sweep	All waveforms		
Carrier	0.2Hz to Fmax. (50ms to 999s)		
Sweep Width & Time	free run or MAN TRIG key, TRIG/GATE input, remote interface		
Trigger Source	MAN TRIG key, internal gate generator, TRIG/GATE input, remote interface		
Amplitude Modulation			
Carrier	1mHz to Fmax. (all waveforms)		
Modulation Source	VCA IN socket		
Frequency Shift Keying	<i>Phase-coherent switching between 2 frequencies at a rate defined by the switch source</i>		
Carrier	1Hz to Fmax. (all waveforms)		
Switch Rep. Rate	dc to 1MHz external, dc to 5kHz internal		
Switch Signal Source	MAN TRIG key, internal gate generator, TRIG/GATE input, remote interface		
Tone	<i>Tone is output only when the trigger signal is HIGH</i>		
Carrier	All waveforms		
Frequency List	Up to 16 frequencies between 1Hz to Fmax.		
Switching Source	MAN TRIG key, internal trigger generator, TRIG/GATE input, remote interface		
Internal Trigger/Gate			
Period	0.2ms to 999s (resolution 0.2ms)		
Waveform	Squarewave (1:1 duty cycle)		
Main Output			
Output Impedance	50Ω or 600Ω switchable		
Amplitude	5mV to 20V pk-pk open circuit		
Accuracy	±3% ±1mV		
Flatness	±0.2dB to 500kHz; ±1dB to 10MHz; ±2dB to 20MHz (TG2000 only)		
DC Offset	±10V from 50Ω/600Ω		
Resolution	3 digits for both amplitude and offset		
Auxiliary Output	<i>Multi-function output user definable to be any of the following:</i>		
Waveform Sync	outputs a 50% duty cycle squarewave at the main waveform frequency		
Trigger Out	outputs a replica of the current trigger signal		
Sweep Sync	outputs a trigger signal or marker at the start of a sweep		
Inputs			
Ext. Trigger / Gate	max. input ±10V. Impedance: 10kΩ		
VCA IN	dc to 100kHz, 2.5V. Impedance approx. 6kΩ		
Interfaces (TG2000 only)			
RS232	variable baud to 19200, 9-pin D connector		
USB	Standard USB 1.1 connection		
General			
Display	20 x 4 alphanumeric LCD		
Data Entry	keyboard, number keys, rotary control		
Memory	up to 9 complete instrument setups can be stored in battery-backed memory		
Power Requirements	100V, 110-120V or 220-240V, 50/60Hz, 40VA max		
Operating Conditions	+5°C to 40°C, 20%-80% RH		

Function Generators - continued

10MHz and 20MHz Function Generators - continued

TG1000 & TG2000 - continued

417469

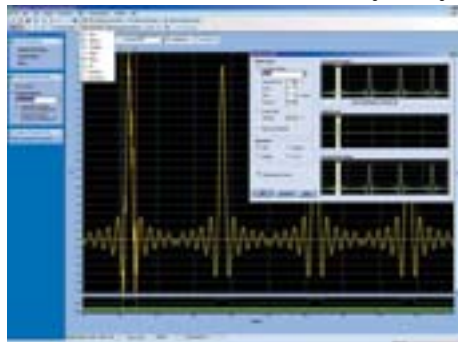
Mfrs.		Price Each		
List No.	Order Code	1+	+	+
TG1000	 179-1451	1,047.95	--	--
TG2000	979-8960	2,020.13	--	--
		Price Each		
Standard Calibration Charge		S		
NATA Calibration Charge		N		

Arbitrary Function Generators

AFG3000 Series



W=330 H=156 D=168mm Weight = 4.5kg



- 25 MHz, 100 MHz or 240 MHz Sine Waveforms
- 14 bits, 250 MS/s, 1 GS/s, or 2 GS/s Arbitrary Waveforms
- 5.6" Colour Display for Full Confidence in Settings and Waveform Shape (AFG3021B has monochrome display)
- Multi-language and Intuitive Operation Saves Set-up Time
- Pulse Waveform with Variable Edge Times
- AM, FM, PM, FSK, PWM
- Sweep and Burst
- Dual Channel Models Save Cost and Bench Space
- USB Connector on Front Panel for Waveform Storage on Memory Device
- USB, GPIB and LAN

The AFG3000 Arbitrary / Function Generator Series, with its large colour display and intuitive user interface, is both easy to learn and easy to use. Operation is intuitive, speeding design and time to market. Dual channel models allow a completely independent selection of waveforms and frequencies and represent a big advantage in versatility and cost. The front panel memory USB connectivity makes it easy to save and transfer waveforms and settings.

All models include: Quick-start user manual, power lead, CD-ROM with reference manual, service manual and ArbExpress software, NIST-traceable calibration certificate.

ArbExpress Software is included to create waveforms with ease. With this PC software waveforms can be seamlessly imported from any Tektronix oscilloscope, or defined by standard functions, equation editor, and waveform maths.

	AFG3021B / AFG3022B	AFG3101 / AFG3102	AFG3251 / AFG3252
Channels	1 / 2	1 / 2	1 / 2
Sine Wave	1µHz to 25MHz	1µHz to 100MHz	1µHz to 240MHz
Square Wave	1µHz to 12.5MHz	1µHz to 25MHz	1µHz to 120MHz
Pulse Wave	1µHz to 12.5MHz	1µHz to 25MHz	1µHz to 120MHz
Other Waveforms	1µHz to 250kHz	1µHz to 1MHz	1µHz to 2.4MHz
Noise Bandwidth (-3dB)	25MHz	100MHz	240MHz
DC (into 50Ω)	-5V to +5V	-5V to +5V	-2.5V to +2.5V
Arbitrary Waveforms	1mHz to 12.5MHz	1mHz to 25MHz	1mHz to 120MHz

Modulation
AM, FM, PM, FSK, Sweep, Burst

Input / Output Ports

Modulation input ch1 & ch2, Ext. Trigger/Gated Burst input, 10MHz Reference In, Ext. Ch1 Add input
Ch1 trigger output, 10MHz reference output

449994

Mfrs.		Price Each			
Description	List No.	Order Code	1+	+	+
1 channel, 25MHz	AFG3021B	142-5300	4,441.23	--	--
2 channel, 25MHz	AFG3022B	142-5301	3,596.32	--	--
1 channel, 100MHz	AFG3101	129-9081	4,787.87	--	--
2 channel, 100MHz	AFG3102	129-9082	6,369.38	--	--

Oscilloscopes

Oscilloscope

TDS 2000C

Tektronix



TDS2024

The latest version of the worlds most popular Oscilloscope. Enhanced features include:

- Brighter clearer display with wide viewing angle
- Built in waveform limit testing
- Automated, Extended Data Logging Feature
- New probes with the lowest capacitive load available and a compact head for easy probing of high density PCB's
- Tektronix Limited Lifetime warranty, for complete piece of mind.

Key Performance Specifications:

- Up to 2 GS/s Sample Rate on All Channels
- 2.5k point Record Length on All Channels

Ease-of-Use Features:

- 16 Automated Measurements, and FFT Analysis for Simplified Waveform Analysis
- Autoset and Signal Auto-ranging
- Built-in Context-sensitive Help
- Probe Check Wizard
- Advanced Triggers including Pulse Width Trigger and Line-selectable Video Trigger
- Multiple-language User Interface
- 5.7 in. (144 mm) Active TFT Colour Display
- USB 2.0 Host Port on the Front Panel for Quick and Easy Data Storage, Printing, and Connecting a USB Keyboard

	TDS2001C	TDS2002C	TDS2004C	TDS2012C	TDS2014C	TDS2022C	TDS2024C
Bandwidth	50 MHz	70 MHz	70 MHz	100 MHz	100 MHz	200 MHz	200 MHz
Channels	2	2	4	2	4	2	4
Sample Rate on Each Channel	500 MS/s	1.0 GS/s	1.0 GS/s	2.0 GS/s	2.0 GS/s	2.0 GS/s	2.0 GS/s
Record Length	2.5k points at all time bases on all models						
Vertical Resolution	8 bits						
Vertical Sensitivity	2 mV to 5 V/div on all models with calibrated fine adjustment						
Bandwidth Limit	20 MHz for all models						
Input Coupling	AC, DC, GND on all models						
Time Base Range	5 ns to 50 s/div			2.5 ns to 50 s/div			

613735

Mfrs.		Price Each	
List No.	Description	Order Code	1+
TDS2001C	50 MHz, 2 Ch, 500 MS/s	184-0961	1,148.22
TDS2002C	70 MHz, 2 Ch, 1 GS/s	184-0962	1,386.53
TDS2004C	70 MHz, 4 Ch, 1 GS/s	184-0963	2,112.81
TDS2012C	100 MHz, 2 Ch, 2 GS/s	184-0965	1,679.52
TDS2014C	100 MHz, 4 Ch, 2 GS/s	184-0966	2,502.77
TDS2022C	200 MHz, 2 Ch, 2 GS/s	184-0967	2,383.10
TDS2024C	200 MHz, 4 Ch, 2 GS/s	184-0968	2,946.38
Accessories			1+
TPP0101	Passive Probe, 100MHz	184-0969	79.44
TPP0201	Passive Probe, 200MHz	184-0970	98.01
TPP0101-PK10	Passive Probes, 100MHz, Pack of 10	184-0971	715.96
TPP0201-PK10	Passive Probes, 200MHz, Pack of 10	184-0972	874.84

Digital Storage Oscilloscopes - Portable

TPS2000 Series

Tektronix



H=267, W=476, D=229mm Weight = 3.7kg



Versatile hanger

The TPS2000 series are 4-isolated-channel, full featured, battery powered oscilloscopes. Make floating and differential measurements much more quickly and accurately, and speed verification of power supply performance, complex control circuits and the effects of neutral current for differential voltages, up to 30V_{RMS} floating on 4 channels simultaneously when paired with P2220 passive probe (supplied), or 600V_{RMS} when paired with the optional P5120 high voltage probe.

The series easily addresses high voltages and currents and potentially hazardous floating measure-



Hot swappable batteries

ments with the use of the optional power bundle TPS2PBND. These oscilloscopes can be used on the bench, in the lab or in the field, with a very high battery life (8 hours) and beyond it is a highly mobile package.

- 100MHz and 200MHz bandwidths
- Sample rate up to 2GS/s real-time
- 2 or 4 fully isolated and floating channels, plus isolated external trigger
- 8 hours of continuous battery operation with 2 batteries, hot swappable for virtually unlimited freedom from an ac power source
- Optional power application software allows a broad range of power measurements
- Quickly document and analyse measurement results with Openchoice software or integrated CompactFlash memory
- FFT function
- Advanced triggers to capture events of interest
- Analogue style knobs
- Simple to set up, Autoset menu, Auto-range waveforms and built in help
- Backlit display, brightness and contrast control

Supplied with

P2220 - 200MHz passive probe, 1x/10x attenuation

TPSBAT - Hot swappable battery

TDSPCS1 - OpenChoice software

Optional Accessories

TPS2PBND - Power bundle. Includes 4x P5120 passive high voltage probes and TPS2PWR1 power measurement and analysis software

TPS2PWR1 - Power measurements application package. Instantaneous power waveform analysis, waveform analysis, harmonics analysis, switching loss, phase angles, dv/dt and di/dt cursors

TDSPCS1 - OpenChoice PC connectivity software; A collection of programs that enable fast and easy communication between MS Windows PCs and TPS2000 series oscilloscopes

Feature	TPS2012	TPS2014	TPS2024
Isolated Channels	2	4	4
Bandwidth (MHz)	100	100	200
Sample rate (GS/s)	1	1	2
Record Length		2.5 K	
Display		Colour	
Battery operation	Capacity for 2 hot swappable battery packs, 4 hours use per pack		
Automatic measurements	11		
Vertical resolution	8-bits (normal or with averaging)		
Vertical sensitivity	2mV to 5V/div on all models with calibrated fine adjustment		
DC vertical accuracy	±3%		
Vertical zoom	Vertically expand or compress a live or stopped waveform		
Max input voltage (1M Ω)	300V _{RMS} CAT II at BNC signal to BNC shell, 1000V _{RMS} CAT II at probe tip to earth ground with optional P5120 passive high voltage probe		
Float Voltage	600V _{RMS} CAT II or 300V _{RMS} CAT III BNC shell to earth ground		
Position range	1200V _{RMS} CAT II between 2ch commons (of not > ±600V _{RMS} from ground)		
Bandwidth limit	2mV to 200 mV/div ±2V; >200mV to 5V/div ±50V		
Linear dynamic range	20 MHz		
Time base range	±5 div		
Time base accuracy	50 ppm		
Input impedance	1M Ω ±2% in parallel with 20 pF		
Input coupling	AC, DC, GND		

385999

Description	Mfrs. List No.	Order Code	Price Each
Oscilloscopes			
100MHz 2ch	TPS2012	798-4146	3,694.32
100MHz 4ch	TPS2014	798-4154	4,116.27
200MHz 4ch	TPS2024	798-4162	4,474.25
Accessories			
Accessory bundle	TPS2PBND	798-4170	2,144.79
Power package	TPS2PWR1	798-4189	661.28
Additional Li-Ion battery	TPSBAT	798-4197	328.06
Fast battery charger	TPSCHG	798-4200	571.53
Versatile hanger	343-1689-00	798-4235	16.00
Carry case, soft	AC2100	798-4243	129.99
Probes			
High voltage, 1000V	P5120	798-4227	574.63
High voltage diff 1300V,25MHz	P5200	872-477	1,083.23
High voltage diff 5600V,50MHz	P5100	207-470	534.39
AC current 1000A, 50kHz	A621 (A2:L0)	798-6866	718.03
AC/DC current, 100A, 100kHz	A622	798-6874	731.44
AC current, 15A, 60MHz	P6021 L0	802-0515	1,798.16
AC current, 6A, 120MHz	P6022 (L0)	798-6882	1,928.15
AC/DC current, 15A, 50MHz	TCP202	207-482	2,534.75
AC/DC current, 15A, 15MHz	TCP303	436-0266	3,152.71
AC/DC current, 50A, 50MHz	TCP305	436-0254	1,679.52
AC/DC current 30A, 100MHz	TCP312	436-0242	2,687.30
AC/DC current 500A, 2MHz	TCP404XL	436-0280	4,354.58
DC to 100MHz current measure system	TCPA300	436-0230	2,847.00
DC to 500MHz current measure system	TCPA400	436-0278	2,643.08
BNC probe power supply , 2 channel	1103 A2	332-0194	3,917.01

High-Voltage Probe and Power Bundle

P5122 & TPS2PBND2



TPS2PBND2

The new P5122 probe is suitable for floating measurements when used with the TPS2000 Series. Because the P5122 has 100x attenuation, it allows the TPS2000 to measure over a higher voltage range than the existing P5120 probe which has 20x attenuation. This higher attenuation allows a TPS2000 oscilloscope, when equipped with the P5122, to make measurements on common 480VRMS electronic devices.

Bandwidth	200 MHz
Attenuation	100x
Input Impedance	100 M Ω / 4.6 pF
Maximum Signal Voltage	1000 V _{RMS} CAT II
Maximum Float Voltage	600V _{RMS} CAT II

P5122 includes:

- P5122 probe
- Push-on hook tip
- Push-on insulating sleeve
- Reference lead with hook clip
- Reference lead with alligator clip
- Ground spring reference contact
- LF comp adjustment tool
- P5122 User Manual
- 1-year warranty

In addition to the probe itself, Tektronix will begin offering a new version of the popular power bundle for the TPS2000. The new TPS2PBND2 will combine the TPS2PWR1 Power Application Module, with four of the new P5122 High Voltage Probes. The price will be less than the combined price of the module and the probes.

TPS2PBND2 includes:

- Four (4) P5122 High voltage probes
- TPS2PWR1 Power Application Software module
- TPS2PWR1 User Manual
- 1-year warranty

610194

Mfrs. List No.	Order Code	Price Each
P5122	Probe 100x, 200 MHz, 1000V CATII	182-4796 4,263.00
TPS2PBND2	Power analysis bundle for TPS Series oscilloscopes	182-5715 1,559.85

Oscilloscope

MSO / DPO 2000



DPO2012



DPO2024



MSO2012



MSO2024

Features & Benefits

- 100 MHz and 200 MHz bandwidth models
- 2 or 4 analog channels
- 16 digital channels (MSO2000 Series)
- Sample rates up to 1 GS/s on all channels
- 1 Mega sample record length on all channels
- 5,000 wfms/s maximum waveform capture rate
- Suite of advanced triggers

The MSO2000 and DPO2000 Series digital phosphor oscilloscopes (DPOs) deliver the performance and tools you need to visualize your signals and find answers quickly. The DPO2000 Series are the first oscilloscopes to provide 1 M points of usable record length on all channels, serial trigger and decode analysis options, FilterVu™ a variable low-pass filter that also allows you to see signal details to the oscilloscope's full bandwidth and all in a compact form factor. The MSO2000 Series adds 16 integrated digital channels, enabling you to visualize and time correlate analog and digital signals on a single instrument. This integration extends triggering functionality across all 20 channels - which is ideal for debugging mixed analog and digital designs.

Vertical System Analog Channels

Input Channels	2
Analog Bandwidth*1 (-3 dB)	100 MHz
Calculated Rise Time	3.5 ns
Hardware Bandwidth Limits	20 MHz
Input Coupling	AC, DC, GND
Input Impedance	1 M Ω ±2%, 11.5 pF ±2 pF
Input Sensitivity Range	2 mV/div to 5 V/div
Vertical Resolution	8 bits

Horizontal System - Analog Channels

Maximum Sample Rate (all channels)	1 GS/s
Minimum Peak Detect Pulse Width	7.0 ns
Maximum Record Length (all channels)	1 M points
Timebase Range	4 ns to 100 s
Timebase Delay Time Range	-10 div to 5000 s
Channel-to-Channel Deskew Range	±100 ns
Timebase Accuracy	±25 ppm

Mfrs. List No.	Description	Order Code	Price Each
DPO2012	Oscilloscope, DPO 2CH 100MHz	165-0367	3,358.01
DPO2014	Oscilloscope, DPO 4CH 100MHz	165-0368	4,040.96
DPO2024	Oscilloscope, DPO 4CH 200MHz	165-0369	4,842.54
MSO2012	Oscilloscope, MSO 2CH 100MHz	165-0370	4,657.88
MSO2014	Oscilloscope, MSO 4CH 100MHz	165-0371	5,600.80
MSO2024	Oscilloscope, MSO 4CH 200MHz	165-0372	6,705.70

525403

Oscilloscopes - continued

Oscilloscope - continued

MSO / DPO 2000 - continued

Mfrs. List No.	Description	Order Code	Price Each 1 +
Accessories			
			1 +
DPO2AUTO	Module, Automotive Serial Trigger	166-5104	865.55
DPO2COMP	Module, Computer Serial Trigger	166-5105	865.55
DPO2CONN	Module, Ethernet & External Monitor	166-5106	490.03
DPO2EMBD	Module, Embedded Serial Trigger	166-5107	865.55
P2221	Passive Probe, 1X/10X 200MHz	166-5109	143.40
RMD2000	Rackmount Kit	166-5111	594.27
ACD2000	Sort Large Case	166-5112	259.97

TDS3000C Series Digital Phosphor Oscilloscopes
With USB Storage Capabilities

- 100 MHz, 300 MHz, and 500 MHz Bandwidth Models
- 2 or 4 Channels
- Sample Rates up to 5 GS/s Real Time on All Channels
- Advanced Triggers: Logic pattern, State, edge delay, runt pulse and slew rate
- Front-panel USB Host Port for Easy Storage and Transfer of Measurement Data
- 25 Automatic Measurements
- FFT Standard
- Multiple Language User Interface
- WaveAlert® Automatic Waveform Anomaly Detection
- TekProbe® Interface Supports Active, Differential, and Current Probes for Automatic Scaling and Units
- Lightweight Design (only 7 lb./3.2 kg) for Easy Transport
- Optional Internal Battery Operation Provides up to Three Hours Without Line Power

The TDS3000C Series Digital Phosphor Oscilloscopes (DPO) provide you with the performance you need at a price you can afford. Bandwidths range from 100 MHz to 500 MHz, with up to 5 GS/s sample rates for accurate representation of your signal.

To solve a problem, first you need to see it. The TDS3000C Series fast waveform capture rates and real-time intensity grading saves time by quickly revealing the nature of faults so advanced triggers can be applied to isolate them.

Quickly Debug and Characterize Signals with DRT Sampling Technology and sin(x)/x Interpolation

The TDS3000C Series combines unique digital real-time (DRT) sampling technology with sin(x)/x interpolation to allow you to accurately characterize a wide range of signal types on all channels simultaneously. With the TDS3000C Series there is no change in sampling rate when additional channels are turned on. This sampling technology makes it possible to capture high-frequency information, such as glitches and edge anomalies, that elude other oscilloscopes, while sin(x)/x interpolation ensures precise reconstruction of each waveform.

Application Modules for Specialized Analysis

- Advanced Analysis Module
- Limit Testing Module
- Telecommunications Mask Testing Module
- Extended Video Module
- 601 Serial Digital Video Module

Applications

- Digital Design and Debug
- Video Installation and Service
- Power Supply Design
- Education and Training
- Telecommunications Mask Testing
- Manufacturing Test
- General Bench Testing

Accessories

TDSPCS1 NI Signal Express™ Tektronix edition Software

Provides extended capabilities including advanced analysis, datalogging, remote instrument control and waveform analysis.

TDS3GV Communications Module + OpenChoice

Offers GPIB, VGA and RS-232 interfaces and supplied with OpenChoice software

P6243 1GHz Active Probe

1.3m 1 GHz Active probe for use with TDS3064, to enhance the features of the oscilloscope

Order Code	1554155	1554156	1554157	1554158	1554159	1554160
Mfrs. List No.	TDS3012C	TDS3054C	TDS3032C	TDS3034C	TDS3052C	TDS3054C
Bandwidth	100MHz	500MHz	300MHz	300MHz	500MHz	500MHz
Channels	2	4	2	4	2	4
Sample rate per chan.	1.25GS/s	5GS/s	2.5GS/s	2.5GS/s	5GS/s	5GS/s
Time base	4ns-20s	1ns-20s	2ns-10s	2ns-20s	1ns-20s	1ns-20s
Time base accuracy	20ppm	20ppm	20ppm	20ppm	20ppm	20ppm
BW limit	20MHz	20MHz	20, 150MHz	20, 150MHz	20, 150MHz	20, 150MHz

Maximum Record Length	10K points on all models
Vertical resolution	9-bits on all models
Vertical Sensitivity/div	1mV-10V on all models
Vertical accuracy	+/-2% on all models *1
Max. Input Voltage(1MR)	150 Vrms CAT I on all models (300 V CAT II with standard 10X probe)
Position range	± 5 div on all models
Input coupling	AC, DC, GND on all models
Input Impedance select.	1 MΩ in parallel with 13 pF or 50Ω
Display monitor	Colour LCD

Three Years Manufacturers Warranty

505740

Description	Calibration	Mfrs. List No.	Order Code	Price Each 1 +	+
Oscilloscopes					
100MHz, 2Ch	SC18 / NC18	TDS3012C	155-4155	5,632.78	--
100MHz, 4Ch	SC18 / NC18	TDS3014C	155-4156	6,684.03	--
300MHz, 2Ch	SC18 / NC18	TDS3032C	155-4157	8,080.88	--
300MHz, 4Ch	SC20 / NC20	TDS3034C	155-4158	9,565.42	--
500MHz, 2Ch	SC20 / NC20	TDS3052C	155-4159	11,590.54	--
500MHz, 4Ch	SC20 / NC20	TDS3054C	155-4160	13,648.67	--
Accessories					
Comms+Openchoice		TDS3GV	369-3880	690.17	--
1GHz Active Probe		P6243	207-433	1,213.22	--
Standard Calibration Charge				S	☎
NATA Calibration Charge				N	☎

TDS3000 Accessories



Application modules and a range of accessories are available that simply plug into the TDS3000 oscilloscope to customise the instrument to user needs.

TDS3VID is especially useful for professionals servicing or maintaining video systems who need to extend the basic PAL, NTSC and SECAM triggering to include triggering on individual lines and fields and custom scan rates. Video autoselect automatically adjusts the settings to display a video waveform. IRE or mV format graticules are available to simplify the measurement and analysis of video waveforms.

New features: Video Picture, Vectorscope, HDTV Triggering. These three capabilities, originally available in the TDS3SDI module, have been added to the TDS3VID module.

Video Picture Mode The Video Picture feature enabled by the TDS3SDI or TDS3VID module lets you quickly check out a monochrome image of the originating camera or other source. Then use the on-screen line select to move quickly to any line in the picture.

Built-in Vectorscope Capabilities Enabled by the TDS3SDI or TDS3VID module, a TDS3000B Series oscilloscope can function as a vectorscope with built in graticules for 100% and 75% colour bars. It's easy to measure chroma levels. The TDS3000's digital phosphor display makes it easy to see your white balance problem so you can adjust the camera to solve it.

Analogue HDTV Triggering The TDS3SDI and TDS3VID also let you work with emerging analog HDTV standards. Trigger on a range of HDTV formats - 1080i, 1080p, 720p, and 480p. Use the vectorscope on analogue HDTV with graticules for both 100% and 75% colour bars.

TDS3AAM Advanced Analysis Module

The TDS3AAM module adds advanced analysis capability to your TDS3000B. With it you can define waveforms as arbitrary math expressions - including a variety of mathematical functions plus constants and measurements. The TDS3AAM also adds Area and Cycle Area measurements, differentiation and integration functions, measurement averaging, and measurement statistics. Enhanced XY cursor capabilities and the FFT capabilities of the TDS3FFT module are also included.

Math Capabilities:

- Grayscale Display of math waveforms
- User-created Waveform expressions
- Arbitrary math, Math on Math, Scalar math using constants or measurements
- Differentiation, Integration

Measurement Additions:

- Area and cycle area
- Measurement averaging, statistics
- Includes TDS3FFT functionality

TDS3GV- Triple communications module with OpenChoice™ software.

Provides GPIB (IEEE-488.2) and RS-232-C for programmability: full talk/listen capability. Plus VGA output for direct display on VGA equipped monitors. The OpenChoice™ software allows the capture of data, waveforms and screen images and is compatible with standard Excel and Word packages.

TDS3LIM Limit Test Module

The TDS3LIM module offers fast, simple verification that your circuit is operating within its intended parameters. You can easily create waveform reference templates to compare to your live waveforms. Compare any number of input channels with any combination of four references. And you can set actions for the TDS3000B to take if a waveform strays outside the reference limits: stop acquisition, sound a beep, print a hardcopy, or save the waveform to

disk. The TDS3LIM is excellent for manufacturing test and other repetitive testing applications where quick Go/No-Go decisions are required.

AC3000 soft carry case for TDS3000

RM3000 rackmount kit for TDS3000

ADA400A 100x, 10x, 1x, 0.1x high gain differential preamplifier probe

P6243 1GHz 1pF input C 10x active probe

P5205 1.3kV, 50MHz high voltage differential probe

P5210 5.6kV, 50MHz high voltage differential probe

P5100 2.5kV, 100x high voltage passive probe

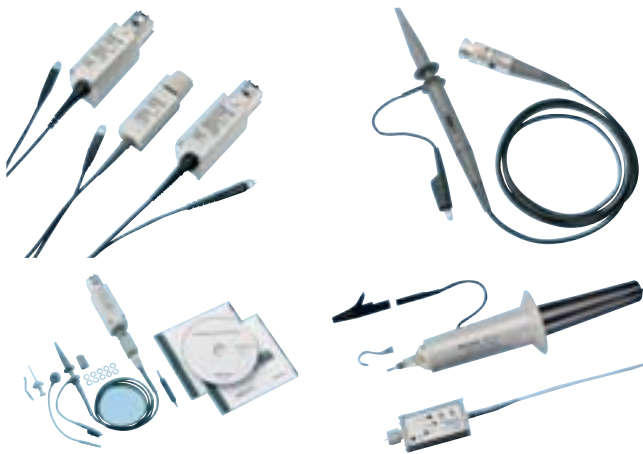
TCP202 15A DC + peak AC 50MHz AC/DC current probe

TDS3BATC Battery Pack, 3000 Series

230419

Price Each			
Mfrs. List No.	Order Code	1+	+
TDS3VID	207-172	739.69	--
TDS3AAM	369-3867	739.69	--
TDS3GV	369-3880	690.17	--
TDS3LIM	369-3879	739.69	--
AC3000 E1	207-330	259.97	--
RM3000	207-342	500.35	--
ADA400A	207-421	2,069.48	--
P6243	207-433	1,213.22	--
P5205	207-457	1,592.86	--
TCP202	207-482	2,534.75	--
P6139A	312-3730	512.73	--
P3010	312-3704	207.36	--
TDS3BATC	166-5113	1,133.44	--

Tektronix Probes



Only genuine Tektronix probes measure up to your Tektronix oscilloscope with designed-in compatibility and identical standards for quality and performance you can always depend on. Choosing the right kind of probe is important; passive and active voltage probes, current probes, differential probes and high voltage probes. All are well built, reliable and offer a long life.

Precision Measurements start right at the probe tip. The right probes matched to the oscilloscope and the device-under-test (DUT) allow the signal to be brought to the oscilloscope cleanly for the greatest signal fidelity and measurement accuracy.

To measure typical signal and voltage levels, passive probes provide ease-of-use and a wide range of measurement capabilities at an affordable price. The pairing of a passive voltage probe with a current probe will provide you with an ideal solution to measure power.

However, general-purpose passive probes cannot accurately measure signals with the fastest rise times, and may excessively load sensitive circuits. To measure signals with fast rise times, a high-speed active or differential probe will provide more accurate results. The P5120 has isolated channel performance for the measurement from earth ground and full isolation between the channels. The P2220 probe also provides floating measurement capability up to 30Vrms with TPS2000 series only.

Tektronix is the leader in probing technologies. Offering world's most advanced high-bandwidth differential and active probes to access dense, high-speed circuitry with the highest signal fidelity currently achievable, all matched perfectly to Tektronix oscilloscopes.

Passive Probes

Mfrs. List No.	Cable Length	Bandwidth	Input Res.	Input Cap.	Max Voltage	Compensation	Read Out	Tip/head Style
P3010	2m	10	100MHz	10MΩ	13pF	420 V _{RMS}	15 to 35pF	5 mm (Min.)
P6114B	2m	10	400MHz	10MΩ	14.1pF	300 V _{RMS}	15 to 35pF	5 mm (Min.)
P6139A	1.3m	10	500MHz	10MΩ	8pF	420 V _{RMS}	8 to 12pF	3.5 mm (Comp.)
P2220	1.5m	1/10	6/200MHz	1/10MΩ	110/17pF	300 V _{RMS}	15 to 25pF	5 mm (Min.)
P2221	1.5m	1/10	200MHz				10 to 25pF	

High Voltage Passive Probes

P5120	3m	20	200MHz	5MΩ	11.2pF	1000 V _{RMS}	15 to 25pF	Various supplied
P5100	3.1m	100	250MHz	10MΩ	2.75pF	1000 V/2500V	7 to 30pF	SMD

Low Capacitance 50 Ω Probes

Mfrs. List No.	Cable Length	Bandwidth	Input Res.	Input Cap.	Max Voltage	Instrument Input	Read Out	Tip/head OutStyle
P6158	1.2m	20	3GHz	1kΩ	1.5pF	22 V _{RMS}	50Ω	3.5 mm (Comp.)

Active Probes

Mfrs. List No.	Cable Length	Atten.	Bandwidth	Input Res.	Input Cap.	Max Voltage	Linear Range	DC offset Range	Tip/head OutStyle
P6243	1.3m	10	1GHz	1MΩ	≤1pF	±15V	±8V	N/A	SMD Active

Differential Probes

Mfrs. List No.	Cable Length	Atten.	Bandwidth	Input Res.	Input Cap.	Diff input Voltage	Common mode voltage	Typical CMRR	Interface style
ADA400A		100	3dB	1MΩ	55pF	±10V RMS	0.01V	>80dB	TekProbe
		10	1MHz			±10V RMS	1V		
		1				±40V RMS	10V		
		0.1				±40V RMS	80V		
P5200	1.8m	50 / 500	25MHz	4MΩ	7pF	1300V _{RMS}	1000V _{RMS}	>50dB	TekProbe
P5205	1.8m	50 / 500	100MHz	4MΩ	7pF	1300V _{RMS}	1000V _{RMS}	>50dB	TekProbe
P5210	1.8m	100 / 1000	50MHz	8MΩ	7pF	4400V _{RMS}	2200V _{RMS}	>50dB	TekProbe
P6246	1.2m	1 / 10	400MHz	200kΩ	<1pF	±850mV/8.5V	±7V	>80dB	TekProbe

Current Probes

Mfrs. List No.	Cable length	Bandwidth	Peak pulse	Max AC-p	Max DC	Rise time	Insertion impedance	Max barewire voltage
TCP312	1.5m	100MHz	50A	60A	5-1A/V 30-10A/V	≤3.5ns	0.08Ω	Insulated only
TCP305	1.5m	50MHz	50A	100A	25-5A/V 50-10A/V	≤7ns	0.035Ω	Insulated only
TCP303	2m	15MHz	150A	424A	25-5A/V 150-50A/V	≤23ns	0.01Ω	600V, 300V
TCP404XL	8m	2MHz	750A	1414A	750* ⁶ -1A/mV 500-1A/mV	≤175ns	0.1mΩ	300V
TC202	2.2m	50MHz	50A	40A	15A	≤7ns	0.07Ω	3kV
P6021	1.5m	60MHz	250A	15A	0.5A	≤5.8ns	0.03Ω	600V
P6022	2.75m	120MHz	100A	6A	0.2A	≤2.2ns	0.03Ω	600V
CT1	1.07m	1000MHz	12A	1.4A	0.3A	≤0.35ns	1Ω	175V _{RMS}
A621		50kHz		2000A				600V
A622		100kHz		100A				600V

249567.460888

Mfrs. List No.	Bandwidth	Order Code	1+
----------------	-----------	------------	----

Passive Scope Probes

P3010	100MHz	312-3704	207.36
P6114B	400MHz	320-4170	690.90
P6139A	500MHz	312-3730	512.73
P2220	200MHz	798-4219	143.40
P2221	200MHz	166-5109	143.40

High Voltage Probes

P5120	200MHz	798-4227	574.63
P5100	250MHz	207-470	534.39

Low Capacitance 50Ω Probes

P6158	3GHz	390-8574	647.87
-------	------	----------	--------

Active Scope Probes

P6243	1GHz	207-433	1,213.22
-------	------	---------	----------

Differential Probes

ADA400A	1MHz	207-421	2,069.48
P5200	25MHz	872-477	1,083.23
P5205	100MHz	207-457	1,592.86
P5210	50MHz	207-469	3,206.35
P6246 E1	400MHz	207-445	4,942.10

Current Probes

TCP312	100MHz	436-0242	2,687.30
TCP305	50MHz	436-0254	1,679.52
TCP303	15MHz	436-0266	3,152.71
TCP404XL	2MHz	436-0280	4,354.58
TCP202	50MHz	207-482	2,534.75
P6021	60MHz	802-0515	1,798.16
P6022	120MHz	798-6882	1,928.15
CT1	1GHz	390-8501	985.20
A621	50kHz	798-6866	718.03
A622	100kHz	798-6874	731.44

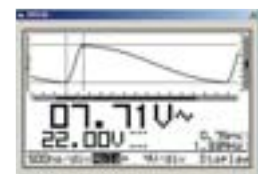
Accessories

TCPA300	Current measuring system	436-0230	2,847.00
(requires TCP305)			
TCPA400	Current measuring system	436-0278	2,643.08
(requires TCP404XL)			
1103 A2	Probe power supply 240V, 50Hz	332-0194	☎

Oscilloscopes - Handheld

Pocket Oscilloscope

PPS10



Oscilloscopes - Handheld - continued

Pocket Oscilloscope - continued

PPS10 - continued

PPS10

- Joystick control for true hand-held operation
- RS232 interface for PC connectivity
- Measures dBm, dBV, DC, rms ...
- Trigger modes: run, normal, once, roll, slope +/-
- X and Y position signal shift
- Audio power calculation (rms and peak)
- Signal markers for Voltage and Time
- Frequency readout (through markers)
- Recorder function (roll mode)
- Signal storage (2 memories)
- Full auto set up
- 128 x 64 pixel high-contrast LCD screen
- DVM read-out with x10 option
- Time base: 200ns to 1hour/div in 32 steps
- Vertical Sensitivity: 5mV to 20V/div in 12 steps
- 0.1mV sensitivity
- 10MHz sampling rate
- 2MHz analogue bandwidth
- 10 hours operation from 5x AAA battery or NiCd / NiMH (not included)
- Includes battery charging circuit
- Supplied with insulated safety probe, user manual and RS232 cable

446675.436852

		Price Each	
Description	Order Code	1+	3+
Pocket Scope	127-0135	578.52	520.68
		Price Each	
Standard Calibration Charge	S	☎	
UKAS Calibration Charge	N		
		☎	

8MHz Handheld Oscilloscope / DMM



A compact, handheld oscilloscope and high performance DMM.

- 60mm mono LCD display (160x160 resolution) with backlight
- 3999 count display
- 10 x screen and setup memories
- AC/DC voltage and current measurement
- Resistance, capacitance and frequency measurement
- Continuity buzzer and diode test
- Sleep mode and low battery warning
- USB interface and PC software
- Supplied with test leads, test clips, 4 x AAA batteries, carry bag, USB lead, software, power adaptor and user manual

Bandwidth
Sampling Rate
Triggers
Vertical Sensitivity
Vertical Accuracy
Horizontal Accuracy
Time Base

DC-8MHz
40MS/s (real time)MHz
Free run, Normal, Single Shot
20mV/div to 500V/div
±(5%+1)
±(0.01%+1)
100ns/div to 5s/div

DC Voltage

400mV, 4V, 40V, 400V, 1000V
4V, 40V, 400V, 750V

DC Current

400µA, 4000µA, 40mA, 400mA,

AC Current

400µA, 4000µA, 40mA, 400mA,

Resistance

400Ω, 4kΩ, 40kΩ, 400kΩ,

Capacitance

40nF, 400nF, 4µF, 100µF

Frequency

10Hz to 10MHz

Input Impedance

10MΩ

General

Safety

1000V CAT II, 600V CATIII

Dimensions (WxHxD)

100x200x48mm

Weight

498g

510045.509508

Description	Order Code	Price Each	
		1+	3+
Handheld Scope / DMM	156-3726	686.13	679.25

Digital Oscilloscope

ScopeMeter 123



H=232, W=115, D=50mm
Weight=1.2kg



The Scopemeter 123 is the rugged solution for industrial troubleshooting and installation applications. It's a truly integrated test tool, with oscilloscope, multimeter and paperless recorder in one affordable easy-to-use instrument. Find fast answers to problems in machinery, instrumentation, control and power systems.

- Dual-input 20 MHz digital oscilloscope
- Two 5,000 counts true-RMS digital multimeters
- A dual-input TrendPlot™ recorder
- Connect-and-View™ trigger simplicity for hands-off operation
- Shielded test leads for oscilloscope, resistance and continuity measurements
- Up to 7 hours battery operation
- 600 V CAT III safety certified
- Optically isolated RS-232 interface
- Rugged, compact case
- All inputs protected to EN61010-1 CAT III 600V

Included accessories

PM8907 line adapter/charger, STL120 shielded test leads set, AC120 alligator clips, HC120 hook clips, BB120 shielded BNC adapter, BP120 NiCad battery pack.

SCC120 Kit Contents (Optional)

Hard-shell carrying case, optically isolated RS-232 interface cable, and FlukeView ® for Windows® software.

Bandwidth	20MHz	True RMS multimeter	5000 counts, dual input
Sample rate	25 MS/s	Connect and view triggering	Yes
Input sensitivity	5mV - 500 V/div	Video triggering with line count	Yes
Timebase range	20ns/div to 1 min/div	Dual input trendplot	Yes
Inputs and digitisers	2	Memory for screens/set ups	10
Max record length	512 min/max points per input	Line power	Adapter/battery charger included
Glitch capture	40 ns	Batteries	5 hours NiCad
Scope measurements	26 automatic		

385823

	Mfrs.		Price Each		
Description	List No.	Order Code	1 +	3 +	+
Scopemeter	UK Version	908-137	2,728.73	--	--
Fluke View Software and accessories	SCC120E Kit	908-149	769.00	730.55	--
Carry Case	C101	947-9783	89.00	82.33	--
			Price Each		
Standard Calibration Charge			\$	☎	
UKAS Calibration Charge			N	☎	

Oscilloscopes - PC Based

PicoScope 2205 Education Oscilloscope Kit



The PicoScope Education Kit has been developed for both students and teachers and allows them to carry out a range of educational experiments including a speed of sound measurement, a Faradays Law drop test and a simple AC dynamo. The results are displayed as high-quality waveforms that can then be printed or included in reports. A further six tests are built in to the software, and new tests can easily be created and stored for instant recall when required.

The kit includes a PicoScope 2205 PC Oscilloscope and Pico's well-established PicoScope 6 software. These form the basis of all the experiments, and enable the student to trigger on and capture complex waveforms with very little previous experience.

The PicoScope Education Kit meets all the requirements of the education syllabus. It is easy to use, with fully illustrated instructions built into the software.

Included experiments:

- Measuring the value of a capacitor
- Serial data
- Speed of a pulse along a cable
- Acceleration due to gravity
- Faradays law test
- Speed of sound
- AC dynamo generator

The kit contains:

- PicoScope 2205 USB Oscilloscope
- Speed of sound apparatus
- Faradays Law apparatus
- AC dynamo apparatus
- 2x BNC to 4mm plug cables
- BNC to crocodile clip cable
- USB cable
- Tough carry case
- Includes PicoScope for Education software with free software updates for life
- Supports Windows XP, Vista and 7.

PicoScope 2205 PC Oscilloscope Specifications

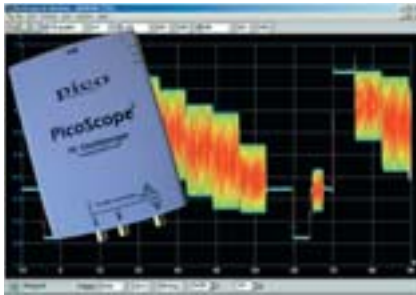
Number of channels	2
Bandwidth	25 MHz
Sensitivity	10 mV/div to 4 V/div
Accuracy	3%
Nominal input impedance	1 MΩ 20 pF
Overload protection	±100 V on single input
Input coupling	AC or DC, software-controlled
Input connectors	BNC
Display resolution	Up to 4000 points horizontally. Number displayed subject to screen size.
Display styles	Real-time, digital colour, analogue intensity
Operating temperature range	+5 °C to +45 °C
Power	Powered from USB port
PC connection	USB 2.0 (compatible with USB 1.1)
Dimensions	100 mm x 135 mm x 45 mm
Weight	210 g
Approvals	FCC, CE

537305

Mfrs.	Order Code	Price Each
List No.		1+
PICO EDUCATION KIT	171-5268	1,066.29

General Purpose PC Oscilloscopes

PicoScope 3000 Series



- Up to 200MS/s real-time sampling rate
- Up to 10GS/s sample rate (repetitive mode)
- Up to 200MHz bandwidth
- Up to 1MB buffer memory
- Advanced display and trigger modes
- Compact and portable
- USB2 powered for high speed data transfer (USB1.1 compatible)
- Supplied with PicoScope (oscilloscope/spectrum analyser) and PicoLog (data acquisition) software
- Supports Windows XP, Vista and 7

The PicoScope 3000 series offer performance levels that match or exceed conventional instruments. A USB interface connects the instrument to the PC, to turn your PC into an oscilloscope and spectrum analyser. A range of advanced display modes, measurements and automated measurements are available to analyse even the most complex of signals. The unit also provides a spectrum analyser and multimeter operation, and can simultaneously display this information on multiple windows on the PC screen.

	3204	3205	3206
PicoScope			
Bandwidth	50MHz	100MHz	200MHz
Sample rate	2.5GS/s	5GS/s	10GS/s
Sample rate (repetitive)			
Sample rate (single shot)	50MS/s	100MS/s	200MS/s
Channels	2+Ext trigger	2+Ext trigger/Sig gen	2+Ext trigger/Sig gen
Timebase	5ns/div to 50s/div	2ns/div to 50s/div	1ns/div to 50s/div
Timebase accuracy	50ppm	50ppm	50ppm
Spectrum ranges	0 to 25MHz	0 to 50MHz	0 to 100MHz
Record length	256K	512K	1MB
Resolution accuracy	8 bits/3%	8 bits/3%	8 bits/3%
Ranges	10mV to 2V/div	10mV to 2V/div	10mV to 2V/div
PC Connection	USB2.0 or USB1.1	USB2.0 or USB1.1	USB2.0 or USB1.1

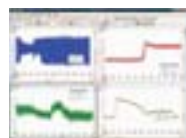
PicoScope Case Bundle

PicoScope PC oscilloscope, Software & Reference CD, Oscilloscope Probes, USB cable, installation guide and hard carry case.

Mfrs.	Order Code	Price Each
List No.		1+ +
3204 - 50MHz	782-0100	1,507.43 --
3205 - 100MHz	782-0119	2,270.59 --
3206 - 200MHz	782-0127	3,033.81 --
3204 CASE BUNDLE	123-0262	1,552.91 --
3205 CASE BUNDLE	123-0263	2,316.09 --
3206 CASE BUNDLE	123-0264	3,079.28 --
		Price Each
Standard Calibration Charge	S	Ⓜ
	N	Ⓜ

PicoScope 6000 Series

350 MHz Oscilloscopes



- 5 GS/s real-time sample rate
- 350 MHz analog bandwidth
- 8-bit vertical resolution
- 4 channels
- Up to 1 gigasample buffer memory

- Hi-speed USB 2.0
- Built-in arbitrary waveform generator and spectrum analyser
- Advanced features: serial decoding and mask limit testing built-in
- Supports Windows XP, Windows Vista and Windows 7 (32 and 64-bit)

The new PicoScope 6000 Series oscilloscopes are the first USB scopes to offer 5 GS/s real-time sampling rate, which is accompanied by an impressive 350 MHz bandwidth. The 6403 also boasts a huge 1-gigasample memory buffer which can be utilised in a number of ways, including:

- Capturing long detailed signals such communication buses or serial data, with up to 100 million times zoom
- Preserving the high sample rate at the long timebases
- Capture and save up to 10000 events in the waveform buffer

PicoScope 6000 series is supplied with PicoScope 6 software package for Windows PCs and laptops, and an SDK for third party programming languages such as LabVIEW, C/C++ and VB.

Model	PicoScope 6402	PicoScope 6403
Number of channels	4	
Vertical resolution	8 bits	
Analog bandwidth	350 MHz	
Real-time (single shot) Sampling rate	5 GS/s (divided by number of active channels)	
Max buffer memory::		
Single channel	32 MS	1 GS
Two channels	16 MS	512 MS
Three or four channels	8 MS	256 MS
Input characteristics	BNC, 50 ohm / 1 M ohm II 15pF	
Voltage ranges	9 ranges from ±50mV to ±20 V FSR (10 mV/div to 4 V/div with 10 divisions)	
Voltage accuracy	3%	
Timebase Ranges	1 ns/div to 200 s/div	
Timebase accuracy	5 ppm	
Trigger modes	Edge, advanced edge, window, runt, pulse width, interval, window pulse width, level dropout and window dropout	
Serial decode support	CAN bus (10 kb/s to 1 Mb/s)	
Display modes	Real time scope, digital colour persistence, analog intensity, spectrum view, XY display	
Waveform generator:	50 ohm, signal out BNC on rear panel, 200 M Samples per second, 16 k memory, 12-bit resolution	
AWG mode	50 mHz to 20 MHz	
Function mode	Built-in functions include: Sine, square, triangle, ramp, sinx/x, Gaussian, half-sine and white noise	
Spectrum analyzer	DC to 350 MHz	
PC connection	Hi-speed USB 2.0 Compatible with USB 1.1	

Kit contents: Hard carry case, Oscilloscope, four 500 MHz x10 probes, one 2 footed probe stand, PicoScope software, installation guide, USB cable, power supply with UK and EURO mains leads.

600015

Mfrs.	Order Code	Price Each
List No.		1+
PICOSCOPE 6402	178-6298	9,999.55
PICOSCOPE 6403	178-6299	12,860.65

Oscilloscope Accessories

BNC to Crocodile Clip Lead



A common test lead for electronics applications. Connects to oscilloscopes, frequency counters, function generators, etc. Manufactured from 50Ω coaxial cable. IEC1010 rating: 30V AC, 60V DC.

248961

Mfrs. List No.	Order Code	Price Each
		1+ 10+
JR9021-2M	428-4227	11.07 8.99

Oscilloscope Probes



A range of high quality, low cost oscilloscope probes with x1 or x10 attenuation. Supplied with probe accessories. Length: 1.2m

248924

Mfrs.	Frequency	Order Code	Price Each
List No.	Rating		1+ 10+
PROBE60S	DC to 60MHz	428-4033	37.28 33.62
PROBE100	DC to 100MHz	428-4045	78.71 76.44
PROBE150	DC to 150MHz	428-4057	93.12 89.84
PROBE250	DC to 250MHz	428-4069	109.06 102.86

Oscilloscope Accessories - continued

Oscilloscope Probes



A range of high quality, low cost replacement probes.

- X1/X10 attenuation (76-107 is X10 only)
 - 1Ω (X1) and 10MΩ (X10) input impedance
 - 1.2m cable length
 - 10-35pF compensation adjustment
 - Low noise
- 76-107 includes a readout actuator pin on the BNC connector
 - 600V maximum (DC + AC peak)
 - CE marked, meets EN-61010-2-031 CAT I (IEC-1010) requirements
 - Includes accessory kit and storage pouch

Model	Bandwidth (X10 position)	Risetime (X10 position)	Order Code
76-109	60MHz (-3dB) into 18pF	5.8ns	342-1582
76-102	100MHz (-3dB) into 16pF	<3.5ns	342-1594
76-105	200MHz (-3dB) into 14pF	<1.8ns	342-1600
76-106	250MHz (-3dB) into 14pF	<1.4ns	342-1612
76-107 (X10)	250MHz (-3dB) into 14pF	<1.4ns	342-1624

Mfrs. List No.	Order Code	1 +	5 +	10 +
76-109	342-1582	91.14	72.88	58.36
76-102	342-1594	97.52	78.02	62.39
76-105	342-1600	155.48	124.37	99.55
76-106	342-1612	164.88	132.40	105.55
76-107	342-1624	168.64	134.37	107.90

Oscilloscope Probes
6499 and 6500

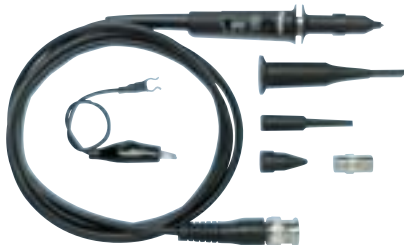


- All probes meet IEC1010-2-031, 300V, CAT II

Model	Attenuation	Bandwidth	Compensation	Voltage max
6499	x1 / x10	20 / 150	10 - 60pF	300
6500	x1 / x10	30 / 250	10 - 50pF	300

Mfrs. List No.	Order Code	1 +	5 +	10 +
20/150MHz Probe	6499 847-1754	126.75	126.75	120.34
30/250MHz	6500 847-1762	129.82	129.82	124.45

Oscilloscope Probes
General Purpose

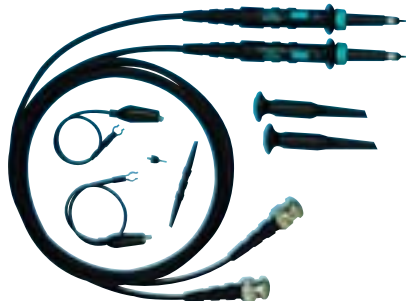


- One piece (monolithic) design for robust probe life
- Probe bandwidth ratings are specified as a system bandwidth (both probe and oscilloscope). The result is a probe frequency response that can be considered transparent
- All probes meet IEC1010-2-031 300V CAT I

Model	Probe Ratio	Input Voltage	System Bandwidth MHz	Risetime	Input Res MΩ	Input Cap pF	Compensation range pF	Readout Actuator
4550B	1:1	300	Up to 15 ³	<23.33 ³	1	<64 + O-Scope	NA	No
	10:1	300	100	<3.50	10	<10.5	10 - 60	
5806A	1:1	300	Up to 20 ³	<17.5 ³	1	<77 + O-Scope	NA	No
	10:1	300	200	<1.75	10	<11.5	10 - 60	
5812A	10:1	300	300	<1.17	10	<17	10 - 60	Yes
6069A	10:1	300	250	<1.40	10	<10	10 - 30	No

Description	Mfrs. List No.	Order Code	1 +	5 +	10 +
100 MHz Probe	4550B	847-1614	106.82	106.42	102.06
200 MHz Probe	5806A	847-1690	122.32	122.32	117.27
300 MHz Probe	5812A	847-1703	219.50	219.50	208.12
250 MHz Probe	6069A	847-1738	113.65	113.65	108.57

Passive Modular Probes
TT-LF-312 and TT-MF-312

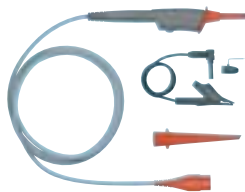


Set comprises: 2 test probes, 2 plug-in spring-hook probe tips, 2 earth leads, a spare probe tip and an alignment tool.

	TT-LF312	TT-MF312
Bandwidth	150MHz	250MHz
Max. Input Voltage	600V	600V
Attenuation	x1 / x10	x1 / x10
Rise Time	24ns / 2.3ns	18ns / 1.4ns
Input Capacitance	47pF / 15.5pF	47pF / 15pF
Input Impedance	10Mohm	10Mohm
Cable Length	1.2m	1.2m

Mfrs. List No.	Order Code	1 +	2 +	5 +
TT-LF312-2-6 10020-2-6	430-8098	121.85	118.08	115.27
TT-MF312-2-6 10020-2-6	430-8104	186.60	180.37	176.31

Insulated Oscilloscope Probes
72940-2



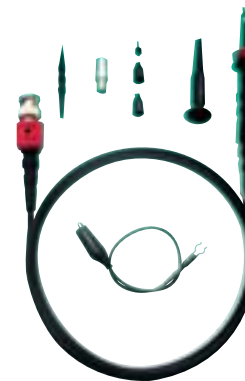
- With CAT II, 600V (CAT III, 300V) rating, these probes are ideal for use with portable oscilloscopes
- 500 MHz bandwidth
- Fully insulated - Meets IEC 61010-031
- Ergonomic design with comfort grip
- Push-on hook and ground contact

Accessories included: Push-on hook clip, push-on reference contact, reference lead with alligator clip for the connection to the 0.2mm socket in the handle

	72940-2 (Red)	
Dividing Ratio	10:1	Lead Length
Input Capacitance	13pF	Ground Clip Lead Length
Input Impedance	10MΩ	Ground Clip Opening
Compensation Range	10pF to 30pF	Rated Voltage
Frequency Range	0 - 500MHz	CAT II, 600V (CAT III, 300V)
Rise Time	1ns	Frequency dependant

Mfrs. List No.	Order Code	1 +	3 +	5 +
72940-2	142-2700	504.49	489.37	474.71

High Voltage Probes
HV Series



	HV150	HV250
Attenuation	x100	x100
Loading Input	100pF	100pF
Bandwidth	300MHz	300MHz
Rise Time	1.2ns	1.2ns
Max. Input voltage	1500Vp	2500Vp

Length: 1.2m

Mfrs. List No.	Order Code	Price Each
HV150	220-541	122.72
HV250	354-612	197.10

Isoprobe® II Safety Oscilloscope Probes



Fully insulated, high frequency oscilloscope probes. Supplied with plug-in reference lead

- Highly flexible coaxial cable
- Insulated safety BNC plugs
- Ergonomically designed probes with finger guards and stainless steel tips
- Up to 1000V CATII IEC1010 rating

10:1 250MHz Probe: A medium frequency divider probe that is a valuable aid to the electric power engineer who wants both reliability and safety. High dielectric strength. Rise Time: 1.2ns. Input Impedance: 10MΩ. Capacitance: 14pF. IEC 1010 rating: 1000V CATII.

10:1 450MHz Probe: A high quality probe assembly for the professionally equipped test engineer. Rise Time: 1ns. Input Impedance: 10MΩ. Capacitance: <14pF. IEC1010 rating: 1000V CATII.

100:1 300MHz Probe: A high quality oscilloscope probe assembly for the safe measurement of high voltages. The low input capacitance and high input impedance makes the probe particularly suitable for measurements on sensitive circuits. For voltages up to 5kV. Rise Time: <1ns. Input Impedance: 100MΩ. Capacitance: ≤6pF. IEC1010 rating: 1000V CAT II.

339906.267770

Description	Order Code	Price Each		
		1+	5+	10+
10:1 250MHz Safety Probe	499-1540	192.57	181.96	171.33
10:1 450MHz Safety Probe	499-1552	209.24	197.10	185.00
100:1 300MHz Safety Probe	499-1564	201.66	191.05	178.93

AC Current Clamp

i200s



A dual range 20A and 200A ac current clamp with voltage output via a safety insulated BNC connector. A dual banana to BNC adaptor is supplied to allow the i200s to be connected to multimeters with banana inputs.

- Two ranges: 20 A & 200A, 10 or 100 mV/ Amp output
- Take accurate current readings without breaking the circuit
- Max. conductor ∅ 20 mm
- CAT III 600V safety rating

FLUKE Compatibility:

27, 43B, 77 IV, 83V, 87V, 88V, 114, 115, 117, 120 Series, 190 Series, 175, 177, 179, 187, 189, 430 Series, 741B, 743B, 744, 787, 789, 1577, 1587, 8845A, 8846A,

Nominal Current Range(s)	20A, 200A
Continuous AC Current Range	0.1 - 24A, 0.5 - 200A
Highest Current	240A
Lowest Measurable Current	0.5A
Basic Accuracy (48-65Hz)	1.5% +0.5A
Useable Frequency	40Hz - 10kHz
Max. Working Voltage	600V AC
Max. Conductor Dia.	20mm
Output Levels	100mV/A, 10mV/A
Output Cable (m)	2m
BNC Adaptor	✓
Safety	CAT III 600V

489307

Mfrs. List No.	Order Code	Price Each		
		1+	3+	5+
I200S	142-2694	660.45	640.63	621.40
		Price Each		
Standard Calibration Charge		S	Ⓐ	
NATA Calibration Charge		N	Ⓐ	

AC Current Clamp

i400s



- CAT IV 600 V / CAT III 1000 V safety rating.
- Soft non-slippery overmold handle.
- Two ranges: 40 A & 400 A, 10 & 1 mV/Amp output.
- Max. conductor ∅ 32 mm.

FLUKE Compatibility:

43B, 120 Series, 190 Series, 430 Series (No adaptor needed)

To work with the models shown below a dual banana plug 4mm male to female BNC adaptor is required

27, 77 IV, 83V, 87V, 88V, 114, 115, 117, 175, 177, 179, 187, 189, 741B, 743B, 744, 787, 789, 1577, 1587, 8845A, 8846A

Nominal Current Range(s)	40A, 400A	Max. Working Voltage	1000V
Continuous AC Current Range	0.5 - 40A, 5 - 400A	Max. Conductor Dia.	32mm
Highest Current	1000A	Output Level(s)	10mV/A, 1mV/A
Lowest Measurable Current	0.5A	Output Cable (m)	2.5m
Basic Accuracy (48-65Hz)	2% +0.15A	BNC Adaptor	✓
Useable Frequency	45Hz - 3kHz	Safety	CAT IV 600V, CAT III 1000V

489308.503195

Mfrs. List No.	Order Code	Price Each		
		1+	3+	5+
I400S	142-2695	561.97	545.11	528.76
		Price Each		
Standard Calibration Charge		S	Ⓐ	
UKAS Calibration Charge		N	Ⓐ	

Current Probe

i310s



The i310s current probe is based on Hall Effect technology for use in measurement of both DC and AC current. The i310s may be used in conjunction with oscilloscopes and other suitable recording instruments for accurate non-intrusive current measurement.

- i310s connects to oscilloscopes via safety BNC, to multimeters via BNC-4mm adaptor supplied
- Dual range 30/300 A
- Wide bandwidth - 20kHz (-3dB)
- Output sensitivity of 10/1 mV / A
- 10 kΩ Load Impedance
- Accuracy of +/- 1% of reading ±50/300 mA
- Maximum jaw conductor 19mm (0.75 in)
- Battery life - 30 hours with low battery indicator
- Superior noise rejection for power electronics applications
- Typical applications include inverters, switch mode power supplies, industrial controllers requiring current measurement and/or waveform analysis, automobile diagnostics.

Safety Standards

- BS EN 61010-1: 2001, BS EN 61010-2-032: 2002, BS EN 61010-031: 2002

- 300 V_{RMS}, Category III, Pollution Degree 2

- Use of the probe on uninsulated conductors is limited to 300 V AC_{RMS} or DC and frequencies below 1kHz

EMC Standards

- BS EN 61326 : 1998 +A1, A2, & A3

488176.502130

Mfrs. List No.	Order Code	Price Each		
		1+	3+	5+
I310S	144-1502	672.32	652.15	632.58
		Price Each		
Standard Calibration Charge		S	Ⓐ	
UKAS Calibration Charge		N	Ⓐ	

AC Current Clamp

i1000s



A clamp-on ac current probe designed to expand oscilloscope applications in industrial and power environments.

- Ideal for measuring distorted current waveforms and harmonics.
- Allows accurate measurement of currents from 100 mA to 1000 A rms, 5 Hz to 100 kHz without breaking into the circuit
- A passive filter eliminates noise and

- ring on rapidly rising di/dt waveform, ensuring accurate screen displays
- Connects directly to an oscilloscope through a reinforced coaxial cable and an insulated BNC connector

FLUKE Compatibility:

43B, 120 Series, 190 Series, 430 Series (No adaptor needed)

To work with the models shown below a dual banana plug 4mm male to female BNC adaptor is required

27, 77 IV, 83V, 87V, 88V, 114, 115, 117, 175, 177, 179, 187, 189, 741B, 743B, 744, 787, 789, 1577, 1587, 8845A, 8846A

Nominal Current Range(s)	10A, 100A, 1000A
Continuous AC Current Range	0.1 - 10A, 0.1 - 100A, 1 - 1000A
Highest Current	2000A
Lowest Measurable Current	0.1A
Basic Accuracy (48-65Hz)	1% +1A
Useable Frequency	5Hz - 100kHz
Max. Working Voltage	600V AC

Oscilloscope Accessories - continued

AC Current Clamp - continued

i1000s - continued

Max. Conductor Dia.	54mm
Output Level(s)	100mV/A, 10mV/A, 1mV/A
Output Cable (m)	1.6m
BNC Adaptor	✓
Safety	CAT III 600V

489309.503194

Mfrs. List No.	Order Code	1+	3+	5+
I1000S	142-2696	1,277.76	1,239.43	1,202.26
Price Each				
Standard Calibration Charge	S			
NATA Calibration Charge	N			

AC Scope Current Probe 50MHz i50s

FLUKE


Designed for use with all types of oscilloscopes, the i50s current probe offers an ergonomic, robust and high performing solution for the measurement of DC and AC currents up to 50 MHz. With a permanent nominal current of 30A RMS and a measuring capacity of 50A for 10s. The i50s considerably widens the possibilities of accurate measurement of commutation currents

- Connects to oscilloscopes via safety BNC, to multimeters via BNC-4mm adaptor supplied
- Dual range 3/50 A
- Exceptional immunity to high common mode voltages (dv/dt = 5kV/μs.) amplitude = 1.5kV, error <0.05 % of IPN
- Auto Zero Function and Auto Degauss functions for optimal performance
- 30A continuous, 50A for 10 seconds
- Wide Bandwidth - 50MHz (-3dB)
- Output Sensitivity of 1 V/A (3A range) 100 mV/A (50A range)
- Rise Time < 7 ns
- Rejection Rate of fast dv/dt (5kV/μs) < 15 mA t
- External magnetic field rejection rate AC and DC 60 dB
- Typical Accuracy of +/- 0.5% of range
- Maximum jaw conductor 5mm
- Typical applications include inverters, switch mode power supplies, industrial controllers requiring current measurement and/or waveform analysis, automobile diagnostics

Safety Standards

- BS EN 61010-1: 2001, BS EN 61010-2-032: 2002, BS EN 61010-031: 2002- 300 V_{RMS}, Category I, Pollution Degree 1

EMC Standards

- BS EN 61326 : 1998 + A1, A2, & A3

488178

Description	Mfrs. List No.	Order Code	1+	3+	5+
Current Probe	I50S	144-1503	4,983.00	4,609.28	--
Power Supply	PSI50S	144-1505	1,552.32	1,505.75	1,460.59

Signal Strength & Detection

Digital RF Power Meter TDM-200

LAPLACE


The Power Density Meter measures the field strength over the range 0.001 to 200μW/cm. This extremely sensitive meter can accurately measure the RF background level even in rural areas. The meter reads true power density directly on the display with 3 ranges, 20, 200 and 2000μW/cm. For comparison, a typical cordless phone will produce 0.01μW/cm at a distance of 50 feet.

Frequency Range	3MHz - 2.5GHz (±25%) 0.5MHz - 3GHz (-3dB) 0.001μW/cm at 1GHz
Max Sensitivity	25% at 5GHz, 10% at 10GHz
Sensitivity	2000μW/cm
Max Reading	LCD, 4½ digit
Readout	Wide: 0.05MHz - 3GHz Narrow: 100MHz - 3GHz
Bandwidth	Internal Fast / Slow selector switch
Antenna	9V (PP3) internal battery
Averaging	60 hours (1000mAh battery)
Power	150x90x30mm
Battery Life	
Dimensions	

339185.343927

Mfrs. List No.	Order Code	1+	2+	5+
TDM-200	502-0475	1,399.49	1,345.86	1,282.86

Data Acquisition Systems

USB Voltage Data Logger EL-USB-3

LASCAR


L = 112, W = 27, D = 27mm

EL-USB-3 measures and stores voltage readings from power supplies, sensors or other sources. User settable logging rate, start-time and alarms and the downloads are stored via a PC's USB port. Software requires Win 98/2000 or XP and allows voltage data to be graphed and printed.

- 32 000 readings
- Screw terminal connection
- 2 user programmable alarm thresholds
- Status indicated by flashing red and green LED
- User selectable measurement unit and scaling factor
- Supplied with battery and software

Measurement range	0 to 30V d.c.	Accuracy	±1%
Internal resolution	100mV d.c.	Logging rate	1 sec to 12 hours

381903.381933

Mfrs. List No.	Order Code	1+	+	+	+
EL-USB-3	852-2901	136.40	--	--	--

4-20mA Current Loop USB Data Logger EL-USB-4

LASCAR


Length = 112mm Ø27mm

Measures and stores up to 32,000 current loop readings over a 4-20mA d.c. measurement range. The user can easily set up the logging rate and start time, and download the stored data by plugging the module into a PC's USB port and running the supplied software. The data can then be graphed, printed and exported to other applications. Correct functioning of the unit is indicated by a flashing red and green LED. The data logger features a pair of screw terminals and is supplied complete with a set of measurement leads terminating in crocodile clips.

- 4-20mA d.c. Current Loop Measurement Range
- Stores 32,000 readings
- Supplied software supports Windows 98SE/2000/XP
- USB Interface for Set-up and Data Download
- User-Programmable Alarm Thresholds
- Red and Green LED Status Indication
- At least one years continuous operation from supplied lithium battery

Measurement Range	4 - 20mA dc	Logging Rate	min: every 1s max: every 12h
Accuracy (overall error)	±1%	Operating Temperature Range	-35 to 80°C

415819.428946

Mfrs. List No.	Order Code	1+	+	+	+
EL-USB-4	100-6158	133.65	--	--	--

USB to InfraRed Converter USB-LINK-IR

LASCAR


Converts USB data into InfraRed format. This allows a PC to communicate with other devices without the need for a wire link. To operate, simply plug USB-LINK-IR into a free USB port, install the device driver and point the USB-LINK-IR at the device you wish to communicate with. USB-LINK-IR appears as a COM port to PC applications and requires no special software to operate. It requires no batteries and no power adaptor, as it is powered from the host's USB port. The module is designed to work in existing COM port applications and is ideal for modern PCs which often have no RS232 port.

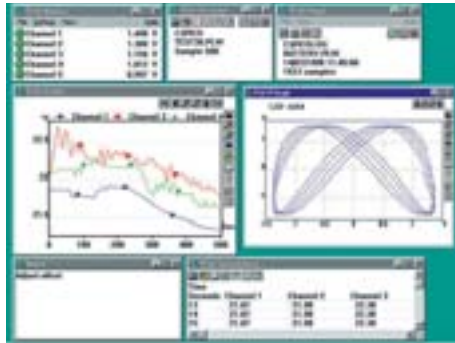
- Converts USB data into InfraRed format
- Transmit distance up to 1.0m
- Support for Windows 98SE/2000/XP, MAC OS-X, Linux 2.40 and above
- Virtual COM port device driver
- Fully compatible with IrDA 1.4 and USB 1.1/2.0 specifications
- IrDA Data rate of 9600 Baud
- Designed to work with existing COM port applications

Baud Rate	9600 bps	Communication Cone	±15°
Max. Communication Distance	1m	Operating Temperature Range	-10 to 50°C

415805.428944

Mfrs. List No.	Order Code	1+	+	+	+
USB-LINK-IR	100-6156	130.90	--	--	--

PC Based Data Acquisition Systems



A range of easy to use PC based data acquisition products. The units simply plug into a PC (desktop or laptop) and require no power supply. Replacing costly chart recorders and complicated 'plug-in' data acquisition boards, these PC based instruments allow your computer to display and record voltages. By connecting suitable sensors they can be used to measure temperature, pressure, humidity, light, resistance, current, power, speed, vibration and other signals.

General features of the range include:

- Easy to install and use – up and running in minutes
- Supplied with PicoLog data logging software and PicoScope software which works as an oscilloscope, spectrum analyser and multimeter
- Data can be displayed in both graphical or spreadsheet format both during and after data collection
- Programmable alarm limits can be set for each channel
- PicoLog can collect data from multiple converters at the same time. This not only allows a mix of these voltage input units to be used on the same PC but also allows other PC based instruments such as the ADC-200 range of PC based oscilloscopes (Farnell parts 768-870/725-432/605-578) to be used at the same time.
- Drivers and examples are provided for C, Delphi and Visual Basic, Labview, Agilent VEE6.1 and Excel
- Runs under all current Windows versions (XP, Vista and 7)

339916.267971

PicoLog 1000 Series

Multichannel Voltage Data Loggers



Terminal Board

Designed to meet the needs of a wide range of general-purpose voltage, sensor and transducer logging applications, the PicoLog 1216 and 1012 feature independent software-configurable channels, ranges, scaling and control outputs, an external terminal board for custom front-end circuitry and a choice of 10 or 12-bit input resolution.

The PicoLog 1000 Series multichannel voltage data loggers include everything needed for immediate use and are complemented by a full suite of software including the PicoLog data logging package, the PicoScope oscilloscope package and an SDK for writing user programs. Both loggers feature 3 sampling modes to meet most data logging needs: real-time continuous, streaming and block mode. Streaming allows channel voltage readings to be logged continuously at 1 kS/s on any number of channels, while real-time continuous provides averaged, time-accurate readings with automatic measurements available in PicoLog. Block mode captures at the full 1 MS/s sample rate of the logger for the duration of the 8k sample buffer.

PicoLog 1000 Series:

- 12 or 16 unipolar analog input channels
- 10 or 12-bit resolution for up to 0.5% accuracy
- up to 4 software configurable digital output lines
- 1 PWM control output (PicoScope 1216 only)
- Up to 1 MS/s sample rate
- USB connected and powered
- Software and pin-compatible with Pico USB ADC-11
- Works with Windows XP and Vista (32 and 64-bit) and Windows 7.
- Includes API and examples for C/C++/C#, VB, LabVIEW VIs
- Complete with terminal board and ready-to-go data logging software

Attribute	PicoLog 1216	PicoLog 1012
Input channels	16 channels	12 channels
Resolution (bits)	12 bits	10 bits
Sampling rate - streaming	1 kS/s per channel in PicoLog, 100 kS/s using API	1 MS/s
Sampling rate - block mode	1 MS/s	1 MS/s
Sample rate - real-time continuous	1 kS/s or greater	1 MS/s
Buffer memory	8k samples shared by all channels	8k samples
Input Type (single/diff)	Single-ended, unipolar	Single-ended, unipolar
Voltage Ranges	0 - 2.5 V	0 - 2.5 V
Accuracy	0.5% @ 12 bits	1.0% @ 10 bits
Overload protection	±30 V	±30 V
AC/DC coupling	DC coupling	DC coupling
Input Impedance	1MΩ fixed - buffered inputs	1MΩ fixed - buffered inputs

Attribute
Digital Outputs
Output power for sensors
Other outputs
Power requirements
PC connectivity
Input/output connector
Dimensions
Compliance

PicoLog 1216
4 digital outputs
2.5 V @ 10 mA. Current-limited.
PWM output (controllable in PicoScope 6).
Powered from USB port, <200 mA operating, <100 mA on startup
USB 2.0 full speed
25-way D Type, Female (pin-compatible with USB ADC-11)
45 x 100 x 140 mm
CE (EMC) Class A emissions & immunity. FCC emissions.

537304

Mfrs.	Order Code	Price Each
List No.	1+	
PICOLOG 1216	171-5266	429.20
PICOLOG 1012	171-5267	283.43
SMALL TERMINAL BOARD	171-5269	40.49

4 Channel Recorder / Logger

PCS10



- Record DC signals or slow-moving signals over very long periods
- Measurements are automatically stored on your hard disk for further processing
- Thanks to the USB connection no power supply is necessary and installation is easy and straightforward
- Signals are instantly displayed on the PC screen using an analogue or DVM display
- Power and recording diagnostic LED
- USB cable included
- PC-LAB2000 Software included

Software Features:

- Analogue trace or DVM readout
- 4 channels record simultaneously
- Minimum / maximum sample hold function for DVM
- From 1 sec to 1000 sec per division
- Storage and recall of screens (full colour) or data
- Automatic recording option for long recordings
- On screen markers for time and voltage
- DLL included for your own developments

Inputs	4 DC-coupled input channels	Sensitivity	10 mV
Input Resistance	1MΩ	Accuracy	±3% of full scale
Max. Sample Rate	100 Samples/sec	Maximum Input	30 Vdc
Input Ranges	3 - 6 - 15 - 30V		

417174.423174

Mfrs.	Order Code	1+	5+	10+
List No.				
PCS10	105-6462	187.35	168.72	155.82

Logic Testers & Analysers

50MHz Logic Probe and Pulser



A hand-held logic probe and pulser designed to aid and simplify troubleshooting on digital circuits.

L=210, Dia=28

- Tests TTL and CMOS
 - Displays DC to 50MHz
 - Detects 10ns pulse width
- | | | | |
|-----------------------------|------------------------|----------------------|-----------------------------|
| Operating voltage | 4VDC to 18VDC | CMOS | Logic "1" 60% VCC 5% |
| Max. input signal frequency | 50MHz | Logic "0" 15% VCC 5% | |
| Input impedance | 120KΩ | Pulse rate | 5pps or 400pps (switchable) |
| TTL | Logic "1" 3.0V +0.25V | Pulse width | 10ns |
| | Logic "0" 0.75V +0.25V | | |

231042

Mfrs.	Order Code	1+	5+	10+
List No.				
72-500	356-2505	155.90	151.52	148.61

Power Supplies - Laboratory/Test

Laboratory Power Supplies - Multi-channel

PSM2 and PSM3



W=255 H=150 D=305mm. Weight 7.5kg

Power Supplies - Laboratory/Test - continued

Laboratory Power Supplies - Multi-channel - continued

PSM2 and PSM3 - continued

- 2x 0-30V linearly adjustable outputs
- 4x 3 digit LEDs for voltage and current display
- Low noise and ripple (<1mV)
- Voltage and current presets
- Constant voltage and constant current modes
- Series or parallel operation
- Provides 16 hours full load stability
- Rugged metal case
- Supplied with instruction manual, power lead, spare fuse and connection leads

	PSM2/2A	PSM2/5A	PSM3/2A
Channel 1			
Voltage	0 - 30 V	0 - 30 V	0 - 30 V
Current	2A	5A	2A
Channel 2			
Voltage	0 - 30 V	0 - 30 V	0 - 30 V
Current	2A	5A	2A
Channel 3			
Voltage	—	—	5V
Current	—	—	1, 2, 3A

446907.434522

Description	Order Code	1+	3+
PSM2/2A	127-0464	312.00	296.00
PSM2/5A	127-0465	396.00	350.00
PSM3/2A	127-0466	318.00	302.00

Price Each

Standard Calibration Charge	S	☎
UKAS Calibration Charge	N	☎

Bench Power Supply - Variable Voltage



- Variable voltage and current
- Switch mode technology for improved operating efficiency
- Low ripple and noise
- Compact ergonomic design occupies a small bench area

Line Regulation	20mV	Mfrs. List No.	Order Code
Load Regulation	50mV	72-8340	157-3426
Dimensions / Weight	150 x 70 x 250mm / 2kg	72-8345	157-3427
		72-8350	157-3428

Mfrs. List No.	Order Code	1+	5+	10+
72-8340	157-3426	349.80	346.32	342.84
72-8345	157-3427	349.80	346.32	342.84
72-8350	157-3428	349.80	346.32	342.84

Bench Power Supply



Single output - 3 voltage / current ranges



- Variable voltage and current
- Switch mode technology for improved operating efficiency
- Low ripple and noise
- Compact ergonomic design occupies a small bench area

Range	Output Voltage	Output Current
1	16V	5A
2	27V	3A
3	36V	2.2A

Line Regulation 4mV
Load Regulation 20mV
Ripple and noise (Pk - Pk) 30mV
Dimensions / Weight 127 x 54 x 330mm / 1.9kg
Voltage supply 90V
Frequency supply 47Hz

Mfrs. List No.	Order Code	1+	5+	10+
72-8355	157-3429	513.24	508.11	503.02

Bench Power Supplies - Single, Dual, Triple EL-R Series



0 - 30V, 0 - 1A	0 - 56V, 0 - 1.1A	0 - 30V, 0 - 2A Dual
0 - 18V, 0 - 3.3A	0 - 15V, 0 - 5A	0 - 30V, 0 - 2A Triple
0 - 30V, 0 - 2A	0 - 30V, 0 - 3A	RS232 model available

The EL-R series has been developed from the best selling EL series with improved features that include 4 digit meters and switchable remote sense terminals.

- Linear regulation for low noise, four digit meters for high resolution
- Constant voltage or constant current with automatic crossover
- Fully isolated outputs on duals and triples, separate output switches
- Third auxiliary output variable 1.5V to 5.0V at 2A on EL302RT
- Switchable remote sense terminals allow perfect regulation at the load
- Safety & EMC complies with EN61010-1, EN50081-1, EN50082-1
- Model EL302P is digitally programmable via RS232

Mfrs. List No.	Outputs		Power	Dimensions (WxHxD)	Weight
EL301R	Single	0-30V, 0-1A	30W	140 x 160 x 320mm	3.4kg
EL183R	Single	0-18V, 0-3.3A	60W	140 x 160 x 320mm	4.4kg
EL302R	Single	0-30V, 0-2A	60W	140 x 160 x 320mm	4.4kg
EL302P	Single	0-30V, 0-2A	60W	140 x 160 x 320mm	4.4kg
EL561R	Single	0-56V, 0-1.1A	60W	140 x 160 x 320mm	4.4kg
EL155R	Single	0-15V, 0-5A	75W	140 x 160 x 320mm	5kg
EL303R	Single	0-30V, 0-3A	90W	140 x 160 x 320mm	5kg
EL302RD	Dual	0-30V, 0-2A	120W	280 x 160 x 320mm	7.5kg
EL302RT	Triple	0-30V, 0-2A	130W	280 x 160 x 320mm	7.5kg

Load regulation (main output)	<0.01% for 90% load change
Line regulation (main output)	<0.01% for 10% line change
Ripple & noise (main output)	Typically <1mV rms
Meter accuracies	Voltage 0.3% ±3 digits, current 0.5% ±3 digits

525616

Mfrs. List No.	Order Code	1+	3+
EL183R	167-0775	724.93	694.93
EL155R	167-0776	853.62	810.76
EL302P	471-8471	952.72	941.35
EL561R	167-0777	724.93	694.93
EL301R	167-0778	639.16	609.13
EL302R	167-0779	707.79	677.76
EL303R	167-0780	853.62	810.76
EL302RD	167-0781	1,222.55	1,158.20
EL302RT	167-0782	1,329.78	1,265.43

Bench Power Supplies - Single, Dual, Triple EX-R Series



0 - 35V, 0 - 5A	0 - 35V, 0 - 4A Triple	RS232 model available
0 - 35V, 0 - 4A Dual	0 - 75V, 0 - 2A Dual	

The EX-R series has been developed from the best selling EX series with improved features that include 4 digit meters and switchable remote sense terminals on most models.

- Mixed-mode power design with linear final regulation
- Four digit meters for high resolution (not EX752M)
- Constant voltage or constant current with automatic crossover
- Fully isolated outputs on duals and triples, separate output switches
- Third auxiliary output variable 1.5V to 5.0V at 5A on EX354RT
- Switchable remote sense terminals (not EX752M or EX355P)
- Multi-mode operation including 75V/4A single output mode on EX752M
- Safety & EMC complies with EN61010-1, EN50081-1, EN50082-1
- Model EX355P is digitally programmable via RS232

Mfrs. List No.	Outputs		Power	Dimensions (WxHxD)	Weight
EX355R	Single	0-35V, 0-5A	175W	140 x 160 x 320mm	3kg
EX355P	Single	0-35V, 0-5A	175W	140 x 160 x 320mm	3kg
EX354RD	Dual	2x 0-35V, 0-4A	280W	260 x 160 x 320mm	4.3kg
EX354RT	Triple	2x 0-35V, 0-4A	305W	260 x 160 x 320mm	4.3kg
EX752M	Dual	2x 0-75V, 0-2A	300W	255 x 155 x 280mm	4.3kg
Load regulation (main outputs)			<0.01% for 90% load change		
Line regulation			<% for 10% line change		
Ripple & noise (main outputs)			Typically <2mV rms, <10mV pk-pk		
Meter accuracies			Voltage 0.3% ±3 digits; current 0.5% ±3 digits		

525617

Outputs	Mfrs. List No.	Order Code	1+	3+
Single	EX355R	167-0786	1,132.44	1,080.98
Single	EX355P	471-8483	1,360.62	--
Dual	EX354RD	167-0783	1,672.94	1,647.22
Triple	EX354RT	167-0784	1,887.42	1,801.64
Dual	EX752M	351-0840	1,861.96	--

PL Series Precision DC Power Supplies

Standard and Bus Interfaced



- Linear regulation for optimum output noise and transient response
- Ultra compact dimensions for minimum bench or rack space
- True analogue controls for simplicity of operation
- Advanced digitally based feature set including V-Span and S-Lock
- S-Lock** - digitally locks voltage and current settings at the touch of a button
- V-Span** - enables the full 300° rotation of the voltage control to cover any, user-defined, voltage range

The **PL303QMD** is a dual output power supply with four modes of operation:

- Independent Mode:** The two outputs are completely independent and electrically isolated from each other.
- Isolated Tracking Mode:** The two outputs remain electrically isolated, but the voltage control of the Master output sets an identical voltage on the Slave output.
- Isolated Ratio Tracking Mode:** As normal tracking, but the Slave voltage can be set to any percentage of the Master voltage and retains that ratio as the Master voltage is varied.
- True Parallel Mode:** All of the power is channelled to the Master output which can then supply up to 6 amps.

Model	PL303	PL155	PL601	PL303QMD
Voltage Range	0 to 30V	0 to 15V	0 to 60V	0 to 30V (dual)
Current Range	0 to 3A	0 to 5A	0 to 1.5A	0 to 3A (dual)
Power Rating	90W	75W	90W	180W
Ripple & Noise	<0.4mVrms, <2mVpk-pk / <0.2mArms			
Load Regulation	Voltage - <0.01% + 2mV / Current - typically 0.01% + 500µA			
Line Regulation	Voltage - <0.01% + 2mV for 10% line change Current - <0.01% + 250µA for 10% line change			
Transient Response	<50µs to within 50mV for a 90% load change			
Temperature Coefficient	Typical: <50ppm + 0.5mV/°C / <100ppm + 1mA/°C			
Meter Accuracy	Voltage ±(0.1%rdg + 10mV), Current ±(0.3% + 3mA)			
Weight	5.2kg	5.2kg	5.2kg	10kg
Model	PL303-P	PL155-P	PL601-P	PL303QMD-P
Voltage Range	0 to 30V	0 to 15V	0 to 60V	0 to 30V (dual)
Current Range	0 to 3A	0 to 5A	0 to 1.5A	0 to 3A (dual)
Power Rating	90W	75W	90W	180W
Front and Rear Terminals	Yes	Yes	Yes	Yes
Analogue Remote Control	Yes	Yes	Yes	No
RS-232 Interface	Yes	Yes	Yes	Yes
USB Interface	Yes	Yes	Yes	Yes
LAN Interface with LXI	Yes	Yes	Yes	Yes

The -P versions are similar to the standard versions but include a comprehensive set of isolated digital bus interfaces along with front and rear terminals and analogue remote control. The LAN interface is designed to conform with LXI (LAN eXtensions for Instrumentation) v1.2.

- USB, RS-232 and LAN interfaces
- Analogue remote control (not PL303QMD-P)
- LAN conforms with LXI v1.2
- Front and rear terminals

525619

Mfrs. List No.	Order Code	1+	3+	5+
PL303	151-0521	892.23	883.33	874.49
PL155	151-0522	892.23	883.33	874.49
PL601	151-0523	892.23	883.33	874.49
PL303QMD	151-0524	2,230.60	2,163.68	2,098.78
PL303P	167-0765	1,711.55	1,625.76	

Mfrs. List No.	Order Code	1+	3+	5+
PL155P	167-0766	1,711.55	1,625.76	
PL601P	167-0767	1,711.55	1,625.76	
PL303QMDP	167-0768	2,788.26	2,659.57	
NATA Calibration Charge		N		

PLH Series Higher Voltage DC Power Supplies

120V and 250V, Standard and Bus Programmable



W=107 H=131 L=288mm,
Weight 5.2kg

The PLH series are higher voltage versions of the New PL series of precision linear regulated power supplies offering output voltages up to 250V.

- Output voltage of 120V or 250V, 90 watts maximum power
- Linear regulation for optimum output noise and transient response
- Ultra compact dimensions - 1/4 rack modular
- True analogue controls for simplicity of operation
- Advanced digitally based feature set including V-Span and S-lock
- Low current range providing 0.01mA resolution, current meter averaging
- Touch-proof safety terminal/binding posts suitable for fixed shroud plugs
- S-Lock - digitally locks voltage and current settings at the touch of a button
- V-Span - enables the full 300° rotation of the voltage control to cover any, user-defined, voltage range

Model	PLH120	PLH250
Voltage Range	0 to 120V	0 to 250V
Current Range	0 to 750mA	0 to 375mA
Maximum Power	90W	94W
Resolution	0.1V/0.1mA (0.01mA on low current range)	
Ripple & Noise	<2mVrms / <0.2mArms	
Load Regulation	Voltage - <0.01% + 2mV / Current - typically 0.01% + 500µA	
Line Regulation	Voltage - <0.01% + 2mV for 10% line change Current - <0.01% + 250µA for 10% line change	
Transient Response	<100µs to within 50mV for a 90% load change	
Temperature Coefficient	Typical: <50ppm + 5mV/°C, <100ppm + 1mA/°C	
Meter Accuracy	Voltage ±(0.1%rdg + 0.1V), Current ±(0.3%rdg + 0.3mA)	

The -P versions are similar to the standard versions but include a comprehensive set of isolated digital bus interfaces and isolated analogue remote control along with front and rear terminals. The LAN interface is designed to conform with LXI (LAN eXtensions for Instrumentation) v1.2.

- USB, RS-232 and LAN interfaces
- LAN conforms with LXI v1.2
- Isolated Analogue remote control
- Front and rear terminals

603722

Mfrs. List No.	Order Code	1+
PLH120	179-1445	782.65
PLH250	179-1446	862.23
PLH120P	179-1447	1,154.07
PLH250P	179-1449	1,233.65

DC Bench Power Supplies

PWS2000 Series



- Key Features:**
- Low Noise, Linear Regulation
- Wide Voltage and Current Ranges
- 10 mV/10 mA Programming Resolution
- Bright Vacuum Fluorescent Displays
- 16 Setup Memories
- 3-year Warranty

Quickly Generate the Voltage or Current You Need

PWS2000 Series power supplies are designed with the performance and intuitive operation you expect from Tektronix. With wide current and voltage ranges, plus 10 mV and 10 mA resolution, PWS2000 Series power supplies satisfy a wide variety of applications. Numeric keypads make voltage and current selection fast and accurate. Bright vacuum fluorescent displays with large digits provide excellent readability. A max voltage setting and password-protected front panel lockout help prevent circuit damage.

Included Accessories

Quick Start User Manual
Documentation CD
Power cord
Calibration certificates documenting traceability to National Metrology Institute(s)

Model	PWS2185	PWS2323	PWS2326	PWS2721
Max Output Voltage	18 V	32 V	32 V	72 V
Max Output Current	5 A	3 A	6 A	1.5 A
Ripple & Noise (7 MHz)	1 mVRMS / 3 mVp-p			
Control modes	Constant Voltage, Constant Current			
Setup Memories	16			

Power Supplies - Laboratory/Test - continued

DC Bench Power Supplies - continued

PWS2000 Series - continued

Mfrs.			Price Each
List No.	Order Code	1+	
PWS2185	18 Volts, 5 Amps	182-4783	468.37
PWS2323	32 Volts, 3 Amps	182-4784	468.37
PWS2326	32 Volts, 6 Amps	182-4785	539.55
PWS2721	72 Volts, 1.5 Amps	182-4786	468.37

610190

DC Bench Power Supplies

PWS4000 Series



New

Key Features and Functions:

- Low-noise Linear Regulation
- Wide Voltage and Current Ranges
- 0.03% Basic Voltage Accuracy, 0.05% Basic Current Accuracy
- USB Interface for Remote Programming
- Bright display shows actual voltage, current, and limits simultaneously
- List mode for test sequencing
- Remote Sense, Rear Outputs and Trigger/status lines
- 3-year warranty

The Perfect Supply for Your Bench

Wide voltage and current ranges, and flexible features make the PWS4000 Series a versatile addition to your bench. Excellent voltage and current accuracy, and remote sensing give you confidence in your output levels. With both numeric keys and a rotary knob you have the ability enter parameters directly or make continuous adjustments. The four-parameter, bright vacuum fluorescent display shows meter readings and limits at a glance. Integrated setup memory and list functions help speed manual and remote control testing. Remote programming is through USB, and NI Signal Express PC software is included. A max voltage setting and password-protected front panel lockout help prevent unintentional circuit damage.

Included Accessories

Quick Start User Manual
Documentation CD

Model	PWS4205	PWS4305	PWS4323	PWS4602	PWS4721
Max Output Voltage	20 V	30 V	32 V	60 V	72 V
Max Output Current	5 A	5 A	3 A	2.5 A	1.2 A
Ripple & Noise (7 MHz)	1 mV RMS 3 mV _{P-P}	1 mV RMS 4 mV _{P-P}	1 mV RMS 4 mV _{P-P}	1 mV RMS 5 mV _{P-P}	1 mV RMS 3 mV _{P-P}
Control modes	Constant Voltage, Constant Current				
Setup Memories	50				
Connectivity	USB Device Port, USBTMC compatible				

610191

Mfrs.			Price Each
List No.	Order Code	1+	
PWS4205	18 Volts, 5 Amps	182-4787	1,039.90
PWS4305	30 Volts, 5 Amps	182-4789	1,224.56
PWS4323	32 Volts, 3 Amps	182-4791	1,039.90
PWS4602	60 Volts, 2.5 Amps	182-4792	1,224.56
PWS4721	72 Volts, 1.2 Amps	182-4793	1,039.90

Power Supply 840W Dual Output PowerFlex



New

The CPX400DP is a bus programmable version of the CPX400A incorporating a full range of interfaces plus smart local control functions such as settings lock and isolated tracking. The CPX400D is a direct replacement for the CPX400A.

- Dual isolated outputs, independent or tracking
- PowerFlex regulation with 840 watts of total power
- Up to 60V and up to 20A within a 420W power envelope on each output
- Isolated tracking provides up to 120V in series or up to 40A in parallel
- S-Lock function locks voltage and current settings at the touch of a button
- Range control buttons offers fixed range or PowerFlex operation
- 3U half-rack casing; front and rear terminals
- Full range of bus interfaces, RS232, USB, LAN (with LXI) and GPIB
- Safety & EMC complies with EN61010-1, EN61326

Load and Line Regulation
Ripple and Noise
Setting Accuracy (Remote)
Metering and Readback Accuracy
Transient Response
Output Protection
Voltage Sensing
Size and Weight

<0.01% + 2mV
Typically <2mV rms
<0.05% + 10mV
<0.1% + 10mV
<250us to within 50mV
User settable over-voltage trip
Remote or local, front or rear, switch selectable
210 x 130 x 350mm (WxHxD), 7kg

603721

Mfrs.			Price Each
List No.	Order Code	1+	
CPX400DP (Programmable)	179-1444		2,586.70
CPX400D (Non-Programmable)	185-3729		1,927.00

Dual 600W Output PowerFlex+ Programmable Power Supply QPX600D

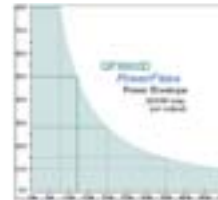


New

W=350 H=130 D=415mm Weight=9kg

The QPX600D is a dual output power supply which offers two independent outputs of 600 watts each. The PowerFlex+ design offers an extremely wide range of voltage/current combinations up to 80V and 50A on each output. Analogue, RS232, USB and LAN (LXI) interfaces are fitted.

- Dual independent or tracking 600 watt outputs
- PowerFlex+ gives an extra wide range of variable voltage/current combinations
- Up to 80 volts and up to 50 amps within each power envelope
- Isolated tracking mode for series or parallel linking
- Low output noise and ripple
- High setting resolution of 1mV
- Interfaces include analogue, RS-232, USB & LAN with LXI support



Output Specifications (each output)

Voltage Range	0V to 80V.
Current Range	0A to 50A.
Power Range	Up to 600W (see PowerFlex+ envelope graph).
Operating Mode	Constant voltage or constant current with automatic cross-over.
Voltage Setting	By floating point numeric entry or rotary jog wheel; resolution 1mV.
Current Setting	By floating point numeric entry or rotary jog wheel; resolution 10mA.
Setting Accuracy	Voltage - 0.1% ±5mV. Current 0.3% ±10mA
Load regulation	<0.01% + 5mV for a 90% load change.
Line regulation	<0.01% + 5mV for a 10% line voltage change.
Ripple & Noise	Typically <4mV rms, <40mV pk-pk, (20MHz bandwidth)
Protection Functions	Power Limiter, over-voltage, over-current and temperature trips.
Over Voltage (OVP)	Settable 2V to 90V in 0.1V steps
Over Current (OCP)	Settable 2A to 55A in 0.1A steps
Status Indication	LCD indication of Output On, CV, CI and Power Limit, Trip status.
Output Switch	Push switch operating electronic power control.
Output Terminals	Rear output and sense terminals
Sensing	Selectable local or remote sensing.

Tracking Functions

Tracking	Isolated tracking of voltage only or voltage and current.
Metering	Additional metering of total current for parallel wiring or total voltage for series wiring.

Metering

Meter Functions	Voltage, Current, Power (VxI), Impedance (V/I).
Meter Resolution	Voltage: 1mV (CV mode) or 10mV (CI mode), Current: 10mA, Power: 0.1W.
Meter Accuracy	Voltage: 0.1% of reading ± 2 digits (CI mode). Current: 0.3% of reading ± 2 digits (CV mode). Power: 0.5% of reading ± 0.1W.

Interfaces

Analogue Interface	Analogue control voltage (0 - 5V or 0 - 10V). V & I monitor outputs. Trip output signal.
Connectivity	RS232, USB and LAN (compliant with LXI class C).

General

AC Input	110V to 240V AC ±10%, 50/60Hz, 1.5kVA max. Installation Category II.
Display Type	Large dot-matrix LCD with backlight.
Memories	Ten non-volatile memories for complete instrument set-ups.
Operation	Fitted with folding legs for bench operation (rack mount option available).
Safety & EMC	Complies with EN61010-1 and EN61326

603704

Mfrs.			Price Each
List No.	Order Code	1+	
QPX600D	179-1443		3,435.67

LD300 Electronic Load

80A, 80V, 300W



- Versatile solution for testing DC power sources
- Constant current, resistance, conductance, voltage and power modes
- Wide voltage and current range, 80V and 80A max
- Low minimum operating voltage of <1V at 40A
- Built-in transient generator with variable slew

- Current monitor output for waveform viewing
- Variable drop-out voltage for better testing
- Analogue remote control capability

The LD300 is an inexpensive electronic load which is suitable for testing and characterising a wide variety of DC power sources such as modular power supplies, charging circuits and batteries.

Its wide voltage/current range and built-in transient generator give it the versatility to provide test solutions from the design laboratory through to the component test area.

Ratings

Voltage and Current	80 volts maximum, 80 amps maximum
Power Dissipation	300 watts maximum continuous at 28°C
Minimum Operating Voltage	Increases with current, <0.5V at 10A, <1V at 40A, <2V at 80A

Constant Current Mode

Setting Range	0 to 80A in 2 ranges, set by 10 turn control
Meter Resolution	1mA on 8A range, 10mA on 80A range
Setting Accuracy	± (0.2% + 20mA)
Regulation	<10mA for a 90% power change

Constant Resistance Mode

Setting Range	0.05Ω to 100Ω in 2 ranges, 10 turn control
Meter Resolution	10mΩ on 10Ω range, 100mΩ on 100Ω range
Setting Accuracy	± (0.5% + 2 digits)
Regulation	<2% for a 90% power change

Constant Conductance Mode

Setting Range	0.05A/V to 40A/V in 2 ranges, set by 10 turn control
Meter Resolution	0.001A/V or 0.01A/V depending on range
Setting Accuracy	± (0.5% + 2 digits)
Regulation	<2% for a 90% power change

Constant Voltage Mode

Setting Range	Vmin to 80V in 2 ranges, 10 turn control.
	Vmin varies with current - see Ratings
Meter Resolution	1mV on 8V range, 10mV on 80V range
Setting Accuracy	± (0.2% + 2 digits)
Regulation	<10mV for a 90% power change

Constant Power Mode

Setting Range	0 to 300W, set by 10 turn control
Meter Resolution	1W
Setting Accuracy	± (0.5% + 2 digits)
Regulation	<2% for a 90% voltage charge

Level Control

Level A, Level B (set by individual 10 turn pots), Transient Internal (Switching between A and B using external switching signal), and Remote (level proportional to external voltage).

Slew Rate Control

All changes of level control are subjected to slew rate control which is adjustable over 3000:1 range by 3 position switch and vernier.

Transient Generator

Pulse Repetition Rate	0.1Hz to 10kHz in 3 overlapping ranges
Setting Resolution	0.1Hz, 1Hz, 10Hz depending on range
Setting Accuracy	± 2% of range
Pulse Duty Cycle	5% to 95% continuously variable

Displays and Metering

Dual 4 digit LED displays showing a variety of settings or measurements as set by a five position switch

Setting Displays	Level A & Level B, Frequency & Duty Cycle, Slew Rate & Drop Out
Measurements	Amps & Volts, Watts & Ohms (calculated from V and I measurements)
Meter Accuracy	Voltage ±(0.1% + 1 digit), Current ±(0.1% + 20mA)

Dropout Voltage

Defines a minimum voltage below which the load current will reduce to zero. Useful for battery discharge testing and for power supplies without short-circuit protection

Remote Control

Analogue - the level for any mode can be set by an external analogue voltage (4V full scale). The control voltage has a compliance of ±80V relative to the load negative terminal. Switching - the change between the Level A and Level B setting for any mode can be done in response to an external logic signal.

Current Monitor

An analogue signal representing the current waveform is available for connection to an oscilloscope or external meter. Scaling is 50mV/Amp and compliance is ±2V to the load negative terminal

Protection

The load incorporates both a power limiter circuit and a fault trip which responds to excess voltage, current, power or temperature

General

Resr Terminals	6mm terminal/binding posts, remote sense, current monitor, remote control
Front Terminals	
Power Requirement	230V or 115V ±14%, 50/60Hz, by internal adjustment. Installation Category II
Safety and EMC	Complies with EN610-1 and EN61326

337908

Mfrs.	Order Code	Price Each
List No.		1+
LD300	471-8525	3,847.16
Price Each		
Standard Calibration Charge	S	☎
	N	☎

Low Ohmmeters

Milli-Ohmmeter

M210

RHOPOINT COMPONENTS



Resistance is measured using a 'Kelvin' configuration of four wires terminating into two crocodile clips, thereby eliminating errors caused by test lead resistance and simplifies circuit connection.

Suitable for testing the resistance of relay and switch contacts, transformer and motor windings, pcb track and through hole plating, earth bonding, mains ring circuits, and for selecting and matching resistors and strain gauges.

- Battery operated
- Accurate low resistance measurement between 0.001Ω to 200Ω.
- Autoranging
- Auto power off, 3 minutes after last measurement
- Supplied with 'Ever Ready' carrying case, test leads and operating instructions
- Lightweight, portable

H=150, W=80, D=38 (Meter)
H=155, W=145, D=45 (Case)

Ranges	1.999R, 19.99R, 199.9R	Temperature drift	0.013%/°C
Accuracy	± 0.1% of range	Display	3 1/2 digit LCD, 12mm character height
Resolution	0.001R, 0.01R, 0.1R	Operating temperature	5 to 35°C
Zero offset	± 0.001R	Battery	One 9V PP3 (20hrs life, continuous use) not supplied
Test current	5mA (max)		510g (inc. case)
Test power	5mW (max)	Weight	

The meter requires a 9V PP3 battery **not supplied**.

222340

Mfrs.	Order Code	1+	5+	10+	Price Each
List No.					
M210	109-279	1,149.84	1,013.37	999.48	
Price Each					
Standard Calibration Charge		S	☎		
NATA Calibration Charge		N	☎		

Hand Held Microhmmeter, D04002

CROPICO

New



The series D04000 digital micro ohm-meters offer true portability without any sacrifice to accuracy or functionality.

Key Features:

- True 4 terminal measurement eliminates lead resistance errors
- Measuring range from 4 milli ohm to 400 ohm
- 1 micro ohm resolution
- True zero capabilities
- Digital Calibration
- Auto / Manual range selection
- Open circuit lead warning LED
- 1A measuring current
- Auto power off to maximise battery life
- MEIGaN Compliant

Range	Resolution	Typical Current	D04002 Specifications	Temperature Coefficient/°C
400Ω	100Ω	1mA	Accuracy @ 20°C ±5°C 1 year	± (0.05% Rdg + 0.02% FS)
40Ω	10mΩ	10mA		± (0.05% Rdg + 0.02% FS)
4Ω	1mΩ	100mA		± (0.05% Rdg + 0.02% FS)
400mΩ	100μΩ	1A		± (0.05% Rdg + 0.03% FS)
40mΩ	10μΩ	1A		± (0.05% Rdg + 0.05% FS)
4mΩ	1μΩ	1A		± (0.05% Rdg + 0.1% FS)

538648

Mfrs.	Order Code	Price Each
List No.		1+
930139	171-8657	1,619.64

Low Ohmmeters - continued

Digital Microhmmeter, D05000 Series

CROPICO



The D05000 series of digital micro ohmmeters offer flexibility of measurement with high accuracy and exceptional functionality. The D0500 series encompass all the features required in an ohmmeter in one practical instrument.

New

Key Features:

- True 4 terminal measurement eliminates lead resistance errors
- Measuring range from 3 milli ohm to 30 kilo ohm
- 100 nano ohm resolution
- True zero capabilities
- Digital Calibration
- Open circuit lead warning LED
- Automatic temperature compensation with programmable coefficients
- Current range from 10mA to 10A
- Fast measuring capability of 50 measurements per second
- High Accuracy 0.03%
- Data logging with statistical analysis
- Cable length calculations
- Programmable measuring current 10% to 100% in 1% steps
- Programmable High Low Limits with red / green lamps on front panel
- Open Circuit voltage limit mode 20mV / 50mV maximum
- Measuring current selection +I / -I and Auto average

D05000/D05001 Specifications

Range	Resolution	Minimum Current	Maximum Current	Accuracy at Full Rated Current
30kΩ	1Ω	10μA	100μA	±(0.03% Rdg + 0.02% FS)
3kΩ	100mΩ	100μA	1mA	±(0.03% Rdg + 0.01% FS)
300Ω	10mΩ	1mA	10mA	±(0.03% Rdg + 0.01% FS)
30Ω	1mΩ	10mA	100mA	±(0.03% Rdg + 0.01% FS)
3Ω	100μΩ	100mA	1A	±(0.03% Rdg + 0.01% FS)
200mΩ	10μΩ	1A	10A	±(0.03% Rdg + 0.01% FS)
30mΩ	1μΩ	1A	10A	±(0.03% Rdg + 0.01% FS)
3mΩ	100nΩ	1A	10A	±(0.03% Rdg + 0.02% FS)

538647

Mfrs.	Order Code	Price Each
List No.		1+
930076 Mains Only	171-8655	7,342.40
930077 Mains & Battery	171-8656	8,754.20

Portable Microhmmeter, D07010

CROPICO



The D07010 is a very rugged and very compact, portable digital ohmmeter for the measurement of low resistance.

New

Key Feature

- True 4 wire measurement eliminates lead resistance errors
- 4 ranges 6 milli ohm to 6 ohm
- Resolution 1 micro ohm on 6 milli ohm range
- Graphics Display with backlight 3 languages
- 1 and 10 Amp measuring current even on the 600 milli ohm range
- Forward and reverse current measurement
- Auto average of forward and reverse measurement
- True zero offset
- Built in test resistor for confidence check
- Data logging with up to 1000 readings stored with date and time stamp
- Hi-Lo limits with audible and visual warning
- Automatic measurement trigger when leads are connected to DUT
- Small size and light weight <4Kg
- RS232 interface with option remote terminal to enable operation up to 15 metres distance
- Rechargeable NiMH batteries with charge indicator and easily replaceable battery pack

D07010 Specifications

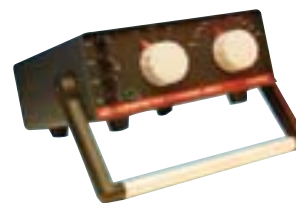
Range	Resolution	Typical Current	Maximum Current	Accuracy at 20°C ±5°C, 1 Year
6Ω	1mΩ	100mA/1A	100μA	±(0.1% Rdg + 0.1% FS)
600mΩ	100μΩ	1A/10A	1mA	±(0.1% Rdg + 0.1% FS)
60mΩ	10μΩ	1A/10A	10mA	±(0.1% Rdg + 0.1% FS)
6mΩ	1μΩ	1A/10A	10mA	±(0.1% Rdg + 0.1% FS)

538646

Mfrs.	Order Code	Price Each
List No.		1+
930119	171-8653	5,396.12

Microhmmeter Calibrator

CROPICO



This milli ohmmeter's test standards are designed for the simple and easy calibration of low resistance ohmmeters and Kelvin / Thomson bridges.

New

Key Features

- True 4 terminal standards
- Switch selectable values
- Polarity reversal switch
- Four terminal zero
- Two models available: MTS1A: 1 milli ohm to 100 kilo ohm and MTS2: 400 milli ohm to 400 kilo ohm

MTS1-A Specifications

Resistance Value	Uncertainty of Adjustment @ 20°C	Watts Max W	Current Max	Typical Temp Coefficient
100kΩ	±0.01%	0.1	1mA	<10ppm
10kΩ	±0.01%	0.1	3mA	<10ppm
1kΩ	±0.01%	0.6	25mA	<10ppm
100Ω	±0.01%	0.6	75mA	<10ppm
19Ω	±0.01%	0.43	150mA	<10ppm
10Ω	±0.01%	0.45	212mA	<10ppm
1.9Ω	±0.01%	0.475	500mA	<10ppm
1Ω	±0.01%	0.56	750mA	<10ppm
100mΩ	±0.01%	0.525	2.5A	<10ppm
10mΩ	±0.05%	0.25	5A	<10ppm
1mΩ	±0.05%	0.1	10A	<10ppm

538649

Mfrs.	Order Code	Price Each
List No.		1+
930240	171-8658	3,595.61

Portable Microhmmeter, D07PLUS

CROPICO



The D07Plus is a 10A Microhmmeter, suitable for applications within Aerospace, Utilities, Cable or Machine Manufacturers or where a cooling curve is required to plot peak resistance.

New

Key Features

- On screen real time graphical plotting cooling curve facilities with peak resistance value calculator
- It's fast, reading rate of 2 readings per second
- Measuring ranges from 6 mohm to 6 Kohm
- Resolution 100 nohm to 6 mohm range
- Backlit LCD graphic panel with programmable timer for battery conservation
- Single pulse measurement for fast resistance tests
- Continuous measurement current for inductive tests
- Full test lead continuity testing and diagnostic display
- Multi lingual - Display available in English, French, German, Spanish or Italian

D07PLUS Specifications

Range	Current	Resolution	FSV	Uncertainty
6 mΩ	10 A	100 nΩ	60 mV	0.05% Rdg + 0.01%FS
60 mΩ	1 A	1 μΩ	60 mV	0.05% Rdg + 0.01%FS
600 mΩ	100 mA	10 μΩ	60 mV	0.05% Rdg + 0.01%FS
6 Ω	10 mA	100 μΩ	60 mV	0.05% Rdg + 0.01%FS
60 Ω	1 mA	1 mΩ	60 mV	0.05% Rdg + 0.01%FS
600 Ω	100 μA	10 mΩ	60 mV	0.05% Rdg + 0.01%FS
6 kΩ	100 μA	100 mΩ	600 mV	0.05% Rdg + 0.01%FS

538645

Mfrs.	Order Code	Price Each
List No.		1+
551A900	171-8652	6,195.15



Free Technical Support

Our trained engineers are here to help!



02 9645 8877



au.element14.com/livechat



au-technical@element14.com



Help us to help the environment

This catalogue has been printed on paper certified from a sustainable source.

Please recycle this catalogue after use.



au.element14.com

Calibrators & Simulators

Pressure Calibrator

Fluke 719 100 psi

FLUKE



With the innovative, built-in electric pump, the Fluke 719 provides pressure calibration at your finger tips:

- Electric pump for one handed pressure calibration
- Pressure measurement to 700 bar using any of the Fluke-700Pxx Pressure Modules
- Measures and source mA with best in class 0.015% accuracy
- Precision pressure adjust vernier
- Best in class pressure measurement uncertainty 0.025%
- Power transmitters during test using 24 volt loop supply
- Simulate mA signals to troubleshoot 4-20 mA loops
- Test pressure switches with build in switch test function
- Proven cleanout ports reduce pump failures

Range	Resolution	Accuracy
-12 to 120 psi, -850 mbar to 8 bar	0.01 psi, 1 mbar	0.035 % of range for one(1) year
Operating Temperature		
-10 to 18°C		

Current Specifications

Range	Resolution	mA +5°C
0 to 24mA	.001mA	.015% Rdg +2 count
Input/Output		
Pressure Input		
Pressure module		
Current input		
1/8 in. NPT pressure fitting		
input LEMO connector		
shrouded banana jacks		
Loop Supply		
Voltage No.		
Power		
24 Volts		
Two 9 volt alkaline batteries		
ANSI/NEDA 1604A or IEC 6LR619V		
12 hours with 12mA into 500Ω or 200 pump cycles		
CSA C22.2 No. 1010.1:1992		
EN50082-1:1992 and EN55022:1994 Class B		

531726

Mfrs.	List No.	Order Code	1+	+	+
	719 100G	169-6709	5,410.00	--	--

Current Loop Calibrator 4-20mA

LC-603



A pocket sized battery powered 4-20mA Current Loop Checker. It is an ideal precision source for checking the calibration of any indicators or controllers. It can also be used as a current source to set up process devices. Simply plug in the supplied connection lead to the device to be checked, select the desired range and check the device readout. If the displayed value is the same as the selected range, the device being checked is within calibration.

L=100, W=75, D=30mm

- Simulates 3 outputs 4mA, 12mA and 20mA
- High accuracy ± 0.2 mA
- Impact-resistant ABS case
- Membrane keypad
- Bright red LED indicators for selected mA output
- Bright red LED indicator for overload
- Low battery indicator
- Supplied with battery & connection lead with red and green leads with connection spades

Range	4mA, 12mA, 20mA	Power	1 x PP3 9V battery
Accuracy	± 0.2 mA	Weight	160g

339400

Mfrs.	List No.	Order Code	1+	5+	10+
	LC-603	494-8920	340.43	287.10	266.59
Price Each					
Standard Calibration Charge			S	☎	
NATA Calibration Charge			N	☎	

Digital Current Calibrator

TENMA



An easy to use portable, hand-held instrument for calibrating process devices.

- Adjustable 0 to 24mA current source
- Current calibration drives load up to 500Ω
- 2 ranges
- Large 13mm display
- Over input indication
- Includes owner manual, test leads and battery
- CE marked

W = 78, D = 38, L = 185

Range	Resolution	Accuracy
0 to 19.99mA, 0 to 24mA	0.01mA, 0.1mA	$\pm (0.25\% \text{ FS} + 1 \text{ digit}), \pm (0.5\% \text{ FS} + 1 \text{ digit})$
Power	9V PP3	

230668.460882

Mfrs.	List No.	Order Code	1+	5+
	72-6694	356-2682	349.33	332.98
Price Each				
Standard Calibration Charge			S	☎
NATA Calibration Charge			N	☎

Voltage / Current Calibrator



- Portable instrument for calibrating process devices and measuring process signals
- Adjustable 0 - 24mA current source
- Adjustable 0 - 10V DC voltage source
- 24V loop supply with simultaneous current measurement
- 88888 count LCD display
- Measure loop current and process voltages from PLC's etc.
- Supplied with manual, test leads, battery and aluminium carry case

Range	Resolution	Accuracy
DC V Input and Output		
100mV	0.01mV	$\pm (0.2\% + 2d)$
10V	1mV	$\pm (0.2\% + 2d)$
DC mA Input and Output		
24mA	0.001mA	$\pm (0.015\% + 2d)$
Loop Power		
24V		$\pm 10\%$
General Specifications		
Power	9V PP3	
Dimensions (WxHxD)	89 x 190 x 42mm	
Weight	350g	

468362.468356

Description	Order Code	1+	2+	5+
Voltage / Current Calibrator	133-9598	435.65	394.34	370.76
Price Each				
Standard Calibration Charge			S	☎
UKAS Calibration Charge			N	☎

FREE global legislation support



RoHS, REACH, WEEE, ErP, Batteries Directive - latest updates, free white papers and live online Q&A at www.global-legislation.com

Calibrators & Simulators - continued

Voltage / Current Calibrator



- Portable instrument for calibrating process devices and measuring process signals
- Adjustable 0 to 24mA current source
- Adjustable -199.9mV to +199.9mV DC voltage source
- Current calibrator drives loads up to 500Ω
- 1999 count 13mm LCD display
- Auto and Manual ranging
- Supplied with manual and test leads

Range	Resolution	Accuracy
Current Source		
0-19.99mA	0.01mA	±(0.25%+1d)
0-24mA	0.1mA	±(0.5%+1d)
Current Measurement		
0-19.99mA	0.01mA	±(0.25%+1d)
0-24mA	0.1mA	±(0.5%+1d)
Power & Current Measurement of 2-wire Loop		
0-19.99mA	0.01mA	±(0.25%+1d)
0-24mA	0.1mA	±(0.5%+1d)
DC mV Source		
-199.9 to 199.9mV	0.1mV	±(0.25%+1d)
General Specifications		
Power	9V PP3	
Dimensions (WxHxD)	78 x 185 x 38mm	
Weight	265g	

467615.467597

Price Each

Description	Order Code	1+	3+
Calibrator	133-8779	345.55	307.35

Voltage and Current Calibrator
1044

H=142, W=78, D=50mm

- Easy to use
- Housed in a pocket sized, rugged ABS case
- Supplied with a leatherette carry case containing a compartment for storing test leads
- Connections are by standard 4mm plugs or by simply clamping the wires under the terminals
- A single 9V battery powers the unit
- Source and Measure Voltage & Current
- 3 Voltage Ranges 0 - 20V
- 3 Current Ranges 0 - 20mA
- 0.05% Accuracy

The 1044 can source and measure voltage and current in one compact unit and the 0.05% accuracy is ideal for simulation and calibration in most engineering applications. Combines the advantages of digital accuracy with analogue controls. The large, easy to read LCD display shows the actual output, even when the connected load exceeds the specifications. This important feature eliminates the risk of large errors when connecting to unknown loads. The display even shows if the battery becomes low. In the source mode, voltage up to 20V and current up to 20mA may be generated in three ranges. When in current source mode the 1044 has a high 24V compliance voltage which is ideal for powering process control loops. In the measurement mode, the range and function can be easily selected with the measured input accurately shown on the LCD display, operating in a similar way to a multimeter.

Voltage Source and Measure		Current Source and Measure	
Ranges	0 - 200mV / 100μV resolution 0 - 2V / 1mV resolution 0 - 20V / 10mV resolution	Ranges	0 - 200μA / 100nA resolution 0 - 2mA / 1μA resolution 0 - 20mA / 10μA resolution
Accuracy	0.05% of full scale + 2 Counts	Accuracy	0.05% of full scale + 3 Counts
Output Current	20mA Max	Output Voltage	24V Nominal
T / C & Noise (source only)	150ppm/°C Noise <30ppm	T / C & Noise (source only)	200ppm/°C Noise <50ppm

339577

Mfrs.		Price Each		
Description	List No.	Order Code	1+	2+ 5+
Voltage Calibrator	1044	505-8223	1,422.94	1,367.21 1,302.82

Price Each

Standard Calibration Charge	S	☎
NATA Calibration Charge	N	☎

Loop Calibrator

Fluke 705

FLUKE

H=164, W=75, D=47mm
Weight = 0.35kg

The Fluke 705 Loop Calibrator is feature-rich solution to loop calibration, maintenance and repair. It offers:-

- A large display and simple, push button interface for ease of use
- Simultaneous mA and % readout for quick, easy, interpretation of readings
- mA accuracy of 0.02%
- Push button 25% steps for fast, easy linearity checks. Save time over traditional knob type controls
- "Span Check" for fast confirmation of zero and span
- Selectable slow ramp, fast ramp, and step to provide smooth outputs for valve slewing and loop functional tests
- 24 volt internal loop supply, so you can power and read a transmitter at the same time without carrying a DMM.
- Single 9V battery that is easily changed
- 0-20mA or 4-20mA default start up modes

Function	Range	Resolution	Accuracy
Voltage measure	0 to 28V	1mV	0.025% Rdg + 1 LSD
Current measure	0 to 24mA	0.001mA	0.025% Rdg + 2 LSD
Current source*	0 to 20mA	.010mA	0.025% Rdg + 2 LSD
Loop supply	24Vdc	n/a	10%
Temperature coefficient, -10 to 18°C, 28 to 55°C, ±0.005% of range per °C			
* Max load, 1000 Ohms; Max applied voltage for simulation, 30V			
Maximum voltage	30 volts		
Non-operating temperature	-40°C to 60°C		
Operating temperature	-10°C to 55°C		
Relative humidity	0 to 90% (0 to 35°C); 0 to 70% (35 to 55°C)		
Operating altitude	3,000m max		
Shock and vibration	Per MIL-T 28800 for a Class 2 instrument		
Safety	CSA CC22.2 No. 1010.1:1992		
EMC	EN50082-1:1992 and EN55022:1994 Class B		
Battery	One 9V alkaline		
Battery life	18 hours typical, at 12mA		

222575

Mfrs.		Price Each		
List No.	Order Code	1+	+	+
FLUKE 705	318-3312	1,184.58	--	--
		Price Each		
Standard Calibration Charge		S		
NATA Calibration Charge		N		

Loop Calibrator

Fluke 707

FLUKE



The 707 is the quickest and the easiest to use, with the most features, the best resolution and accuracy.

- Intuitive user interface combines the best features of dial and button based calibrators
- Measure mA and volts accurately to test and calibrate mA control loops
- Source / simulate mA to test 4-20mA devices such as valve positioners or input cards to PLCs
- Perform fast linearity tests with 25% and 100% stepping
- Conduct remote tests with auto-step and auto-ramp features
- Power transmitters using loop supply with simultaneous mA measurement
- Small, streamlined shape, with protective holster, makes it easy to carry
- Industry leading mA performance with 0.015% accuracy and 0.001mA resolution
- Rugged and reliable
- Ex version available

Function	Range	Resolution	Accuracy
Voltage measure	0 to 28V	1mV	0.015% Rdg + 2 LSD
Current measure	0 to 24mA	0.001mA	0.015% Rdg + 2 LSD
Current source*	0 to 20mA	.010mA	0.015% Rdg + 2 LSD
Loop supply	24Vdc	n/a	10%
Temperature coefficient, -10 to 18°C, 28 to 55°C, ±0.005% of range per °C			
* Max load, 1000 Ohms; Max applied voltage for simulation, 30V			

Maximum voltage	30 volts
Non-operating temperature	-40°C to 60°C
Operating temperature	-10°C to 55°C
Relative humidity	0 to 90% (0 to 35°C); 0 to 70% (35 to 55°C)
Operating altitude	3,000m max
Shock and vibration	Per MIL-T 28800 for a Class 2 instrument
Safety	CSA CC22.2 No. 1010.1:1992
EMC	EN50082-1:1992 and EN55022:1994 Class B
Battery	One 9V alkaline
Battery life	18 hours typical, at 12mA

Mfrs.		Price Each		
List No.	Order Code	1+	3+	+
FLUKE 707	389-0508	1,411.93	--	--
FLUKE FLUKE 707EX	442-9850	1,757.00	1,669.15	--
C101 Carry Case	947-9783	89.00	82.33	--
		Price Each		
Standard Calibration Charge	S			
NATA Calibration Charge	N			

526071

Loop Calibrator

Fluke 707



The 707 is the quickest and the easiest to use, with the most features, the best resolution and accuracy.

- Intuitive user interface combines the best features of dial and button based calibrators
- Measure mA and volts accurately to test and calibrate mA control loops
- Source / simulate mA to test 4-20mA devices such as valve positioners or input cards to PLCs
- Perform fast linearity tests with 25% and 100% stepping
- Conduct remote tests with auto-step and auto-ramp features
- Power transmitters using loop supply with simultaneous mA measurement
- Small, streamlined shape, with protective holster, makes it easy to carry
- Industry leading mA performance with 0.015% accuracy and 0.001mA resolution
- Rugged and reliable
- Ex version available

Function	Range	Resolution	Accuracy
Voltage measure	0 to 28V	1mV	0.015% R _{dg} + 2 LSD
Current measure	0 to 24mA	0.001mA	0.015% R _{dg} + 2 LSD
Current source*	0 to 20mA	.010mA	0.015% R _{dg} + 2 LSD
Loop supply	24Vdc	n/a	10%
Temperature coefficient, -10 to 18°C, 28 to 55°C, ±0.005% of range per °C			
* Max load, 1000 Ohms; Max applied voltage for simulation, 30V			

Maximum voltage	30 volts
Non-operating temperature	-40°C to 60°C
Operating temperature	-10°C to 55°C
Relative humidity	0 to 90% (0 to 35°C); 0 to 70% (35 to 55°C)
Operating altitude	3,000m max
Shock and vibration	Per MIL-T 28800 for a Class 2 instrument
Safety	CSA CC22.2 No. 1010.1:1992
EMC	EN50082-1:1992 and EN55022:1994 Class B
Battery	One 9V alkaline
Battery life	18 hours typical, at 12mA

232289

Mfrs.		Price Each		
List No.	Order Code	1+	3+	+
FLUKE 707	389-0508	1,411.93	--	--
FLUKE 707EX	492-0223	1,757.00	--	--
C101 Carry Case	947-9783	89.00	82.33	--
		Price Each		
Standard Calibration Charge	S			
NATA Calibration Charge	N			

Volt/mA Loop Calibrator

FLUKE 715



A compact and lightweight Volt/mA process calibrator combining multiple features and ease of use. Ideal for installation, maintenance and repair applications. Supplied with protective holster with bench stand, test leads, alligator clips and battery.

- Clear 5 digit display
- 4-20mA loop current measurement
- Low level voltage measurement for use with sensor, transmitter and PLC outputs
- mA or % measurement display
- Source or simulate 24mA loop current
- 100mV or 10V source voltage
- 24 volt internal loop supply with simultaneous current measurement, so you can power and read a transmitter at the

same time without carrying a DMM.

- Single 9V battery that is easily changed
- 4 to 20hrs battery life (depending on functions used)



Voltage Measurement		Current Sourcing	
Range	0-100mV/0-10V	Range	0-20mA or 4-20mA
Resolution	10µV/1mV	Accuracy	0.0015% rdg + 2LSD
Accuracy	0.02% rdg + 2LSD	Drive Capability	1000Ω @ 24mA
Current Measurement		Supply Voltage	24V
Range	0-24mA	Voltage Sourcing	0-100mV/0-10V
Resolution	0.001mA	Dimensions (WxHxD)	83x210x32mm
Accuracy	0.015%		

248540

Mfrs.		Price Each		
List No.	Order Code	1+	3+	+
715	431-4499	2,121.94	--	--
C101 Carry Case	947-9783	89.00	82.33	--
		Price Each		
Standard Calibration Charge	S			
	N			

Thermocouple Calibrator

FLUKE 714



A compact and lightweight, single function process calibrator for the calibration, testing and simulation of 9 common types of thermocouple. Ideal for installation, maintenance and repair applications. Supplied with protective holster with bench stand and battery.

- Clear 5 digit display
- Dust, splash and EMI tolerant
- Suitable for use with the common J,K,T,E,R,S,B, L and U type thermocouples
- Temperature measurement from the thermocouple
- Simulation of thermocouple output
- mV source for the calibration of linear thermocouple transmitters
- Selectable °F or °C ranges
- Mini jack TC termination

Measure/Simulate TC		Measure/Simulate mV	
Range	-200 °C to 1800°C	Range	-10 to +75mV
Resolution	0.1°C	Resolution	0.01mV
Accuracy	0.3°C to 10µV	Accuracy	0.025% + 1 Count
		Dimensions (WxHxD)	83x187x32mm

248542

Mfrs.		Price Each		
List No.	Order Code	1+	3+	+
714	431-4505	2,121.94	--	--
C101 Carry Case	947-9783	89.00	82.33	--
		Price Each		
Standard Calibration Charge	S			
	N			

Temperature Calibrator

FLUKE 724



The temperature solution.

A powerful yet easy-to-use field calibrator with measurement and source functions to test and calibrate almost any temperature instrument or device. Supplied with test leads, test clips and batteries.

- Large, easy to read dual LCD display allows the user to view the input and output simultaneously
- Display backlight
- Compact, streamlined and rugged design for field use
- RTD, Thermocouple, Ohms, Volts, measurements to test sensors and transmitters
- Source/simulate Thermocouples, RTDs, Volts, Ohms, to calibrate transmitters
- Linearity tests with 25% and 100% steps
- Execute remote test with auto step and auto ramp
- Power transmitters during tests
- Stores frequently used test setups for later use

Function	Range	Resolution	Accuracy
Voltage	0 to 100mV 0 to 10V (source) 0 to 30V (measure)	0.01mV 0.001V (source) 0.001V (measure)	0.02% rdg + 2 LSD
mA (measure)	0 to 24mA	0.001mA	0.02% rdg + 2 LSD
mV	-10.00mV to +75.00mV	0.01mV	0.025% rdg + 1 LSD
Resistance	0Ω to 3.2KΩ (measure) 15Ω to 3.2KΩ (source)	0.01Ω to 0.1Ω	0.10Ω to 1.0Ω
Loop Supply	24V dc	N/A	10%
Thermocouples	J,K,T,E,L,N,U B,R,S	0.1°C 1°C	to 0.7°C to 1.4°C
RTDs	Ni120 (672), Pt 100, 200, 500, 1000	0.1°C	to 0.2°C
Dimensions (WxHxD)	96x200x47mm		

248559

Mfrs.		Price Each		
List No.	Order Code	1+	3+	+
724	431-4529	3,399.00	--	--
C101 Carry Case	947-9783	89.00	82.33	--
		Price Each		
Standard Calibration Charge	S			
	N			

Calibrators & Simulators - continued

Fluke 787 Process

MeterCurrent, Source and Simulate

FLUKE



H=187 (*201), W=87 (*98), D=32 (*52) *incl. holster

The Fluke 787 ProcessMeter combines a DMM and loop calibrator in one. It has the ability to source, simulate and measure dc current with 1µA resolution.

The ProcessMeter has been designed for troubleshooting and calibrating current loop applications. It is EMI shielded, dust and splash resistant and has a removable battery door making it easy to change the battery without opening the meter.

Supplied complete with protective yellow holster, TL75 test leads, AC70A alligator clips, 9V battery and user manual and quick reference guide.



- DMM and Loop calibrator in one tool
- Precision 1000V, 440mA digital multimeter
- Measure both ac/dc volts, ac/dc current, resistance, continuity and frequency
- Min./Max./Average/Hold/Relative modes
- dc 20mA current source/loop calibrator
- Manual step, auto step, auto ramp
- Clear LCD with backlight, 4,000 count, 30,000 count for dc current

dc/ac volts	4000mV, 4V, 40V, 400V, 1000V	dc current O/P	0-20mA or 4-20mA
dc/ac volts	1A (0.44A continuous)	dc current simulate	0-20mA or 4-20mA
dc mA	30mA	Ext. 24V loop supply	overranging to 24mA
Resistance	400R, 4KR, 40KR, 4MR, 40MR	Current adjustment modes	Manual: course, fine, 25% step Automatic: slow ramp, fast ramp, 25% step
Frequency	199.99Hz, 1999.9Hz, 19.999KHz		
Continuity	100Ω		

222498

Mfrs. List No.	Order Code	Price Each		
		1+	3+	+
Fluke 787	892-968	1,399.00	--	--
C101 Carry Case	947-9783	89.00	82.33	--
		Price Each		
Standard Calibration Charge		\$		

Fluke 789 Process Meter

FLUKE



- 24V Loop power supply
- HART mode setting with loop power (adds 250 ohm resistor)
- 1200 ohm drive capability on mA source
- Infrared I/O serial port compatible with FlukeView® Forms Software Version 2.1
- DMM designed to meet 1000 volt IEC 1010 CAT III standards
- 140 hours typical battery life (measurement)
- Includes test lead set, alligator clips, 4xAA batteries, manual, reference guide, product overview CD

Measurement Function	Range & Resolution
Vdc	400mV, 4V, 40V, 400V, 1000V
Vac (true rms)	400mV to 1000V
mAdc	30mA
A dc	1A (0.44A continuous)
A ac	1A (0.44A continuous)
Resistance	400R, 4R, 40R, 400KR, 4MR, 40MR
Frequency (0.5Hz to 20Hz)	199.99Hz, 1999.9Hz, 19.999KHz
Diode Test	2.000V
Continuity	Beeps for resistance <100R

242132

Mfrs. List No.	Order Code	Price Each
		1+
FLUKE 789	420-2820	1,539.00

Express checkout

With no need to re-enter your details, returning customers can now buy products even faster - **order online today at au.element14.com**

Multifunction Process Calibrator

725 and 725Ex

FLUKE

H=96
W=200
D=47

The Fluke 725 Multifunction Calibrators are a versatile, easy to use field calibrators. Use the measure and source functions to test and calibrate almost anything. The 725Ex model is an ATEX compliant intrinsically safe version ideal for locations where explosive gasses may be present.

- Rugged, reliable design stands up to field use
- Easy to read measure/source screen lets you view input and output simultaneously
- Measure volts, mA, RTDs, thermocouples, frequency, and ohms to test sensors and Transmitters
- Source/simulate volts, mA, thermocouples, RTDs, frequency, ohms, and pressure to calibrate transmitters
- Support flow meter testing with frequency and CPM (counts per minute) functions
- Perform fast linearity tests with auto step and auto ramp features
- Power transmitters during test using loop supply with simultaneous mA measurement
- Store frequently used test setups for later use
- Backlight lets you work in poor light
- Remote interface allows benchtop automated operations

Summary specifications (18°C to 28°C for one year)

Function	Range	Resolution	Accuracy	Notes
Measure or source Voltage	0 to 100mV 0 to 10V (source) 0 to 30V (measure)	0.01mV 0.01V 0.01V	0.02% Rdg + 2 LSD	Max Load 1 mA
mA	0 to 24 -10.00mV to +75.00mV	0.001mA 0.01mV	0.02% Rdg + 2 LSD 0.025% + of range + 1 LSD	Max load 1000Ω
Resistance	15Ω to 3200Ω	0.01Ω to 0.1Ω	0.01Ω to 0.1Ω	
Frequency	1CPM to 10kHz	5 digits	0.05% + 1 count	Squarewave
Loop supply	24Vdc	N/A	10%	
Thermocouples	J,K,T,E,L,N,U	0.1°C	0.7°C	
Thermocouples	B,R,S	1°C to 1.4°C		
RTDs	Ni120 (672) Pt 100, 200, 500, 1000 (385) Pt 100 (3916) Pt 100 (3926)			
Maximum voltage	30V			
Storage temp.	-40°C to 71°C			
Operating temp.	10°C to 55°C			
Relative humidity	95%(10°C to 35°C); 75%(30°C to 40°C); 45%(40°C to 50°C); 35%(50°C to 55°C)			
Shock	30g, 11ms, half-sine shock (or 1 metre drop test)			
Vibration	Random, 2g, 5-500 Hz			
Safety (Model 725)	CSA C22.2 No. 1010.1:1994 Class B			
Safety (Model 725Ex)	ATEX Ex (II 1G EEx ia IIB) 171°C KEMA 04ATEX 1303X, I.S. Class I, Div I Groups B-D, 171°C compliant			
Weight	650g			
Battery	4 AA alkaline batteries. Battery life; 25 hours typical			

222577

Mfrs. List No.	Order Code	Price Each		
		1+	3+	+
FLUKE 725	318-3300	3,900.00	--	--
FLUKE 725EX	947-9880	5,410.00	--	--
C101 Carry Case	947-9783	89.00	82.33	--
		Price Each		
Standard Calibration Charge		\$		
NATA Calibration Charge		N		

Electrical Installation Testers

F-Set Tone Probe Kit

ACCESS



- Tone generator and amplifier probe kit (F-set) for cable tracing
- Fitted with alligator clips & modular plug
- Internal switch for modulated or unmodulated tone & an external tone/continuity - test/off switch
- Supplied with velcro canvas pouch
- 9V batteries for both generator/probe (not included)

242376

Mfrs. List No.	Order Code	1+	5+	10+
T0115	417-8889	308.04	247.86	187.68

Digital Insulation Tester Amprobe AMB-25



These quality and affordable Meg-ohmmeters still offer a solid range of features designed to meet most insulation test applications:

- Test insulation of wire, cables, transformers and motors
- Comes as a complete kit including test leads
- Selectable test voltages 250V, 500V and 1000V
- Programmable timer and button lock to perform the dielectric Absorption Ratio Test
- Sensitive Ohmmeter for checking resistance of motor windings
- Internal memory (stores 9 readings)
- Safety category: CAT III 1000V



	Range	Resolution	Best Accuracy
AC Voltage	700V	1V	$\pm(1.2\%rdg + 5d)$
DC Voltage	1000V	1V	$\pm(0.8\%rdg + 3d)$
Insulation Resistance			
Test Voltage: 250V	0 - 600M Ω		$\pm(3\%rdg + 5d)$
Test Voltage: 500V	0 - 1000M Ω		$\pm(3\%rdg + 5d)$
Test Voltage: 1000V	0 - 2000M Ω	1M Ω	$\pm(3\%rdg + 5d)$
Resistance	0 - 9999 Ω		$\pm(1\%rdg + 2d)$
Dimensions	W=145 H=265 D=91mm. Weight 1.034Kg		

Includes: Test leads and user manual
Optional carry case GP-2CC available

531727

Mfrs.		Price Each		
List No.	Order Code	1+	+	+
AMB 25	169-6715	488.18	--	--

Insulation Multimeter



A combined multimeter / insulation tester for electrical applications and ideal for the troubleshooting and maintenance of motors and switchgear.

- Large LCD with full icon display and backlight
- Auto / manual range selection
- TRMS measurements
- Insulation resistance measurement
- AC/DC current measurement
- Voltage, resistance, capacitance and frequency measurement
- Min/Max modes and data hold
- Continuity buzzer and diode test
- 99 record datalogging
- Sleep mode and low battery warning

- Supplied with test leads, test clips, 9V battery and user manual

Function	Range	Best Accuracy
Insulation Resistance		
500V	0.1M Ω to 60M Ω , 60M Ω to 500M Ω	$\pm(2\% + 5)$
1000V		
General		
DC Voltage	60mV, 600mV, 6V, 60V, 600V, 1000V	$\pm(0.09\% + 2)$
AC Voltage	6V, 60V, 600V, 1000V	
DC Current	60mA, 400mA	$\pm(0.2\% + 2)$
AC Current	60mA, 400mA	
Resistance	600 Ω , 6k Ω , 60k Ω , 600k Ω , 6M Ω , 40M Ω	$\pm(0.9\% + 2)$
Capacitance	10nF, 100nF, 1 μ F, 100 μ F	$\pm(1\% + 3)$
Frequency		
Safety	IEC1010 600V CATIV/1000V CATIII	
Dimensions	97x202x46mm (WxHxD)	
Dimensions	505g	

510042.509500

		Price Each	
Description	Order Code	1+	3+
Insulation Multimeter	156-3723	386.92	369.32

Residual Current Device Tester

RCDT300 Series



Designed for testing standard, DC and selective residual current devices (RCDs). The series includes two models both of which are easy to hold and use, and have a robust rubber case with a built-in lid to protect the display.

All models include:

- Tests standard, DC and selective RCDs
- Ramp testing
- Auto (remote) testing
- Enables testing on 110V centre tapped supplies
- Tough rubber armoured case with built-in cover
- Δ I, I, 5I RCD trip time test
- Selective breakers
- DC breakers ($\frac{1}{2}$ I, I, 5I)
- 30, 100, 300, 500 mA RCDs
- 0°/180° polarity selection
- Touch voltage display (selectable)
- Max touch voltage (25V/50V)

- 3 phase safe
- Large clear display
- Battery status indication
- Auto power off
- Fuse blown indication
- Weatherproof to IP54
- Supplied with carry case

RCDT320 Extra features

- 10mA/1A RCDs
- RCD trip current test (RAMP)
- Auto sequence test
- Operating range: 100-280V and 50-290V
- Backlight

RCD test current accuracy

No trip test	(Δ I)-8% to -2%
Trip test	(I, 5I) +2% to 8%
Trip time	$\pm 1\% \pm 1ms$

Voltage measurement

Range ac	0 - 300V 25 to 450Hz
Accuracy	$\pm 2\% \pm 2$ digits

Frequency measurement

Range	25 to 450Hz
Accuracy	25.0 to 199.9Hz ± 0.1 Hz

200 to 450Hz ± 1 Hz

Fault (touch) voltage

Displayed range

0 - 90V

Error

$\pm 5\% / \pm 15\% \pm 0.5V$

Power Supply

Batteries

8x 1.5V AA Batteries

Rechargeables

8x 1.2V NiCd or NiMH cells

1000 consecutive tests

190x140x75mm

980g

339410.344500

Mfrs.		Price Each		
List No.	Order Code	1+	+	+
RCDT310 500mA	940-0818	878.84	--	--
RCDT320 1000mA	940-0826	1,074.02	--	--

Insulation Testers

1503 and 1507



W=100 H=203 D=50mm. Weight 550g

The Fluke 1503 and 1507 Insulation Testers are compact, rugged, reliable and easy to use. With their multiple test voltages, they are ideal for many troubleshooting, commissioning, and preventative maintenance applications. Additional features, like the remote probe on these tools save both time and money when performing tests.

Includes: remote probe, test leads, test probes, alligator clips, holster and user documentation.

- Automatic calculation of both Polarisation Index and Dielectric Absorption Ratio
- Remote test probe for repetitive or hard-to-reach testing
- Live circuit detection prevents insulation test if a voltage larger than 30V is detected
- Make repetitive tests easy with Compare (Pass/Fail) functionality (1507 only)
- Auto discharge of capacitive voltage
- Auto power off
- Large backlit display
- EN61010-1 CAT IV 600V
- One year warranty

Electrical Installation Testers - continued

Insulation Testers - continued

1503 and 1507 - continued

Insulation resistance			
Test Voltage Ranges	Resolution	Test Current	Accuracy
Fluke 1503			
500 V	0.1MΩ - 20MΩ, 20MΩ - 200MΩ, 200MΩ - 500MΩ	0.01MΩ, 0.1MΩ, 1MΩ	1mA at 500kΩ ±(2% + 5 digits)
1000 V	0.1MΩ - 200MΩ, 200MΩ - 2GΩ	0.1MΩ, 1MΩ	1mA at 1MΩ ±(2% + 5 digits)
Fluke 1507			
50 V	0.01MΩ - 20MΩ, 20MΩ - 50MΩ	0.01MΩ, 0.1MΩ	1mA at 50kΩ ±(3% + 5 digits)
100 V	0.01MΩ - 20MΩ, 20MΩ - 100MΩ	0.01MΩ, 0.1MΩ	1mA at 100kΩ ±(3% + 5 digits)
250 V	0.01MΩ - 20MΩ, 20MΩ - 200MΩ	0.01MΩ, 0.1MΩ	1mA at 250kΩ ±(1.5% + 5 digits)
500 V	0.01MΩ - 20MΩ, 20MΩ - 200MΩ, 200MΩ - 500MΩ	0.01MΩ, 0.1MΩ, 1MΩ	1mA at 500kΩ ±(1.5% + 5 digits)
1000 V	0.1MΩ - 200MΩ, 200MΩ - 2GΩ, 2GΩ - 10GΩ	0.1MΩ, 1MΩ, 100MΩ	1mA at 1MΩ ±(1.5% + 5 digits) / >2GΩ: ±(10% + 3 digits)
Function	Range	Resolution	Accuracy
Earth Bond Resistance Measurement			
Resistance	20R, 200R, 2kR, 20kR	0.01Ω, 0.1Ω, 1Ω, 10Ω	±(1.5% + 3 digits)
AC/DC Voltage Measurement			
Voltage	600 V	0.1 V	±(2% + 3 digits)
General Specifications			
Operating Temperature	-20°C to +55°C		
Batteries	4x AA batteries. Can perform 1000 insulation tests.		
Protection Standard	IP40		
			416604.429124
		Mfrs.	Price Each
Description	List No.	Order Code	1+
Insulation Tester	1503	101-8357	710.55
Insulation Tester	1507	101-8361	879.00
Hard Carry Case	C101	947-9783	89.00

Insulation Multimeters

Model 1577 / 1587



W=275 H=200 D=100mm. Weight 3 kg

Combining a digital insulation tester with a full-featured, true RMS digital multimeter in a single, compact, handheld unit, which provides maximum versatility for both troubleshooting and preventative maintenance. Whether you work on motors, generators, cables, or switch gear, the Fluke 1587/1577 Insulation Multimeters are ideally suited to help you with your tasks and at a cost that is far less than buying the two products.

- Large backlit display for easy reading
 - EN61010-1 1000V CAT III / 600V CAT IV
 - Three year warranty
- Auto power off
 - Input alert warns of incorrect connections
 - Rugged utility hard case

Includes: hard case, test leads, crocodile clips, temperature probe (1587 only) and remote test probe.

Accessories:

- TPAK Magnetic Hanger (302-9578)

Multimeter Features

- True RMS voltage and current measurement
- Auto and manual ranging
- Selectable filter for accurate measurements on motor drives
- MIN / MAX recording
- Diode Test
- Temperature, capacitance and frequency measurement

Insulation Features

- User selectable test voltages for many applications
- Special remote control probe for easy and safe measurements
- Auto discharge of capacitive voltage for added user protection
- Live circuit detection prevents insulation tests if >30V is detected

1577	1587
●	●
●	●
●	●
●	●
●	●
●	●
●	●
●	●
●	●

Insulation Specifications

- Measurement Range
- Test Voltages
- Test Voltage Accuracy
- Short-circuit Test Current
- Auto Discharge
- Maximum Capacitive Load

1577

- 0.1MΩ to 600MΩ
- 500V, 1000V
- +20%, -0%
- 1mA nominal
- Discharge time <0.5s for C = 1μF or less
- Up to 1μF load

1587

- 0.01MΩ to 2GΩ
- 50V, 100V, 250V, 500V, 1000V
- +20%, -0%
- 1mA nominal
- Discharge time <0.5s for C = 1μF or less
- Up to 1μF load

Other Functions

- DC Voltage
- AC Voltage
- DC Current
- AC Current
- Resistance
- Capacitance
- Frequency
- Temperature

Maximum

- 1000V
- 1000V
- 400 mA
- 400 mA
- 50 MΩ
- 9999 μF
- 99.99 kHz
- 40 - 537 °C

Resolution

- 1 mV
- 0.1 mV
- 0.01 mA
- 0.01 mA
- 0.1Ω
- 1 nF
- 0.01 Hz
- 0.1 °C

Accuracy

- 1577 ±(0.2%+2d)
- 1587 ±(0.09%+2d)
- ±(2%+3d)
- ±(1%+3d)
- ±(1%+2d)
- ±(0.2%+2d)
- ±(2%+2d)
- ±(1.5%+2d)
- ±(0.9%+2d)
- ±(1.2%+2d)
- ±(0.1%+1d)
- ±(1%+10 digits)

488984

Description	Order Code	Price Each 1+
1577 Insulation Multimeter	948-7484	999.00
FLUKE 1587 Insulation Multimeter	967-7267	1,200.00
TPAK Magnetic Hanger	302-9578	62.00

Insulation and Continuity Testers

MIT200 Series



One of the smallest insulation testers available on the market today. With options of a two voltage, or three voltage instrument, the MIT200 instruments offer a range of safety and operation features expected from a Megger tester. The combined analogue pointer and digital readout provide both accuracy and charge/discharge characteristics. Auto continuity testing removes the need for a third hand. Replacing the highly respected BM120 and BM220 range, the new MIT220 and MIT230 use the same small case, but now up-rated to CATIII 600V. Voltage warning and display, plus voltage lockout protect both the user and the instrument, if accidentally connected to a live circuit. Both instruments meet the requirements of BS7671, as well as BSEN 61557 and IEC61010.

W=98 H=195 D=40mm. Weight 530g

Common features:

- 250V and 500V insulation testing
- 1000MΩ range
- Continuity testing at 200mA down to 0.01Ω
- Digital display and "Analogue arch"
- Alkaline or rechargeable batteries

- IEC61010-1 CATIII 600V
- Test leads and probes
- Hard carry case
- Calibration certificate included
- 3 year warranty

MIT230 additional features:

- 250, 500, 1000V insulation testing

419191.428556

Mfrs.		Price Each			
Description	List No.	Order Code	1+	5+	10+
Insulation Tester	MIT220-EN	108-6217	715.26	--	--
Insulation Tester	MIT230-EN	108-6218	847.40	--	--
Fused Test Leads	6220-789	108-6238	146.82	136.18	130.12

REACH - SVHCs



We've checked over **200,000 products** for **Substances of Very High Concern** under REACH and are continuing to check more every day. Easily identify these products online and access supporting safety datasheets when you see this logo. Visit au.element14.com to stay up-to-date.

Insulation and Continuity Testers

MIT400 Series



W=108 H=232 D=55mm. Weight 800g

General features:

- Insulation testing to 1000V and to 200GΩ
- Continuity testing at 200mA down to 0.01Ω
- Analogue and dual digital display
- PI/DAR insulation timer / display
- Bluetooth data transfer
- TRMS voltage measurement and test data storage
- IEC61010-1 CATIV 600V

Combining the latest range of measurement techniques with new instrument design to provide a state-of-the-art tester that is compact and comfortable to hold. All primary results are displayed in the larger digital display and repeated on the analogue arc. Additionally, auxiliary test information such as frequency, leakage current, Insulation or circuit voltage is displayed in the smaller secondary digital display. Rubber over moulding combines the tough shock absorbing outer protection with excellent grip, on a strong modified ABS housing, providing an almost indestructible case.

Industrial Applications: service, maintenance and electrical installations testing.

- **MIT400:** Basic CATIV 600V tester
- **MIT430:** Advanced CATIV 600V tester, results storage and Bluetooth download

Instrument	MIT400	MIT430
Insulation Voltage Range		
50V (10GΩ)		●
100V (20GΩ)		●
250V (50GΩ)	●	●
500V (100GΩ)	●	●
1000V (200GΩ)	●	●
Insulation Range	20GΩ	200GΩ
Leakage Current Display		●
INS test voltage display	●	●
Continuity		
0.01 to 100Ω	●	●
Variable Current Limit (200mA/20mA)	●	●
Fast Buzzer - selectable threshold	●	●
kΩ range to 999kΩ	●	●
Voltage		
Live circuit warning at 50V	●	●
Default voltmeter	●	●
TRMS measurement to 600V	●	●
Measurement Ranges		
Frequency (40 to 400Hz)		●
Capacitance (0.1nF to 10μF)		●
mV / transducer (0.1 to 19.99V)	●	●
Features		
Backlight	●	●
Battery condition display	●	●
Insulation timed PI-DAR tests	●	●
Test button / Lock button	●	●
Limit alarm pass band on INS	●	●
Auto power down	●	●
Result Storage	●	●
Bluetooth Connectivity	●	●

General Accuracy (at 20°C)

Insulation	±3% ±2 digits (up to 10MΩ) ±5% (up to 100MΩ) ±30% (up to fullscale)
Continuity	±3% ±2 digits (0.01 to 100Ω)
Resistance	±5% ±2 digits (10Ω to 1MΩ)
Voltage	±1% ±2 digits (max. 600V ac or dc)
Frequency	±2% ±2 digits
mV	±2% ±2 digits
mA	±2% ±2 digits
Capacitance	±5% ±2 digits

General Specifications	
Batteries	6 x AA (alkaline or NiMH) gives 3000 consecutive tests of any type.
Protection	IP54
Operating Temperature	-10°C to 55°C
Safety	IEC61010-1 600V CATIII (MIT430 is 600V CATIV)

Supplied with: red/black silicone lead set with clips, protective rubber boot, remote switch probe (except MIT400) and batteries.

419195.428557

Mfrs.		Price Each			
Description	List No.	Order Code	1+	2+	5+
Industrial Insulation Tester	MIT430-EN	108-6225	1,497.07	1,467.14	1,437.78
			Price Each		
Standard Calibration Charge		S		☎	
UKAS Calibration Charge		N		☎	

Megger



Insulation / Continuity Tester with Multimeter functions

3454



H=148, W=175, D=56mm Weight = 530g

Insulation test voltage	250V, 500V, 1000V
Measurement range	4 to 4000MΩ
1st effective range	0.2 to 200MΩ
2nd effective range	0 to 4000MΩ
Accuracy	1st effective range: ±3 %rdg. ±4 dgt. / 2nd effective range: ±5 %rdg. ±5 dgt.
No load voltage	Not more than 1.2 x rated measurement voltage
Short circuit current	1.2 mA max
Response time	∞ to center, ∞ to 0 MΩ within 5s
Low resistance range	40Ω to 4MΩ short circuit current: 200 mA
Accuracy	±3 %rdg. ±6dgt. (±5 %rdg. ±6dgt. at 400 kΩ range or higher)
AC voltage range	0 to 750V
Accuracy	±3 %rdg. ±6dgt. (up to 600V)

380955.381287

Mfrs. List No.	Order Code	Price Each		
		1+	3+	5+
HITESTER 3454-11	842-1439	875.00	831.25	809.34
		Price Each		
Standard Calibration Charge		S	☎	
		N	☎	

Installation Testers

1650B Series

FLUKE



1651B

1652B

1653B

The 1650B series tests continuity, insulation resistance, loop impedance, short-circuit current (PSC), RCDs and more.

1651B: Performs all basic installation tests including continuity, loop and line resistance, PFC/PSC (short-circuit current), RCD tripping time.

1652B: As 1651B plus RCD tripping current level, automatic RCD test sequence, test DC sensitive RCDs.

1653B: As 1652B but with earth resistance and phase sequence measurement. Has internal memory and a PC interface for documentation and reporting.

- **Easy:** simply turn knob, press the button and see results
- **Efficient:** measure loop impedance without tripping RCDs, eliminating the need to bypass them
- **Rugged:** withstands a one-meter drop for demanding field use
- **Safe:** slim probe with test button keeps your eyes on the panel while probing hard to reach points
- **Comfortable:** compact and lightweight (less than 1.2kg) for all day testing
- **Compliant:** meets all relevant standards including EN 61557 and BS 7671 16th Edition IEE wiring regulations
- **Current:** High current loop impedance test
- **Extra:** Includes Zero Adapter for easy test lead compensation.

Measurement functions

	1651B	1652B	1653B
Voltage and Frequency	●	●	●
Wiring polarity	●	●	●
Insulation Resistance	500, 1000V	250, 500, 1000V	50, 100, 250, 500, 1000V
Continuity	●	●	●
Loop & Line Resistance	●	●	●
PFC/PSC (short-circuit current)	●	●	●
RCD tripping time	●	●	●
RCD tripping current level	●	●	●
Automatic RCD test sequence		ramp test	ramp test
Test DC-sensitive RCDs		●	●
Earth Resistance		●	●
Phase Sequence Indicator		●	●

Other features

Self-test	●	●	●
EN61557*/VDE0413 compliant	●	●	●
Illuminated display	●	●	●
Line voltage indicator	●	●	●
Battery indicator and battery test	●	●	●
Memory, Interface			
Memory (500 measurements)			●
Computer interface			●
Time stamp (with FlukeView Forms)			●
Software			Option

Electrical Installation Testers - continued

Installation Testers - continued

1650B Series - continued

Description	Mfrs. List No.	Order Code	Price Each		
			1+	3+	6+
Installation Tester	FLUKE 1651B	167-1237	1,100.00	--	--
Installation Tester	FLUKE 1652B	167-1238	1,300.00	--	--
Installation Tester	FLUKE 1653B	167-1239	2,200.00	--	--
Accessories					
Earth Spike Kit	ES165X	483-2759	320.00	--	--
Test Probe - Remote	TP165X	483-2760	122.00	119.00	115.00
Test Lead Set	TL165X STD	491-7133	175.00	161.88	--
Test Lead Set - Fused	TL165X FUSED	491-7145	355.40	331.63	325.51
PC Software	FVF-SC2	359-6473	409.00	378.33	--

525835



- Stakeless testing, makes your earth ground loop resistance testing quicker and easier. No need for a separate earth ground clamp
 - 3- and 4-pole Fall of Potential, earth resistance loop testing
 - 4-pole Soil Resistivity testing
 - Selective earth ground rod testing using 1 clamp
 - Stakeless earth ground rod testing using 2 clamps
 - IP56 rated for outdoor use
 - Rugged carrying case
- In addition, the Fluke 1625 offers these advanced features:
- Automatic Frequency Control (AFC) - identifies existing interference and chooses a

measurement frequency to minimize its effect, providing more accurate earth ground value

- R* measurement - calculates earth ground impedance at 55 Hz to more accurately reflect the earth ground resistance that a fault-to-earth ground would see
- Adjustable limits - for quicker testing

Measurements Performed:

Measuring Range

Intrinsic Error

3 and 4-pole Ground Resistance Measurements

0.001Ω to 19.99kΩ

±(2% rdg + 3 digits)

3 and 4-pole Selective Ground Resistance Measurements with Current Clamp

0.001Ω to 19.99kΩ

±(7% rdg + 3 digits)

Stakeless Ground Loop Measurements

0.001Ω to 199.9Ω

±(7% rdg + 3 digits)

Display

1623

1625

Working Temperature

1999 count backlit LCD

2999 count backlit LCD

Temperature Coefficient

-10°C to 50°C

-10°C to 50°C

Measurement Time

±0.1% / K

±0.1% / K

Protection

Approx. 6 secs.

Power

IP56 (IP40 for battery door)

6x AA batteries (up to 6000 measurements)

1623

Basic GEO Earth Ground Tester

Includes Tester, Test Leads, Batteries, Manual.

1623 KIT

Basic GEO Earth Ground Tester Kit

1623 Tester plus Clamp Set (EI-1623), 4-Pole Stake Kit (ES-162P4) and a rugged carry case.

EI-1623

Selective/Stakeless Clamp Set for 1623

Contains both the Inducing and Sensing Clamp along with all necessary adaptors.

EI-1625

Selective/Stakeless Clamp Set for 1625

Contains both the Inducing and Sensing Clamp along with all necessary adaptors.

447038

Earth/Ground Testers

Earth Resistance Meter



For measuring the resistance of earthing in electrical equipment and the measurement of ground resistivity.

- Large dual LCD display with backlight
- Test hold function for easy operation
- Zero automatic adjustment
- Sampling rate: 2.5 samples per second
- Low battery indication
- Over range indication
- Audible continuity test
- Safety Category: CATIII 1000V

Function	Max. Range	Basic Accuracy	Best Resolution
Earth Resistance	10Ω	±(2.0%+0.1Ω)	0.01Ω
	100Ω	±(2.0%+3d)	0.1Ω
	1000Ω	±(2.0%+3d)	1Ω
DC Voltage	1000V	±(0.8%+3d)	1V
AC Voltage	750V	±(1.2%+10d)	1V
Resistance	200kΩ	±(1.0%+2d)	0.1kΩ

Physical Specifications

Power 6x AA batteries
Dimensions (WxHxD) 92 x 200 x 50mm
Weight 700g

Includes: 6x AA batteries, 4x iron stakes, 4x test lead sets, and shoulder bag carry case.

486294.465634

Order Code	Price Each		
	1+	3+	5+
143-0704	255.91	221.98	192.30
Price Each			
Standard Calibration Charge	S	☎	
UKAS Calibration Charge	N	☎	

GEO Earth Ground Testers

1623 and 1625



W=250 H=133 D=187mm. Weight 1.1kg

Flash / High Potential Testers

5kV Insulation Resistance Tester

MIT510



- Mains or battery powered
- Large, easy to read, digital/analog backlit display
- Selectable test voltage from 250 to 5000 V
- Automatic IR test
- Measures to 15 ΩT
- Rugged polypropylene case with ingress protection to IP65

W=360 H=305 D=194mm. Weight 6.75kg

Designed specifically for the testing and maintenance of high voltage electrical equipment. Information displayed includes resistance, voltage, leakage current, capacitance, battery status and time constant. In addition, the elapsed time of the test is displayed constantly removing the need for separate timers. The instrument can test when being powered by the mains or its internal rechargeable battery, a great benefit when site conditions are unknown or long term testing is required. The instrument is fitted with a guard terminal to enhance accuracy. The guard test lead is included as standard with the instrument. To further enhance the flexibility of the instrument the MIT510 has the facility to set the test voltage in steps from 250 V to 5000 V avoiding the expense of several insulation resistance testers to meet your application needs. The instrument measures the voltage at the terminals and if this is above 50 V then the instrument will display the high voltage warning and inhibit testing. At the end of the test the instrument will automatically discharge the energy transferred to the equipment during the test phase.

Electrical Specifications

Voltage Input Range

85-265 V_{rms} 50/60Hz, 60VA

Test Voltages

250V, 500V, 1000V, 2500V, 5000V

Accuracy (23°C, 5kV)

±5% @ 1TΩ, ±20% @ 10TΩ

Guard

2% error guarding 500kΩ leakage with 100MΩ load

Short Circuit / Charge Current

3mA @ 5kV

Capacitor Charge Time

<3s per μF at 3mA, 5kV

Electrical Specifications

Capacitor Discharge Time	<120ms per μF to discharge from 5000V to 50V
Capacitance Measurement (>500V)	10nF to 50 μF (dependent on test voltage)
Capacitance Measurement Accuracy	$\pm 5\%$ $\pm 5\text{nF}$
Voltage Output Accuracy	+4%, -0% $\pm 10\text{V}$ of nominal test voltage at 1G Ω load
Current Measurement Range	0.01nA to 5mA
Current Measurement Accuracy	$\pm (5\% + 0.2\text{nA})$ at all voltages
Interference Rejection	1mA _{rms} per 250V test voltage up to a maximum of 2mA
General Specifications	
Battery Life	6 hours continuous testing at 5kV
Protection	IP65
Operating Temperature	-10°C to 50°C

Supplied with: 3m lead set and user guide on CD

493712

Description	Mfrs. List No.	Order Code	Price Each		
			1+	+	+
Insulation Resistance Tester	MIT510	151-1515	7,127.79	--	--
			Price Each		
Standard Calibration Charge	S				
NATA Calibration Charge	N				

Power Quality Testers & Analysers

Single-Phase Voltage Quality Recorder

VR1710

Easy-to-use solution for detecting and recording voltage quality problems



Applications:

- Voltage recording
- Distortion measurement
- Flicker measurement
- Voltage transients

The Fluke VR1710 is a single-phase, plug-in voltage quality recorder that provides fast and easy recording of voltage trends, dropouts, harmonics and general power quality including dips and surges to help maintenance and facilities management personnel easily pinpoint the root cause of voltage problems. Voltage quality parameters including RMS average, transients, flicker, and harmonics up to the 32nd are recorded using a user-selected average period from 3 seconds to 10 minutes.

- Clear graphical summary of data and quick overview of key power quality parameters
- Get the complete picture with Min, Max, Average RMS values (1/4 cycle) with time stamps
- See the detailed with actual transient display (> 100 μs) with time stamp
- Comprehensive analysis of Individual harmonic and THD values with trends
- Remote access capability via an external modem

Operating Voltage:	70 V to 300 V
Resolution	0.125V
Possible number of recording events:	175,000
Time resolution	5 ms
Over voltage measurement	Yes
Frequency Analysis	Yes
Harmonics measurement:	EN 61000-4-7 (up to 32nd harmonic)
Flicker measurement	EN 61000-4-15
Recording time	1 day to 339 days*
Transients	Yes (>100 μs)
Frequency range	50Hz($\pm 1\text{Hz}$) & 60Hz($\pm 1\text{Hz}$)

*Please refer to datasheet

501111

Mfrs. List No.	Order Code	Price Each		
		1+	3+	+
VR1710	155-1225	1,595.00	1,475.38	--
		Price Each		
Standard Calibration Charge	S			
NATA Calibration	N			

Power Logger

1735

FLUKE



H=180, W=240, D=110mm Weight = 1.7kg

The Analyst 3P measures all essential power quality parameters in 50 and 60Hz systems: rms values of voltage and current, events, harmonics, voltage, power and line frequency.

- 3 phase power quality analyser and disturbance recorder
- Colour display
- Portable, robust and easy to use
- Ideal for troubleshooting, load profiling and energy optimisation
- Voltage and current up to 40th harmonic
- Power and energy measurement
- Easy to use PQlog view download, analysis and reporting software

Measurements	Range	Resolution
Voltage Inputs	U_N ranges Y: 57 to 480VAC U_N ranges D: 100 to 830 VAC	0.1V 0.1V
Current inputs	LEM flex I_N : 15/150/3000A AC (Sinewave) Probes: 50/ 500mV AC	0.01A - 1A
Frequency	46 - 54Hz and 56 - 64Hz	0.01Hz
Power	Max: 2.49MW Typical: 34.50kW	Max: 1kW, Typical: 1W - 10W
PF Power Factor	0.000 to 1.000	0.001
General		
Data storage	Up to 50 screenshots	
Interface	RS232	
Operating temp	0 to 40°C	
Storage temp	-20 to 60°C	
Safety	IEC 61010-1, 600V CAT III	

382479

Mfrs. List No.	Order Code	Price Each		
		1+	+	+
1735	127-2821	5,436.09	--	--

Cable Locators & Testers

Stud / Metal / AC Voltage Detector



- Laser leveling, layout and stud locating on vertical and horizontal surfaces
- Wood, metal and live wire detection - detects wood at depths up to 18mm
- 180° pivoting laser plane with level and plumb vials
- 6m laser line projection onto work surface with 90° squaring
- Two self contained hang pins to mount unit to work surface (vertical or horizontal)
- LCD sensing and mode display with new target graphics
- LED display with continuous live wire detection
- Thumb dial adjustable feet for leveling the laser
- Ergonomically designed for comfort and grip
- Requires a 9V battery
- Dimensions (WxHxD): 67 x 180 x 38mm. Weight 180g

486299.465652

Order Code	Price Each		
	1+	5+	10+
143-0705	85.14	77.36	71.37

Spotted an error?



Now you can update our product information online. Simply search for the order code at au.element14.com and look for this logo to notify us of an error.

Cable Locators & Testers - continued

Impulse Reflectometer



The TDR-400 is a handy, light impulse reflectometer, processor controlled, with LCD display for check and locate faults in telecommunication and power cables.

Measuring principle:

The measuring pulse fed into the cable will be reflected by inhomogeneity of the cable impedance (cable faults) and showed on the display. The distance and the kind of the fault can be determined out of the shape and the time setting of the reflection (Practical experience can be obtained by test measurements). If the cable is terminated with a resistance equal to the impedance of the cable, no reflexion occurs when the cable is faultless. In the case of breaks, contact faults in sleeves, short circuits or taps/splitter in the sector to be tested, the distance to the cable beginning can be determined by the pulse echo. If wide pulses are used for the measurement, the echoes are stronger, but faultless taps/splitter cause then strong echoes.

Propagation factor

The Propagation factor (nvp-value) declares the velocity of electrical signals in the cable in relation to the speed of light. The propagation factor of the cable under test must always be preset before the length measurement. If the propagation factor is unknown, a approximate value is set and the fault is determined from both ends of the cable.

Features TDR-400

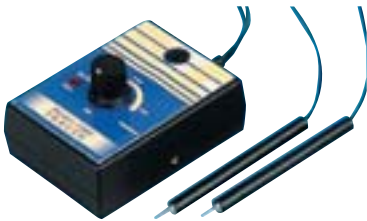
Measuring range	0 - 2000 m
Resolution	0.25 m, 0.5 m, 1 m, 4 m
Accuracy	0.2 % of the measuring range
Propagation factor	0.25 to 0.999
Storage places	10 for propagation factor
Dynamics	44 dB
Impedance	75 Ohm
Output	F-socket
Output pulse	4 V/5 ns or 100 ns
Operating	with 3 keys
Display	LCD display, 120 x 32 pixel, illuminated
Power supply	NiMH accumulator 6 V/ 700 mAh (5 x R3),
Power consumption	80 mA

525720

Mfrs. List No.	Order Code	1+	5+
TDR-400	167-1221	2,801.13	2,717.08

Voltage & Continuity Testers

Short Circuit Tracer



H = 110, W = 80, D = 37 (mm)

A highly efficient test tool for quickly locating short circuits on PCBs. The unit is designed as an aid for finding the most difficult fault on PCBs which is a short across two tracks that travels across a large part of the board e.g. ICs. The unit emits an audible tone that reduces in frequency as the short is approached and increases in frequency as the probe is moved away.

- Audible tone via built-in buzzer or headphone socket (headphones not supplied)
- Adjustable resistance 0 to 250mΩ
- Battery operated (supplied)

248943

Mfrs. List No.	Order Code	1+	10+
MODEL 1000	428-4148	189.00	187.68

Voltage Test Screwdriver



An all-weather voltage test screwdriver for voltage, polarity, continuity testing, bulb/fuse testing and microwave leakage detection. Features an integral LED indication and contact/non contact inductive testing.

AC Voltage Test	70 to 250V AC	Polarity Test	1.5V to 36V DC
Contact	70 to 600V AC	Continuity Check	0 to 50MΩ
Non-Contact	Up to 250V DC	Microwave Leakage Detection	≥5mV/cm²

248981

Mfrs. List No.	Order Code	1+	10+
Voltage Test Screwdriver	428-4331	13.55	11.46

Volt Stick Voltage Tester



H=145, W=20, D=18mm Weight = 35g

- Locate breaks in cables
- Detect blown fuses inside plugs of fuse holders
- Distinguishes between live and neutral in single and three-phase supplies
- Identifies voltage-carrying cables in junction boxes
- Identifies faulty in-line switches
- Locates faulty lamps in series connections
- Red light in the tip to indicate voltage
- Fully insulated for safe use

The Volt Stick is an instrument for quick testing the presence of AC voltage, without metallic contact. It can be used for testing cables, sockets, switches etc. By simply touching the area with the tip, the Volt Stick indicates voltage presence by its glowing tip. Intrinsically safe ATEX versions for use in hazardous areas such as chemical plants, oil refineries and off shore rigs are also available.

Voltage range	220 - 230 Volts AC, or 90-1000V for IN02470
Sensitivity	Indicator will illuminate at 4mm distance of a 2.5mm² conductor carrying 220V
Altitude	<2000m
RH	80% @ 30°C, 50% @ 40°C
Operating temp	-20 to +50°C
Response time	Instantaneous
Battery type	2x 1.5V AAA (supplied)

381017.267944

Description	Order Code	1+	10+
Black 230V	838-8598	72.36	67.62
Yellow 230V	838-8601	72.36	67.62
ATEX blue 230V	838-8610	124.62	116.05
ATEX blue 110V	838-8628	106.14	98.86

Volt Stick Pro Voltage Tester



H=146, Ø=18mm Weight = 40g

- Unique forked tip gives unsurpassed selectivity and reduces the risk of spurious indications
- Live cables can easily be detected in equipment cabinets, fuse boxes etc
- Cables and connections can be checked simply in low voltage equipment too
- Extremely safe when measuring in junction boxes
- With the supplied field strength amplifier, anti-tamper, earthed outlets can be checked
- Powerful red light in the tip to indicate voltage
- Fully insulated for safe use

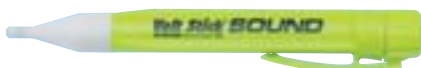
The Volt Stick PRO, with its unique forked tip, has an unsurpassed voltage range and increased selectivity. This is because the maximum sensitivity is between the two prongs of the fork. Outside the fork the sensitivity is low, so external interference fields have small effect.

Voltage range	12-600V AC (838-8636) 230V AC (838-8644)
Altitude	<2000m
RH	80% @ 30°C, 50% @ 40°C
Operating temp	-10 to +50°C
Power	2x AAA alkaline batteries (supplied)

381098.345077

Description	Order Code	1+	10+
Volt Stick 12-600V AC	838-8636	113.69	106.01
Volt Stick 230V AC	838-8644	100.04	93.27

Volt Stick Voltage Tester with Sound



H=145, W=18, D=20mm Weight = 40g

The Volt Stick SOUND is an instrument for safely checking the presence of an AC voltage in cables, wall sockets, fuses junction boxes etc. No current flow is needed for correct operation. Voltage indication with both sound and light signal. Low battery indicator.

- Locates breaks in cables
- Detects blown fuses inside plugs or fuse holders
- Distinguish between live and neutral wires in both single and three-phase supplies

Voltage range 230 VAC
Altitude <2000m
RH 80% @ 30°C, 50% @ 40°C

- Identifies voltage-carrying cables in junction boxes
- Identifies faulty in-line switches
- Locates defective in-series light bulbs
- Both light and sound voltage indicators
- Low battery indicator

Operating temp -10° to +50°C
Power supply 2 x AAA batteries (included)

381099.345078

Price Each

Order Code	1+	10+
838-8652	69.18	64.54

Voltage Detector



A high quality voltage detector with a useful On/Off switch to stop unwanted and annoying activation due to static charges generated when handling.

H = 150, W = 25, D = 21 (mm)

- Contact-free, clear and audible indication of voltage between 50 and 500V
- Quick and accurate detection of breaks in open ended cables
- Detects microwave leakage
- Phase detection in sockets
- 50 to 500Hz frequency range
- Powered by 2x AAA type batteries (supplied)

248986

Price Each

Order Code	1+	10+
Voltage Detector 428-4343	52.95	50.54

Testboy® 100 Non-Contact Voltage Tester



STEINEL

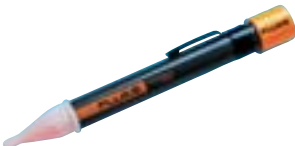
- Voltage sensing 120 to 1000 V AC
- Recognises live conductors in cable connections, cable drums, socket outlets, switches etc
- Non-visible cable breaks can be determined to within a tolerance of a few millimeters
- Includes extremely powerful LED torch
- Approved to Cat II/1000V to AS/NZS 61010-1

Display Visual IP Rating IP44
Measuring Range 120-1000V AC Weight 45g
Power Supply 2 x 1.5 V AAA Dimensions (mm) 160x25

374088

Tester	Mfrs.	Price Each			
Type	List No.	Order Code	1 +	+	+
Voltage	Testboy 100	766-8545	49.72	--	--

1AC Volt Alert



FLUKE

- Non contact voltage detector
- Touch the tip to a terminal strip, outlet or cord. When it glows red you know there's voltage in the line
- Fits in shirt pocket for convenience

- Outer surfaces are non-conductive for safety
- Cat III - 600V
- Country specific versions must be ordered
- Uses 2x AAA batteries (included)

Model	Fluke 1AC-A1-II
Country Availability	For Sale in Australia and NZ
Operating Range	90 to 1000V
Operating Temperature	-10 to 50 °C
Enclosure	IEC529, IP54
Dimensions	146mm long x 19mm diameter
Weight	40.6g including batteries

333519

Description	Mfrs. List No.	Order Code	1+	3+	5+
For Sale in Aust. and NZ	Fluke 1AC-A1-II	164-3803	59.00	--	--

Voltage Detector with Light

Fluke LVD2

FLUKE



- Ultra-Bright White LED light with 100,000 hour life
- Detects from 90 to 600 V AC
- Rated to CAT IV 600 V
- Dual Levels of Detection, Blue indicates proximity to AC Voltage source, Red indicates you're at the source
- AAA battery included

Non-contact AC voltage detector and LED flashlight combined into one easy to use pen-style design.

460637.460630

Mfrs.	Order Code	1+	3+	+
List No.				
LVD2	132-7563	60.00	55.50	--

Magnet Stick



H=152, Ø=17mm
Weight = 40g

The Magnet Stick is an instrument for testing the presence of magnetic fields. By simply holding the tip of the instrument near the test area, it indicates a magnetic field by glowing. The test lamp responds to all kinds of magnetic fields, from alternating current to direct current and permanent magnets. An ATEX approved model for use in explosive environments is also available.



- Detects the presence of a magnetic field
- Works with permanent magnets and electro-magnets / coils
- Powerful red light in the tip to indicate presence of a magnetic field
- Easy to use
- Solenoid valves in pneumatic and hydraulic control equipment can easily be tested
- Test relays with coils and electrically controlled solenoid valves in all types of vehicles and machines
- Test solenoid valves when servicing oil burners

Sensitivity 300 Gauss, (0.3 mT) RH 80% @ 30°C, 50% @ 40°C
Power supply 2x AAA batteries (supplied) Operating temp -10 to +50°C
Altitude <2000m Functional check Test magnet included

381100.345079

Description	Order Code	1+	10+
Magnet Stick	838-8660	86.22	80.31
Magnet Stick ATEX	838-8679	150.53	140.35

Non Contact Voltage & Magnetic Pole Indicator

TEK200

MARTINDALE



The TEK200 detects the presence and polarity of magnetic fields produced by indicators, relays, solenoids and transformers. The integral self test activates the sensor in the tip of the tester at 50Hz as well as checking the battery and LED. This proves that the unit is fully functional and avoids the need for a separate proving unit.

Voltage Range 100 - 600V, 50Hz to 50kHz
Sensitivity Registers at 3mm for 100V / 50Hz, 23mm for 240V / 50Hz
Indication Red LED plus 3kHz tone
Magnetic Field Range ±10mT, 0 - 50kHz
Magnetic Indication North Pole: Red LED, South Pole: Green LED
Operating Temperature -5°C to 40°C
Case Material Flame Retardant ABS

339541

Mfrs.	Order Code	1+	5+	10+
List No.				
TEK200	505-7802	144.04	132.67	123.71

Combicheck 1.3 Voltage Tester

Weidmüller



- High ohm 2-pole voltage tester
- Large range of voltage from 6-690 V and the peak current resistance of 6 kV makes sure any tests on the supply network can be made
- Tester is truly safe and very easy to use
- Integral torch function
- Tested and approved in accordance with EN61243-3 and VDE 0682 Part 401

Voltage & Continuity Testers - continued

Combicheck 1.3 Voltage Tester - continued

Voltage range	6-690V AC/DC	Frequency range	0-100Hz (AC >2Hz)
Voltage Indication	LED display	Battery type	2 x 1.5V AAA
Input resistance	265K Ohm	Input current	<2.5 Ma @ 690V
Continuity testing	<500K Ohm (With audible buzzer for continuity and voltage)	Battery capacity	1500 operations
Peak current resistance	6KV	IP rating	IP50
Single phase test	>90V ac	Operating temperature	-10 to +50°C

234425

Mfrs.	Order Code	1+	5+	10+
COMBI CHECK 1.3	369-5815	108.49	106.84	105.75

Mastercheck 3.2 Voltage Tester



- PTC controlled, especially suitable for safe working when doing 2-pole voltage testing
- The individual LEDs display the voltage in increments of: 6, 12, 24, 50, 120, 230 and 400 V
- Tested and approved in accordance with EN61243-3 and VDE 0682 Part 401

Voltage range	6-400V AC/DC	Battery type	2 x 1.5V AAA
Voltage Indication	LED display	Input current	<2.5 Ma @ 400V
Input resistance	265K Ohm	Battery capacity	1500 operations
Continuity testing	<500K Ohm	IP rating	IP50
Peak current resistance	6KV	Operating temperature	-10 to +55°C
Frequency range	0-100Hz (AC >2Hz)		

234428

Mfrs.	Order Code	1+	2+	5+
114510	369-5827	135.65	132.88	130.74

Electrical Testers

T5 Series



- Integral test leads and probes
- Automatic selection
- Continuity and bleeper function
- T5 electrical testers for continuity/ohms and current measurements

- 2 versions available T5-600 rated to 600 volts ac/dc
- T5-1000 rated to 1000 volts ac/dc
- New open jaw technology for fast current measurement up to 100 amps ac, with 0.1 amp resolution
- Continuity and bleeper function
- Sleep mode when not in use

ACC-T5-KIT T5 Series Accessory Kit:

A complete accessory kit for use with the Fluke T5 Series Electrical testers.

- TP220 SureGrip™ Test probe Set
- AC285 SureGrip™ Large Jaw Alligator Clip Set
- C33 Soft Meter Case

T5-H5-1AC Tester Kit contains:

- T5-1000 Electrical tester
- H5 holster
- 1AC VoltAlert voltage detector

1AC VoltAlert voltage detector

- Pocket size voltage detector
- 200-600 Volts ac
- All outer surfaces are non conductive
- Detects voltage without metallic contact
- EN61010-1 CAT III 600V

	T5-600	T5-1000
Volts ac max	600V	1000VV
Volts dc max	600V	1000VV
Current ac max.	100A	100A
Max resistance Ohms	1000R	1000R
Cat III rating	2	2

385804

Price Each

Mfrs. List No.	Order Code	1+	2+	5+
T5-600	184-342	199.00	184.08	--
T5-1000	184-354	230.00	--	--
Holster	874-164	48.79	--	--
ACC-T5-KIT	491-7273	85.12	--	--
T5-H5-1AC KIT	835-3662	500.52	485.50	470.94
C101 Carry Case	947-9783	89.00	82.33	--

Price Each

Standard calibration charge	S	☎
UKAS calibration charge	N	☎

Portable Appliance (PAT) Testers

Appliance Tester TNT



- Simple one button testing on 240V rated appliances
- Equipped to test IEC & extension leads without the need for an extra adaptor
- Performs insulation tests 500Vdc (Class 1 and 2), mains supply test, earth bond tests 200mA, Polarity and continuity test
- Includes instruction book, IEC lead, earth lead and soft case
- Complies with AS/NZ 3760

252205

Type	Mfrs. List No.	Order Code	1+	5+	10+
Appliance Tester	TNT	435-9136	1,302.80	1,243.10	1,188.79
Test tags(Pk100 mixed)	TTR	435-9148	55.06	52.39	49.71
Test tags(Pk100 mixed)NSW	TTN-R	435-9150	53.26	51.42	49.71
Logbook Equipment	EELB	435-9173	26.32	23.77	21.52
Logbook RCD testing	RCDLB	435-9185	26.32	23.77	21.52
Marking Pen	MP	435-9203	4.49	4.33	4.20

6000 Series PAT Testers



The Fluke 6200 and 6500 PAT testers have auto test capabilities to help increase the number of portable appliance tests performed per day. They're designed to enable you to work faster without compromising safety. They are lightweight and easy to carry around when working on-site. The hard carrying case (supplied) not only offers protection during transit but also includes extra storage space for accessories and other tools. They're also extremely compact, and have Fluke's traditional ruggedness to be able to withstand working in the field. Packed with all the features you need for testing portable appliances, a Fluke PAT tester is a complete all-in-one solution.

Measurement functions (Pass limits set to AS3760)	Fluke 6200	Fluke 6500
Earth Bond Test (Rpe) (selectable 10A or 200mA)	Standard	Standard
Insulation Test (Riso)	Standard	Standard
Touch Current Test	Standard	Standard
Substitute Leakage Current Test	Standard	Standard
Load/Leakage Test: Load Current	Standard	Standard
Load/Leakage Test: Load Power	Standard	Standard
Load/Leakage Test: Leakage Current	Standard	Standard
PELV Test	Standard	Standard
Other features		
Self-test	Standard	Standard
AS61010 compliant	Standard	Standard
Illuminated Display	Standard	Standard
Live voltage indicator	Standard	Standard
Software	Not applicable	Fluke DMS
Serial connection	RS-232 port to connect to Fluke Printer. Fixed 9600 baud rate	RS-232 port to connect to Fluke printer, Fluke scanner or PC. Selectable baud rate (1200,2400,9600,19200,38400)
Earth bar	0.9 inch null bar for earth bond zeroing	0.9 inch null bar for earth bond zeroing
Earth bond socket green socket for earth	green socket for earth bond testing	green socket for earth bond testing

Measurement functions (Pass limits set to AS3760)	Fluke 6200	Fluke 6500
Other features		
Touch probe socket	Red socket for insulation test, touch test, substitute leakage test and PELV test	Red socket for insulation test, touch test, substitute leakage test and PELV test
IEC lead	Standard	Standard
Australian (10A) mains socket	Standard	Standard
Keypads	Main	Main and QWERTY
Display	Custom LCD	128 x 128 dot matrix
Memory, Interface		
Memory	N/A	1000 Measurements
Printer interface	Standard	Standard
Compact Flash Memory Card	N/A	1 slot (HPP only)
Barcode Interface	N/A	Standard
Included accessories		
Hard carrying case	●	●
User guide on CD-ROM	●	●
Optional accessories		
Fluke-DMS - Software to manage end-user details when using Fluke - 6500		●
SP Scan 15 - Bar code scanner for Fluke-6500		●
SP1000 - Thermal transfer printer the prints records only for the Fluke - 6200	●	
IEC extension Lead adapter		
		449306
		Price Each
Mfrs. List No.	Order Code	1+ + +
6200AU	128-9680	1,995.00 -- --
6500AU	128-9681	2,950.00 -- --

SafeTcheck Portable Appliance Tester



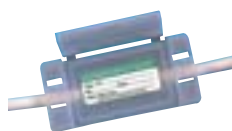
- Unique in its failsafe design
- User friendly operator interface (one button operation)
- Data logging is user selectable
- 151-6369 Std Datalogger stores up to 500 records with values.
- 154-6948 Unit with upgrade stores up to 2000 records with values
- Class 1 and 2 leakage tests up to 15A
- Class II - Stainless Steel Cloak supplied as standard
- Operator selectable insulation voltage (250V or 500V)
- Optional fixed or portable RCD tester with isolation transformer

Shown with optional extras keyboard and scanner

- Performs combined Lead and RCD test in one test
- Optional high current earth bond test (0.2A, 10A or 25A)
- Unit weight approx. 3Kg
- Housed in a robust dust and water resistant case
- Calibration certificate included

Mfrs.		Price Each
List No.	Description	Order Code 1+
STCPRDLRCD	TESTER, PAT, SAFE T CHECK STD 500 RECORD	151-6369 2,570.78
STCPRDLRCD/2000TESTER	PAT SAFETCHECK 2000 MEMORY RECORD	154-6948 3,153.15
STCDLKS	KEYBOARD AND SCANNER PROLOGGER II	154-6947 393.86
STCIN-CLKL	CLOAK, INSULATION LARGE 350 X 900	154-6949 309.69

Snap-tags



Fast and convenient way of identifying cables particularly portable appliance testing details. The snaptags completely enclose the label enabling it to be kept in good condition until it is replaced. They also have the added benefit of being reusable.
Label Area: 42x26mm. Overall Dimensions: 75x35mm
Sold in packs of 50.

BDST1 - lugged for use with 1.5mm² cables with the facility for also securing with a cable tie
BDST2 - non lugged for fixing with cable ties

Mfrs.		Price Per Pack (50)
List No.	Order Code	1+ 2+ 5+
BD ST1	370-5869	186.50 165.95 148.32
BD ST2	370-5870	186.50 165.95 148.32

Data Networks & Telecommunications

PC Cable Tester

Pro'sKit®



H = 35, W = 290, D = 130 (mm)

A useful, stand-alone cable wiring configuration tester to identify and test most common PC connection leads. The tester includes a comprehensive range of connector types and is ideal for testing data cables, network cables, printer cables, monitor cables, modem cables, mouse cables, game cables, modem cables, USB cables etc.

- Tests each pin connection to allow the user to identify open circuits, short circuits, cross-wires, miss-wires and pin-pin connectivity
- 4, 9, 15 and 25 pin tests
- Tests each pin and displays connection
- Test Shielding
- Automatic and manual scan test progression
- Test progression speed and reset to pin1
- 2x 36RX pins and 2x 24 TX pins LEDs indicate connection results for each pin test
- Numbers pins
- Battery low indicator
- Requires a PP3 type battery or a 9V DC, 150mA power adaptor - not supplied

Connector Support:

TX Side:

D Type: 9-way (F + M), 15-way (M), 25-way (M + F)

HD D Type: 25-way (M)

BNC: (F)

RJ45: (F)

USB: A (F), B (F)

IEEE1394 Firewire: (F)

RX Side:

Centronics: 36-way (F)

D Type: 9-way (F+ M), 15-way (F), 25-way (M + F)

HD D Type: 25-way (F)

BNC: (F)

RJ45: (F)

USB: A (F), B (F)

IEEE1394 Firewire: (F)

Mfrs.		Price Each
List No.	Order Code	1+ 5+ + +
3PK-NT013	428-3284	553.45 538.27 -- --

PC Cable Checker

1577 PC Cable Check Pro



This powerful troubleshooting tool maps cables and detects good connections and any opens, shorts, and crosses in the cable including PC, Mac, video, network and coaxial cable assemblies.

Advantages:

- Universal tester for all computer cables
- Quickly & easily troubleshoot cables to eliminate the cable as the source of the problem
- True cable mapping
- Easy to read and understand with LED indicator lights
- New rugged case with built-in handle for easy transport
- Auto scan or manual scan modes

Features & Benefits:

- Rubber feet grip to desk or bench to prevent slipping
- Power shuts off after 30 seconds of non-use to extend battery life
- Tests over 20 types of patch cables up to 300m in length

W=169 H=279 D=41mm. Weight 770g

Tests cables with the following terminations:

- **Modular plugs:** RJ45, RJ11, RJ12 shielded and unshielded (UTP/STP)
- **Coaxial:** BNCs and CATV 'F's (BNC-to-F adapter required; not included)
- **D-Sub:** 9-, 15- and 25-pin
- **HD-Sub:** 15-pin
- **USB:** A, B and mini 5-pin
- **1394 firewire:** 4- and 6-pin
- **Mini-DIN:** 4- and 6-pin
- **Centronics:** 36-pin printer

Mfrs.		Price Each
List No.	Order Code	1+ 3+
1577	111-4770	496.34 435.40

Data Networks & Telecommunications - continued

Fibre Optic Cleaning Kit



Contaminated end-faces are the number one cause of fibre link failure. This precision fibre optic cleaning kit allows effective removal of all contaminants from end-faces on both patch cords and inside ports. By using the specially formulated solvent, all contaminants are dissolved, static charge is neutralised and particles are lifted without scratching the end-face. The customised wipers and swabs are used to deliver the solvent to the end-face, entrap microscopic debris and absorb dissolved contaminants.

- A range of wipes and swabs enable cleaning of all styles of fibre optic connections
- Housed in a rugged carrying case

Contents: Cleaning cube with wipes, 10 cards with sealed cleaning zones, solvent pen, 1.25mm and 2.5mm port cleaning swabs

489203.503167

Mfrs. List No.	Order Code	1+	2+	5+
NFC-KIT-CASE	146-7436	573.82	562.36	551.12

Enhanced Network Cable Tester



A quick network cable tester to verify the correct wiring, continuity and polarisation of 10-Base-T (UTP/STP), EIA/TIA-568B, 356A and Token ring modular RJ45 network cables. By using the remote terminator, the unit allows cables to be tested before and after installation.

Powered by 1x PP3 type battery - not supplied

Pro'sKit

- Test 10-Base-T (UTP/STP), EIA/TIA-568B, 356A and Token ring cabling
- LEDs indicate the status and connections of the cables
- Tests shielding
- Supplied with soft carry case

249558

Mfrs. List No.	Order Code	1+	5+
3PK-NT008	433-8856	230.46	210.75

LAN Cable Tester



Verify cable integrity of Datacom, Telecom and Coaxial cables, with an easy-to-read LED display.

- Instantly indicates cable type and tests for faults
- Button-free operation, just plug cable in and read results
- Checks datacom/network, voice/telecom, crossover and shielded cables
- Battery low indicator
- Powered from 9V alkaline battery
- RJ45 jack, accepts RJ45 & RJ11 plugs

W=116 H=68 D=28mm. Weight 230g

414697.403887

Description	Order Code	1+	10+	25+
LAN Cable Tester	100-3017	144.62	128.55	109.53

Powerful and affordable solutions for PCB design:

CadSoft's EAGLE software offers a user-friendly, powerful and affordable solution for PCB design, including three modules embedded in a single user interface; Schematic Capture, Board Layout, and Autorouter. Find out more at au.element14.com

Modular Wiring Tester

UTP and STP Cable Testing



H=144, W=60, D=41.5



The SLT3-S consists of a master and remote unit for separate end-to-end continuity testing of shielded twisted pair cables. Each unit has a shielded socket to accept USOC, 258A and 258B type modular connectors. The tester will test 2, 4, 6 and 8 wire circuitry for shorts, opens and miswires. The master and remote halves snap together when not in use.

The master unit requires a 9V PP3 style battery as supplied.

222516

Order Code	1+	5+
648-930	253.97	241.34

Lan Cable Tester LED Display



- Test pin configuration for: 10/100 base -T cable 10 base-2 cable, RJ45 modular cables, AT&T 258A cable, EIA / TIA 568A/568B cables, Token Ring Cable
- Verify the cable wiring for continuity, opens, shorts or incorrect wiring
- Test installed cable on wall plate or the patch panels by using the Remote Termination module
- Perform Loopback Test or Remote Test
- Buzzer sound warning for error condition in cable
- Two sets of LED lights for Source and Test indication
- Maximum line length: > 300 meters

- Connector types: RJ45, BNC
- Unit ships with Remote Terminator, 1 ea RJ45 to female BNC cable, 1 ea RJ45 to male BNC cable, 1 ea 1 RJ45 to RJ45 cable, 1 ea female BNC to female BNC connector, 9 volt battery and Users Manual

525731

Mfrs. List No.	Order Code	1+	5+
LAN-1	167-1227	235.94	228.84

Network Cable Analyser

Atlas IT

PEAK



The amazing Peak Atlas IT represents a revolution in network cable testing in terms of speed, size, ease of use and features.

Simply connect one end of your network cable to the Atlas IT and the other end to the Atlas Terminator and press the test button. Within seconds, the display verifies the cable and identifies it as either a Straight Through (PC-Hub type) or a Cross-Over (PC-PC type).

Additionally, the Atlas IT detects problems such as missing, shorted or wrongly wired connections,

clearly highlighting this on its scrollable display. The Atlas IT can even be used as a quick reference guide: wiring instructions can be displayed on-screen when not testing cables, and battery life is extended with its automatic switch-off feature, if not used for more than 30 seconds.

- Automatic identification of Straight-Through patch cables
- Automatic identification of Cross-Over cables
- Automatic analysis of above cable types
- Analyses all 8 lines of cable
- Fault identification and highlighting for the following faults
 - Short Lines
 - Open Lines
 - Swapped Lines
- Display of cable-making instructions when not testing cables
- Can test plug-plug, plug-socket and socket-socket
- Support for up to 150m (500ft) of cable
- Miniature Atlas Terminator, ideal for use in tight spaces
- Clear and user-friendly scrollable display
- Spare battery and spare Atlas Terminator supplied

232307

Description	Mfrs. List No.	Order Code	1+	5+	10+
Cable Analyser	ATLAS IT	388-2937	420.76	392.97	371.48
Carry Case	ATC55	521-5511	48.78	--	--

SimpliFiber Pro



SFPOWERMETER



SFPSINGLEMODE-SOURCE

SimpliFiber Pro is an improved fiber test set that simplifies and shortens the front-line testing process by reducing the multiple steps and using a simultaneous dual-wavelength testing feature to measure the range of power levels in just half the time. Allowing for a non-touch solution to check for a live fiber without having to plug into ports and enabling a network technician to do time-consuming procedures that normally require a team



FINDFIBER



FTK1000



FTK1300



FTK1350



FTK1450



FTK2000

SimpliFiber Pro singlemode 1310/1500 source

FindFiber: One FindFiber Remote ID source

FindFiber-6: Set of six FindFiber Remote ID sources

FTK1000 Basic Fiber Verification Kit: Includes SimpliFiber Pro optical power meter, 850/1300 multimode source, and carrying case

FTK1300 Multimode Fiber Verification Kit: Includes SimpliFiber Pro optical power meter, 850/1300 multimode source, VisiFault VFL, FT120 FiberViewer, FindFiber Remote ID sources, and carrying case; ST and LC adapter

FTK1350 Multimode Fiber Verification Kit with FT500 FiberInspector Mini: Includes SimpliFiber Pro optical power meter, 850/1300 multimode source VisiFault VFL, FT500 FiberInspector Mini, FindFiber Remote ID sources, and carrying case; ST and LC adapter

FTK1450 Complete Fiber Verification Kit with FT500 FiberInspector Mini: Includes SimpliFiber Pro optical power meter, 850/1300 multimode source, 1310/1550 singlemode source, VisiFault VFL, FT500 FiberInspector Mini, two FindFiber Remote ID sources, and carrying case; ST and LC adapter, NFC-Kit-Box fiber optic cleaning kit

FTK2000 Singlemode Fiber Verification Kit: Includes SimpliFiber Pro optical power meter, 1310/1550 singlemode source, and carrying case

Model	Description
NFK1-SMPLX-SC	62.5 uM simplex reference cord set (SC/SC x 2); special patented damage-resistant end-faces
NFK1-SMPLX-LC	62.5 uM simplex reference cord set (SC/LC, LC/LC); special patented damage-resistant end-faces
NFK1-SMPLX-ST	62.5 uM simplex reference cord set (SC/ST, ST/ST); special patented damage-resistant end-faces
NFK2-SMPLX-SC	50 uM simplex reference cord set (SC/SC x 2); special patented damage-resistant end-faces
NFK2-SMPLX-LC	50 uM simplex reference cord set (SC/LC, LC/LC); special patented damage-resistant end-faces
NFK2-SMPLX-ST	50 uM simplex reference cord set (SC/ST, ST/ST); special patented damage-resistant end-faces
NFK3-SMPLX-SC	SM simplex reference cord set (SC/SC x 2); special patented damage-resistant end-faces
NFK3-SMPLX-LC	SM simplex reference cord set (SC/LC, LC/LC); special patented damage-resistant end-faces
NFK3-SMPLX-ST	SM simplex reference cord set (SC/ST, ST/ST); special patented damage-resistant end-faces
NFA-SC-SINGLE	SC interchangeable adapter
NFA-LC-SINGLE	LC interchangeable adapter
NFA-ST-SINGLE	ST interchangeable adapter

532810

Mfrs. List No.	Order Code	1+	3+
SFPOWERMETER	169-9333	2,085.75	--
SFPSINGLEMODESOURCE	169-9334	3,822.31	--
FINDFIBER	169-9335	336.49	--
FINDFIBER-6	169-9336	2,032.00	--
FTK1000	169-9338	4,499.02	--
FTK1300	169-9339	6,686.73	--

Mfrs. List No.	Order Code	1+	3+
FTK1350	169-9340	7,962.45	--
FTK1450/E	169-9341	11,027.09	10,698.35
FTK2000	169-9342	6,303.57	--
NFK1-SMPLX-SC	169-9343	224.32	--
NFK1-SMPLX-LC	169-9344	224.32	--
NFK1-SMPLX-ST	169-9345	224.32	--
NFK2-SMPLX-SC	169-9346	224.32	--
NFK2-SMPLX-LC	169-9347	224.32	--
NFK2-SMPLX-ST	169-9348	224.32	--
NFK3-SMPLX-SC	169-9352	224.32	--
NFK3-SMPLX-LC	169-9353	224.32	--
NFK3-SMPLX-ST	169-9354	224.32	--
NFA-SC-SINGLE	169-9355	218.58	--
NFA-LC-SINGLE	169-9356	218.58	--
NFA-ST-SINGLE	169-9357	218.58	--

LAN Tester & Multimeter



Compact 2-in-1 unit provides standard digital multimeter functions, as well as pin configurations on network and voice cables. Dual pinout indicator provides sequential verification of each pin on a network cable, and the included remote terminator allows testing of cables which are already installed. Digital multimeter measures AC/DC volts and amps, resistance and diodes, and provides audible continuity test.

- 2,000 Count LCD display
- Verifies correct wiring of 10 Base-T & 10 Base Thin Ethernet, RJ-45, RJ11, RJ12 and BNC network cables
- Autoranging multimeter functions
- Selectable auto/manual range selection
- Max & Data hold
- Selectable continuity beep
- Rugged overmoulded housing

Supplied with 1x 9V & 2x AA batteries, test leads, BNC network cable adaptors, zipper carry case and owners manual.

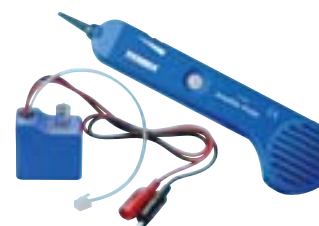
Technical Data

DC Voltage	200mV, 2V, 20V, 200V, 600V	Basic Accuracy	±0.5% +3 digits
AC Voltage	2V, 20V, 200V, 600V		±1.0% +5 digits
DC Current	200µA, 2000µA, 20mA, 200mA		±1.5% +3 digits
AC Current	200µA, 2000µA, 20mA, 200mA		±1.8% +3 digits
Resistance	200Ω, 2KΩ, 200KΩ, 2MΩ, 20MΩ		±1.2% +5 digits
Continuity	Buzzer sounds at less than 150Ω		
Input Impedance	7.5MΩ		

542457

Description	Order Code	Price Each
	174-9433	82.46

Tone & Probe Set



This tone & probe set is a basic necessity for anyone running data, voice or any other low voltage cable. It is also suitable for tracing alarm, coax or speaker cables which are already installed.

- Quickly trace and identify cables
- Provides live telephone line status check
- Selectable steady and warble tone
- Volume control
- Headphone jack
- Transmitter has attached RJ-11 plug and clip leads

Supplied with 2x 9V batteries, belt loop carry case & user guide.

538431

Order Code	Price Each
174-9434	89.48

Data Networks & Telecommunications - continued

LAN Wiremap Checker MicroMapper™



A compact, handheld cable tester and toner designed for network professionals. Quickly and easily verifies the integrity of an Ethernet twisted-pair cabling installation giving you visibility of opens, shorts, crossed, reversed and split pairs. Just push the TEST button and MicroMapper will automatically scan all wire pairs for any existing faults in your cable. MicroMapper's built-in tone generator works with the IntelliTone Probe or any other analog probe, allowing you to trace cable through walls, floors, and ceilings. The MicroMapper also includes a remote unit that allows one person to test installed cabling or patch cords.

- Gain new vision into verifying basic Ethernet cabling integrity quickly and easily
- Tests twisted-pair cables automatically for continuity and all major miswires
- Speeds troubleshooting with easy-to-read pair-based LED fault indicators
- Identifies hidden cables clearly with powerful inductive tone generator
- Enables one-person testing of installed cables with separate remote unit

MicroMapper includes:

MicroMapper and MicroMapper Remote, RJ45 patch cable, owners CD and quick start guide, 4x AAA alkaline batteries.

415906.428980

Description	Order Code	Price Each	
		1+	3+
MicroMapper	980-8639	427.62	419.08

MicroMapper



MMP-50



MMP-KIT



MMP-TTK

MicroMapper™ Pro

- Simplifies voice/data/video cable testing with a 'quick check' test for twisted pair and coax connectors.
- Test terminations, length, cable ID, and location reliably and quickly with one tester.
- Full wiremap including split pair and distance to break clearly displayed on a large LCD.
- Locates cable with built-in analog toner
- Identifies cable with up to eight optional cable IDs

MicroMapper™ Pro Kit

- Comprehensive testing, locating, and ID tagging for voice/data/video cable
- Verifies voice/data/video cable wiremap with a 'Quick-check' test
- Tests twisted pair and coax connectors without adapters
- Locates cable with built-in analog toner and included Pro3000 probe
- Identifies cable with up to eight included cable IDs

MMP-KIT Includes:

MicroMapper™ Pro VDV Cable Tester, Pro3000™ Tone Probe, # 1-8 Cable IDs, F-type adapter, multi-language Getting Started Guide, batteries

MMP-TTK Includes:

MicroMapper™ Pro VDV Cable Tester, #1 Cable ID, F-type adapter, multi-language Getting Started Guide, Pro3000™ Probe, IS50 Pro-Tool™ Kit, batteries, and deluxe Fluke Networks carry case

532804

Mfrs. List No.	Order Code	Price Each	
		1+	+
MMP-50	169-9369	557.72	--
MMP-KIT	169-9370	903.11	--
MMP-TTK	169-9371	1,009.49	--
MMP-ID1	169-9372	69.23	--
MMP-IDK28	169-9373	290.46	--

Tone Generator and Probe 540DK

WAVETEK



A low cost cable identification and connector tracer used in moves, adds and changes to telephone, LAN, Security and alarm systems, CCTV, coax runs etc. The 541TG is a tone generator/sender and the 542SP is an inductive/sensing speaker probe.

- Traces End-to-End connections, locate and identify cables and connectors
- Probe's unique rubber tip will not break or crack
- LED provides visual indication of correct wire
- Volume adjustment control
- Industrial standard compatibility allows items to be used with similar devices that send or sense tones
- 541TG sends an alternating 900Hz/100Hz "warble"
- The tone generator includes both an RJ11 and a pair of alligator clips for quick attachment
- Both are powered by a 9V battery supplied

222542

Mfrs. List No.	Order Code	Price Each		
		1+	5+	10+
540DK	493-259	317.16	303.26	275.46

701 KIT Classic Tone and Probe Kit

Tempo



The 701Kit is recognised by technicians around the world as the industry standard for cable and wire identification. The kit can be used to identify single conductors or cables within a bundle, at a cross connect pointer on any conductive material.

The Kit Includes: 77HP high power tone generator, 200EP Inductive amplifier and sturdy polyester carry case.

- Amplifier can be used with any tone generator
- Selectable warble tone
- Polarity testing
- 3-colour LED (identifies AC ring voltage)
- Continuity testing
- Talk battery supply
- Weather resistant design

449998.267524

Mfrs. List No.	Order Code	Price Each		
		1+	3+	10+
701K	129-9484	264.41	257.13	257.13

Toners and Probes

IntelliTone™ Series

FLUKE networks



IntelliTone™ 100 Kit:

- Finds the cables others can't
- Smart digital signal processing rejects noise and false signals
- Audible, visual signal indication simplifies cable location in noisy environments
- Tones safely and clearly on active networks
- Diagnoses essential cable information with polarity, continuity, and talk battery
- Identifies and diagnoses POTS with Line 1 service and polarity
- Powerful talk battery capability tests telecom circuits
- Essential diagnostics include continuity and polarity tests
- Auto power off and low battery indicator

Breakthrough digital signal processing technology finds cables other toners/probes can't. Advanced sensing modes accurately find the correct cable bundle, and then rapidly isolate the exact cable from within that bundle. Two controlled audible songs and LED signal strength indicators simplify cable location, even in noisy environments. Digital signal processing rejects noise and safely tones active networks. Identifies and troubleshoots telecom POTS/services.

IntelliTone 100 Kit includes:

IntelliTone 100 Toner and 100 Probe, coax F connector adapter, RJ11 and RJ45 patch cables, test leads with alligator clips, lanyards, owners CD and quick start guide, two 9 volt batteries.

415830.428978

Description	Order Code	Price Each	
		1+	3+
Intellitone 100 Kit	980-8302	505.49	495.37

MicroScanner² Cable Verifier

FLUKE networks



Next generation MicroScanner streamlines voice/data/video cable and service testing. Revolutionary user interface makes testing fast, easy, and crystal clear. Everything cable technicians need to know, including available services (10/100/1000 Ethernet, POTS, PoE voltage), cable length, wiremap, cable ID, and distance to fault all are displayed on one "oversized" backlit screen. Replace multiple tools by testing all RJ11, RJ45, and Coax (F) media with no adaptors. Built-in IntelliTone digital and analogue toning precisely locates virtually any cable or wire pair - even on active networks. Ergonomic design features sleek rubber over mould to enhance grip and ruggedness. Includes carry case.

- Displays cable length, wiremap, cable ID, and distance to fault on one screen
- Detects today's media services, including 10/100/1000 Ethernet, POTS, and PoE
- Locates virtually any cable or wire pair with IntelliTone digital and analogue toning
- Tests all common media types, including RJ11, RJ45, Coax, with no adaptors
- Rubber over mould enhances grip and increases ruggedness
- "Oversized" backlit LCD makes results crystal clear in any work environment
- Detail mode gives additional test status information
- Intuitive icons shows what's at the far end of any cable (10/100/1000 switch, POTS service, short, cable ID)

489974.502076

Description	Mfrs. List No.	Order Code	Price Each		
			1+	2+	5+
Microscanner 2	MICROSCANNER 2	146-7430	1,022.34	--	--
Microscanner 2 Kit	MICROSCANNER 2 KIT	146-7431	2,479.20	2,429.65	2,381.01
Remote Identifier Kit 2-7 MS2-IDK27		146-7432	551.97	--	--
Pouch	MS2-POUCH	146-7433	46.96	46.00	--

DTX CableAnalyser

FLUKE networks
New



This revolutionary new platform significantly reduces total time to certify by improving every aspect of the testing process. It all starts with a Cat 6 Autotest time that's three times faster than other testers - and fiber testing that's five times faster. But that's just the beginning. DTX also gives you Level IV Accuracy, unmatched troubleshooting diagnostics, 900 MHz of testing bandwidth, 12-hour battery life, and nearly instant setup and reporting

DTX-MFM2 is a set of two DTX Multimode Fiber Modules, each incorporating:

- 850 nm and 1300 nm LED sources combined into a single output port
- 850/1300/1310/1550 nm power meter
- Integrated VFL

DTX-LT INTL

- DTX-SFM2 is a set of two DTX Singlemode Fiber Modules, each incorporating:
- 1310 nm and 1550 nm laser sources combined into a single output port
 - 850/1300/1310/1550 nm power meter
 - Integrated VFL

The DTX Compact OTDR is a full featured Optical Time Domain Reflectometer (OTDR) module that snaps onto a DTX CableAnalyser. In addition to copper testing, it makes this powerful certification tool a complete, easy-to-use OTDR that shoots and analyses traces on singlemode and multimode fiber.

The DTX-Coax Test Adapters give you the ability to test video distribution cabling or legacy data network coaxial cabling with the DTX CableAnalyzer™ Series

DTX-NSM: Certify cabling, verify network service availability, verify link connectivity and document in one LinkWare report. Documentation provides clear evidence that the job was done right.

The DTX-PCU6S Patch Cord Test Solution gives you a simple, cost-effective way to quickly verify whether a patch cord meets TIA/ISO performance specifications

532807

Mfrs. List No.	Order Code	Price Each		
		1+	3+	5+
DTX-LT INTL	169-9358	17,801.65	--	--
DTX-MFM2	169-9359	10,445.26	--	--
DTX-SFM2	169-9360	14,365.12	--	--
DTX-OTDR-KIT	169-9361	22,208.18	--	--
DTX-COAX	169-9363	1,569.27	--	--
DTX-NSM	169-9364	2,757.06	--	--
DTX-PCU6S	169-9365	1,842.35	--	--
DTX-CHA001AS	169-9366	559.76	--	--
DTX-PLA002PRP	169-9367	166.62	--	--
DTX-PLA002S	169-9368	1,984.58	--	--

Wireless LAN Tester

FLUKE networks
New



AirCheck Wi-Fi Tester is a simple-to-use, handheld wireless tester that allows users to quickly verify and troubleshoot 802.11 a/b/g/n network availability, connectivity, and security all in a dedicated, handheld tool. Its intuitive interface allows you to quickly see wireless network usage and easily determine if it's Wi-Fi traffic or non-Wi-Fi interference. AirCheck helps you audit your wireless environment to identify and locate wireless APs which are unauthorized or rogue. The tester fully documents your troubleshooting session and creates professional-quality reports. Use these reports to close your trouble ticket or to provide the required information to escalate the ticket to the next level. AirCheck provides the information you need to quickly solve your frontline wireless problems.

- Dedicated, handheld 802.11 a/b/g/n wireless network tester with instant-on technology
- Fully supports 2.4 and 5.0GHz frequency bands
- Rapidly perform a wireless discovery to fully assess your current wireless security and network availability
- See what's using your wireless network by channel and quickly determine if it is 802.11 traffic or non-802.11 interference.
- Robust and in-depth WLAN connection tests - from probing to DHCP request to ping
- Quickly identify and locate wireless access points whether authorized or rogue
- Fully documents your troubleshooting session - enabling fast trouble ticket resolution or problem escalation

AirCheck	AirCheck Wi-Fi Tester includes: AirCheck, USB cable, soft case, Getting Started Guide, and CD with AirCheck Manager software and User Manual
ACK-LRPRO	AirCheck Frontline Troubleshooting Kit with LRPRO including: AirCheck, External directional antenna, USB cable, carrying case, Getting Started Guide, and CD with AirCheck Manager software and User Manual, LinkRunner Pro Standard Kit, and PoE Detector.
EXTANT-RPSMA	External Uni-Directional Antenna, RPSMA connector
WBP-LION	AirCheck Lithium Ion Replacement Battery
POE-Detector	Power over Ethernet Detector
MS-Auto-Ch	MetroScope Auto Charger
DTX-ACUN	AC Charger, Universal
GLD-ACK	AirCheck Gold Support Services 1 yr

601457

Mfrs. List No.	Order Code	Price Each		
		1+	3+	5+
AIRCHECK	179-1415	5,505.58	--	--
ACK-LRPRO	179-1416	7,740.29	--	--
EXTANT-RPSMA	179-1417	539.52	--	--
WBP-LION	179-1418	677.46	--	--
MS-AUTO-CH	179-1419	101.15	--	--
DTX-ACUN	179-1420	236.05	--	--

Starter Telephone Test Kit

TS-19

FLUKE networks



Specifically designed for in-house telecom technicians, the TS-19 Test Set combines all the basic test set features at a value price - plus it provides DataSafe protection to prevent accidental disruption of data service in monitor mode.

- High-impedance DataSafe operation in monitor mode
- Tone (DTMF) and pulse operation
- Last number redial
- Polarity indication in talk mode

The Fluke Networks TS19 Test Set combines all the essential test set features at a value price. This test set was specifically designed for in-house telecom technicians. Its high-impedance monitor prevents accidental disruption of service from clipping onto a data line while in monitor mode, thus ensuring the integrity of critical data lines. Features such as tone (DTMF) or pulse operation, talk/monitor capabilities, polarity test button and last number redial make this test set the perfect combination of features and price.

450136.460925

Description	Mfrs. List No.	Order Code	Price Each		
			1+	3+	5+
Test Telephone	TS19	130-0481	336.82	330.09	323.51

Data Networks & Telecommunications - continued

Buttinski CZ20124



- DropSafe™
- DataSafe™
- RainSafe™, test set for use in extreme weather conditions
- High impact case
- Ergonomic design



495337

Mfrs.	Order Code	1+	5+	10+
List No.				
CZ20124	152-0964	688.06	664.92	--

Buttinski TS25 Phone & Data



- DTMF Digit Grabbing - Test other equipment for proper DTMF generation Caller ID and Call-waiting Caller ID
- Continual data detection in monitor mode
- 1-way amplified speaker with volume control for hands-free monitoring
- Tone generator - Use your standard probe to receive tone and trace cable
- Continuity test for detecting shorts
- Battery level indicator
- Meets: Aust TS 008, 001&2



372844

Mfrs.	Order Code	1+	+	+
List No.				
TS25D	530-5676	665.86	--	--

Audio/Video & Security

Hand Held Audio Generator

72-505



- Wide frequency range
- Sine and square wave output
- Sync output
- Variable amplitude
- Output attenuator (-20 dB)
- 600Ω output impedance
- Low battery indicator
- Supplied with user instructions, 9V PP3 battery and test leads

Generator Frequency 20Hz to 150KHz in 46 steps, ± 0.5 dB
 Sine Wave Output 1.2V RMS (no load)
 Distortion $\leq 0.05\%$ (200Hz - 15KHz)
 $\leq 0.01\%$ (50Hz - 30KHz)
 $\leq 0.3\%$ (20Hz - 100KHz)
 Square Wave Output 8V p-p max. (no load)
 Rise/fall time $\leq 0.5\mu\text{sec}$
 Overshoot $< 2\%$
 Dimensions (WxHxD) 96x153x26mm

337122

Mfrs.	Order Code	1+	5+
List No.			
72-505	490-8338	117.56	105.78

Powerful and affordable solutions for PCB design:



CadSoft's EAGLE software offers a user-friendly, powerful and affordable solution for PCB design, including three modules embedded in a single user interface; Schematic Capture, Board Layout, and Autorouter. Find out more at au.element14.com

Speaker Impedance Meter

72-6947



Avoid amplifier damage by verifying actual speaker system impedance prior to operation. Unlike conventional V/Ω meters, which measure DC resistance, this unit utilises an internal 1KHz oscillator to measure true impedance. Accurately measure speaker lines that utilise impedance matching volume controls, switchers, transformers and passive crossovers. Because this unit accurately measures up to $2K\Omega$, it may also be utilised with 25V, 50V, 70V, and 100V speaker line transformers in commercial installations (information included in the manual).

- Large digital display for easy viewing
- Measuring range: 0 to 2000Ω
- Rugged, double insulated case is CATIII rated for use up to 100V
- Supplied with test leads, carry case and owners manual
- Power: 6x AA batteries (not supplied)
- Dimensions (HxWxD): 203 x 89 x 57mm

381129.345264

Mfrs.	Order Code	1+	3+
List No.			
72-6947	838-8725	479.44	453.16

Professional PAL Audio/Video Pattern Generator

Teletest-Pro

OZAN



- 8 test pattern colour bars: grey scale, crosshatch, red purity, white purity, black burst, dots, multi-burst, colour bars
- Composite video output and S-Video output
- 1kHz and 10kHz audio sine wave output
- Stereo balanced audio line output
- Handheld and battery powered

Requires 9V PP3 Battery (not supplied), See Order Code 392-5572

8 Test Patterns 75% EBU
 Video output Composite video 75Ω IV P-P, BNC socket
 S-Video 75Ω IV P-P(Y) 0.3V P-P(C) 4-pin DIN socket
 Audio test signals 1kHz and 10kHz pure sine wave
 Audio output Stereo balanced line audio, 600Ω 0dBu (0.775Vrms)
 2 x XLR (Cannon) sockets
 Weight 265g
 Power 9VPP3 battery

222477

	Order Code	1+	5+	10+
Teletest Pro	908-174	1,172.58	1,091.72	1,074.02

Automotive

Automotive Multimeter Kit

88-V/A



- Built-in thermometer (probe supplied)
- Continuity check
- Frequency for pulsed DC and AC tests
- Duty cycle to verify operation of feedback carburetors
- Diode test for alternator testing
- Peak min/max to capture intermittent events as short as 250ms
- Large, easy to read, two level backlit display
- Magnetic hanger (supplied) for easy set-up and viewing, freeing your hands for other tasks
- CAT III 1000V, CAT IV 600V

H = 186,
 W = 86,
 D = 32mm
 Weight = 360g



Perhaps the most important tool you'll use in troubleshooting auto electrical systems is the multimeter. Basic multimeters measure voltage, current and resistance, while automotive multimeters like this can also check frequency, duty cycle, make diode tests, and measure temperature, pressure and vacuum.

	Range	Resolution	Accuracy
Voltage DC	0 - 1000V	10 μ V	\pm (0.1% + 1)
Voltage AC	0 - 1000V	100 μ V	\pm (0.5% + 2)
Current DC	0 - 10 A	0.01 μ A	\pm (0.4% + 2)
Current AC	0 - 10 A	0.01 μ A	\pm (1.2% + 2)
Resistance	0 - 50M Ω	0.01 Ω	\pm (0.4% + 1)
Capacitance	0 - 10000 μ F	0.01 nF	\pm (1% + 2)
Frequency	0 - 200kHz	0.01 Hz	\pm (0.01% + 1)
Temperature	-200 - 1090 °C	0.1 °C	1%

Accessories

Insulation piercing clip set

TP81 (4mm) for making contact without cutting or stripping insulation. Tiny hole left in insulation can easily be sealed

Suregrip automotive test lead kit

TL281 kit contains:

- TL224 Suregrip silicone test lead set
- TP220 Suregrip test probe set
- AC220 Suregrip alligator clip set
- AC285 Suregrip large jaw alligator clip set
- Soft case

Suregrip deluxe automotive test lead kit

TL282 kit contains:

- TP81 Insulation piercing clip set
- TP40 automotive back probe pins
- TL224 Suregrip silicone test lead set
- TP220 Suregrip test probe set
- AC220 Suregrip alligator clip set
- AC285 Suregrip large jaw alligator clip set
- AC280 Suregrip hook clip set
- Soft case

BNC to female to double stacking banana plug

BP880 BNC to female allows the use of coax cabling or instruments with automotive meters

Five Automotive back probe pins (4mm)

Make connections to terminals inside connectors. Pins can be bent to fit into tight spaces

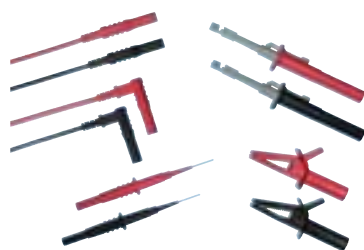


339486.409233

Description	Mfrs. List No.	Order Code	Price Each		
			1+	3+	+
Automotive multimeter	88-V/A	803-4990	1,187.24	--	--
4mm insulation clips	TP81	852-5340	77.00	71.23	--
Suregrip deluxe lead kit	TLK282	852-5382	271.07	--	--
Back probe pin set	TP88	852-5390	22.00	20.35	--
BNC to female	BP880	852-5404	21.69	--	--
Automotive back probe pins	TP40	852-5420	63.00	58.28	--

Automotive Test Lead Kit

129393



Automotive kit consists of:

- Pair of double insulated silicone test leads, one end terminating in a straight fixed shrouded plug, the other in a right angled plug, both compatible with all standard 4mm instrument sockets
- Pair of large fully insulated crocodile clips with wide jaw opening
- Pair of cable piercers for intrusive measurement taking
- Pair of slim back probing probes

381206.381276

Description	Mfrs. List No.	Order Code	Price Each			
			1+	3+	5+	10+
1.2m Automotive Test Kit	129393	844-8876	99.56	91.35	86.92	80.14
3m Automotive Test Kit	129393/3	844-8884	126.10	115.61	110.05	101.45

Test Adaptors

Male BNC Adaptor



A low cost BNC male connector to 4mm binding posts.

- Black thermoplastic body
- Rated 500V RMS 3A

230674

Mfrs. List No.	Order Code	Price Each
76-005	356-2414	20.47

Bridging Links

2.0mm and 4.0mm



A selection of standard and touch-protected bridging links

- Vibration proof contacts
- High corrosion resistance
- Low contact resistance
- Asymmetrically positioned safety socket

2.0mm Standard

Current Rating
Rated Voltage
Temperature range
Insulation
Contacts

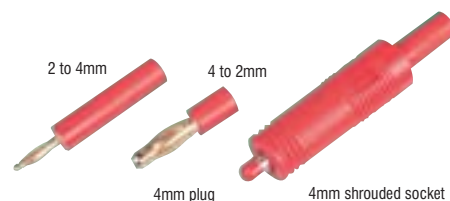
10A
30V ac / V dc
-40°C to +80°C
PA
plated

238725

Plug Spacing mm	Mfrs. List No.	Order Code	1+	10+	50+	100+
2.0mm Bridge Links						
12.0	63.9848-21	413-0194	18.12	16.40	15.96	15.37
14.0	20.1020-21	413-0224	24.12	21.87	21.20	19.58

Adaptors

2mm to 4mm, 4mm to 2mm



A range of adaptors suitable for converting and inter-connecting 2mm and 4mm connecting leads and plugs. Also a 4mm plug protected by a retractable shroud to convert to a 4mm shrouded socket. Maximum current 25A.

Mfrs. List No. 24.0115-1=152-740, 24.0106-1=152-742, 24.0166-1=462-834, 24.0115-4=152-741, 24.0106-4=152-743

209769

Mfrs. List No.	Colour	Order Code	1+	10+	25+	50+	+
2mm Plug - 4mm Socket							
24.0115-1		152-740	18.08	17.41	17.18	16.19	--
24.0115-4		152-741	18.08	17.41	17.18	16.19	--
4mm Plug - 2mm Socket							
24.0106-1		152-742	13.43	12.87	12.40	11.00	--
24.0106-4		152-743	13.43	12.87	12.40	11.00	--
4mm Plug - 4mm Shrouded Socket							
24.116-22		462-834	17.91	16.58	15.69	14.17	--

Test Leads, Probes & Accessories

BNC to Test Clip Lead



- 3ft length

414729.404679

Description	Mfrs List No.	Order Code	1+	10+	25+
BNC Test Lead	10HA084	100-3024	7.89	7.42	6.60

Test Leads, Probes & Accessories - continued

Cable Test Leads 50Ω



Ready-made test and interconnection leads using RG58 cable and fitted moulded strain relief sleeves. Available in various cable lengths.

230392

		Price Each			
Cable Length	Order Code	1 +	10 +	25 +	50 +
BNC Plug to BNC Plug					
0.5m	315-3472	32.70	29.97	28.51	24.79
1m	315-3484	33.99	31.46	30.57	27.51
2m	315-3496	45.48	40.94	36.52	33.20
BNC Plug to Crocodile Clips					
1m	315-3502	24.78	22.61	22.37	21.05
BNC Plug to 4mm Plugs					
1m	315-3514	29.19	26.64	26.31	24.79

4mm Test Lead with Probes

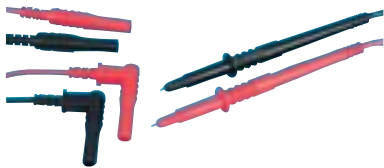


Test leads with totally shrouded, right angled 4mm plug connection and comfort grip probes with finger barriers. The notched probe tips are manufactured from hard alloy to prolong service life. Supplied in a red and black pair with tip covers. Rated at 15A and IEC1010 1000V CTAII. Length: 700mm.

248962

Mfrs. List No.	Order Code	Price Each	
		1 +	10 +
CT-3A	433-8832	12.88	11.79

Test Leads



Superior quality test leads that are an ideal upgrade for existing test probes in terms of ruggedness, reliability and increased safety. The fine test probes have finger guards and terminate in either straight or right angle, shrouded 4mm plugs that fit the vast majority of multimeters. Ideal for electronics testing applications. IEC1010 1000V CAT III rated. Length: 1m.

248964

	Order Code	Price Each	
		1 +	10 +
Straight Plugs	428-4239	31.23	30.17
Right Angle Plugs	428-4240	32.31	31.10

Fused Test Leads



Superior quality, heavy duty test leads with integral fuses within the probe bodies and large finger guards.

- Supplied with interchangeable test probes and shrouded crocodile clips
- Terminate in either straight or right angle, shrouded 4mm plugs

- 660V ac, 500mA, 50KA fused
- IEC1010 600V CATIII rated
- Length: 1.2m.

414899.267877

Description	Mfrs. List No.	Order Code	Price per Pair	
			1 +	10 +
Straight Plugs	131009/SH	100-3454	119.35	113.80
Right Angle Plugs	131009/RA	100-3455	119.35	113.80
Probe fuses (3 pack)		844-8965	27.21	24.95
500mA/1000V/50kA				

Basic Test Accessory Kit

76-081



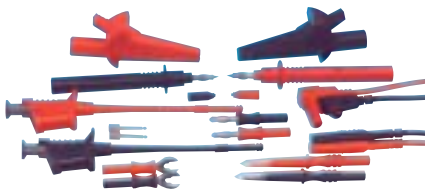
- Features:
- A high quality, replacement basic test lead set
 - 1m red and black silicone leads, rated 1000V, CAT III, 12A
 - Probe bodies with replacement tips, rated 1000V, CAT III, 36A
 - 90° flexible pincer clips rated 1000V, CAT III, 6A
 - CE marked

230698

Mfrs. List No.	Order Code	Price Each
		1 +
76-081	342-1636	31.3875

Deluxe Test Accessory Kit

76-082



- Kit Includes:
- Probe bodies with 4mm spring contacts, replaceable 2mm tips with IC caps, black and red, 1000V CAT III, 36A
 - Flexible pincer clips, black and red, 1000V, CAT III, 20A
 - 4mm banana plug adapters, black and red, 42V, 10A
 - Spring-tip mini probe with IC caps, black and red, 600V CAT II, 1A
 - Insulated spade lug adapters, black and red, 42V, 36A
 - Leads, 4mm sheathed straight to right-angle plugs, 1.5m PVC wire, black and red, 1000V, CAT III, 12A

230699

Mfrs. List No.	Order Code	Price Each		
		1 +	+	+
76-082	342-1648	125.16	--	--

General Purpose DMM Test Lead Kit

76-103



- Features:
- 1.5m red and black silicone leads, rated 1000V, CAT III 12A
 - Insulated alligator clips rated 1000V, CATIII, 20A
 - Spade lug adapters, rated 42V, 20A
 - Probe sprung hooks, rated 500V, CAT I, 15A
 - Probe bodies, rated 1000V, CAT III, 36A

230701

Mfrs. List No.	Order Code	Price Each
		1 +
76-103	342-1650	95.00

Right-angle Test Lead Set

76-091



- High flexible silicone leads
- Set includes 1 red, 1 black 1.5m lead with 4mm right-angle sheathed plugs, 1 red, 1 black probe body, 1 red and 1 black sprung hook probe adaptor
- 1000V CAT III 36A probe body and leads
- 500V CAT I 5A sprung hook adaptor

230702

Mfrs. List No.	Order Code	Price Each
76-091	356-2487	58.27

General Purpose Right Angle DMM Test Leads



- Silicone lead wire, straight to right angle 4mm sheathed plugs
- Set includes 1 red, 1 black 1.5m lead, 1 red, 1 black probe, 1 red, 1 black crocodile clip with piercing point, 1 red 1 black sprung hook probes, 1 red, 1 black spade lug adaptor
- 1000V CAT III 36A probe bodies, 1000V CAT III 12A leads, crocodile clips 1000V CAT III 20A
- 500V CAT I 5A probe sprung hooks

230703

Mfrs. List No.	Order Code	1+	+	+
76-104	356-2499	100.45	--	--

Test Lead Kit



A superior quality test lead kit that is an ideal upgrade for existing test probes supplied with multimeters. The leads and accessories are rugged, reliable and have many features that maximise user safety. IEC1010 1000V CAT III rated. Length 1.2m.

- 2x leads: Right angle to straight 4mm shrouded plugs
- 2x probes with shrouding and finger guards
- 2x heavy duty, shrouded crocodile clips

- 2x spring action IEC test clip probes with finger guards

248969

	Order Code	1+	10+
Test Lead Kit	428-4252	85.94	82.88

Fully Insulated Croc Clips Fused Prod Modules



- Pair of fully insulated shrouded crocodile clips 600V CAT III
- Overlapping steel jaws grip down to 0.3mm max opening 30mm
- Pair of shrouded fused prod modules fitted with 2A 600V 50KA HBC fuses
- Prod tips are exposed 4mm to meet HSE GS38 safety guidance
- Pair of 'wide body' unfused test prod CA-TIII1000V 10A rating
- 4mm diameter lantern style tip with point
- Pair of electronic sprung hook CATIII 1000V 10A rating

- Fits 4mm sockets, grips down to 0.1mm
- Designed to be used with modular test lead set or any other 4mm safety plug

600V CAT III

222433

	Order Code	1+	5+	10+	25+
Fully insulated croc clips	562-245	27.36	25.79	24.48	21.90
Fused Probe modules	562-257	76.06	71.02	68.85	--
Sprung hooks	100-183	42.45	41.56	40.11	37.72

Safety, Shrouded, 4mm Plugs

1000V



A high quality safety test lead set manufactured to IEC1010-1, VDE0100/0110 and approved by BG.

Comprising rigid test probes featuring moulded finger guards and refined steel sharp point tips, shrouded crocodile clips and 1m long flexible PVC connecting leads. One end of the lead is fitted with a stackable, fixed shrouded 4mm plug, the other end is

fitted with an in-line, fixed shroud 4mm plug. Both plugs feature insulated tip centre pins for additional safety.

Supplied in a plastic zip wallet.

Working voltage 1000V, maximum current 32A.

Mfrs. List No. 20067

222351

	Order Code	1+	5+	10+	25+
	226-154	186.60	172.12	170.51	164.01

High Voltage Probe



Measures up to 40kV DC or 28kV rms AC. Division ratio is 1,000 to 1. Has 1,000MΩ input resistance for use with an instrument having 10MΩ input impedance. DC accuracy: 20kV to 35kV, ±1% at 20°C to 30°C; add 1% at 10°C to <20°C and >30°C to 45°C. 0kV to <20kV and >35kV to 40kV: ±2%. AC accuracy: 60Hz, 5%.

233707

Mfrs. List No.	Order Code	Price Each
FLUKE 80K-40	781-988	318.00

Temperature Probe



80T-150U Universal temperature probe. Compatible with all Fluke and most popular DMMs.

- High accuracy temperature probe suitable for air, surface and non-corrosive liquids
- For low voltage environments (under 24V ac/60V dc)
- Fast responding
- Switch selectable for °C or °F
- Standard 9V battery
- Battery test instructions included

233708

Mfrs. List No.	Order Code	Price Each
FLUKE 80T-150UA	781-927	362.00

Stray Voltage Adapter Test Lead Kit

TL225 SureGrip™



Eliminates false readings due to stray or ghost voltages caused by the capacity between wires. This is achieved by ensuring that there is a lower impedance across the input terminals of the meter. The low impedance is achieved without compromising the safety of the electrician.

- Ensures the meter has a low input impedance that eliminates stray voltages
- On energized wires, the meter will indicate the real voltage
- On non-energized circuits the meter will read close to zero (even if there are stray voltages)
- Can be used with all modern meters with standard input spacing
- Operating range 200 V to 1000 V AC
- EN61010-1 CATIII 1000V, CATIV 600 V
- One year warranty

Kit includes: SV225 Stray Voltage Eliminator, TL224 SureGrip™ Silicone Test Lead Set (right to straight), TP220 SureGrip™ Test Probe Set and C75 Accessory Case. Also available is a pack of 1 SV225 Stray Voltages Eliminators.

417359

Type	Order Code	1+	3+	5+
TL225 Test Lead Set	101-8362	171.00	158.18	--
SV225 Stray Voltage Eliminators	101-9218	69.00	66.55	64.25

Test Leads, Probes & Accessories - continued

TL80A/TL81A Electronic Test Lead Sets

FLUKE



Highly flexible, silicone test lead sets that are shrouded to IEC1010 CATII, 300V rating. The lead kits are supplied with a pair of red and black, 10A rated leads and a selected range of common clips and probes. Supplied in a handy zipped, soft vinyl cases. UL listed.

Basic Test Lead Set:

Contents:

- Pair of 1m silicone test leads with a right angle, shrouded 4mm plug at one end and a stainless steel probe on the other
- Pair of insulated alligator type clips
- Pair of insulated probe tips

Deluxe Test Lead Set:

Additional components:

- Pair of 1m silicone test leads with straight to right angle shrouded 4mm plugs
- Pair of plug-in test probes
- Pair of hook and pinch style probe clips
- Pair of IC probe tip adaptors

248755

Description	Mfrs. List No.	Order Code	Price Each		
			1+	3+	+
Basic Test Lead Set	TL80	493-314	105.00	97.13	--
Deluxe Test Lead Set	TL81A	431-3902	253.00	234.03	--

Fluke Instruments

FLUKE



423-981

424-006

201-285

467-194

Model	Holster Case Order Code	Soft Vinyl Case Order Code	TL75 Test Lead Set Order Code 201-285	Test Clips Order Code 467-194	630mA Fuse Order Code 105-559	1A Fuse Order Code 106-667	3A Fuse Order Code 147-615
10, 11, 12, 12B		227-020	●	●			
70, 73, 75, 77, 79	423-981 or 227-031	424-006 or 424-018	●	●	●	●	●
83, 85, 87		—	●	●		●	
23	423-981	424-006 or 424-018	●	●	●		
27		—	●	●	●		●
8060A	—	424-018	●	●	●		●
45, 45-01	—	—	●	●			
51, 52	423-981	424-006 or 424-018					

Note

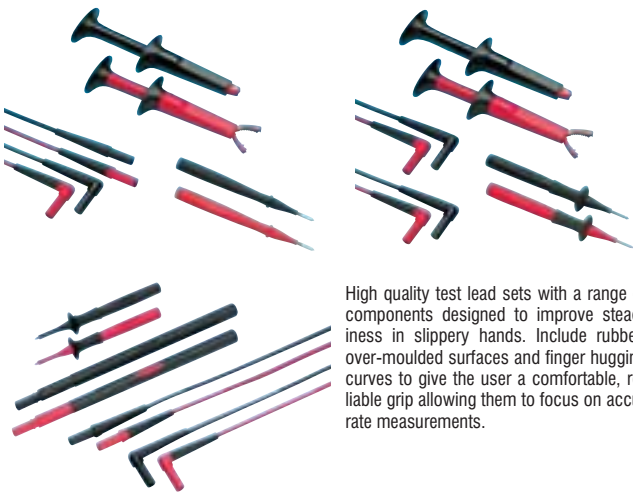
C90 case required for instruments fitted in a C70 holster

T140/222334

	Mfrs. List No.	Order Code	Price Each
			1+
	C50	424-006	56.00
	C90	424-018	55.00
TL75 Test lead set	TL75	201-285	34.00
630mA fuse	740670	105-559	11.45
1A Fuse	830828	106-667	24.42
3A Fuse	475004	147-615	19.84

SureGrip™ Test Lead Sets

FLUKE



High quality test lead sets with a range of components designed to improve steadiness in slippery hands. Include rubber, over-moulded surfaces and finger hugging curves to give the user a comfortable, reliable grip allowing them to focus on accurate measurements.

- 1.5m silicone, isolated test leads for maximum flexibility and resistance to high and low temperatures
- Reinforced strain reliefs ensure proper contact and increase lifetime
- Fully insulated probes
- IEC1010 CAT IV 600V, CAT III 1000V safety rating for use with the highest rated equipment
- UL listed

SureGrip™ Industrial Test Lead Set:Includes:

- TP222 Straight to 90° 4mm Test Lead
- AC220 Alligator type probe set
- TP220 Industrial test probes

SureGrip™ Electrical Test Lead Set:Includes:

- TP222 Straight to 90° 4mm Test Lead
- AC220 Alligator type probe set
- TP1 Slim-Reach™test probes

TL238 SureGrip High Energy Test Lead Kit:

Designed for use in high energy environments. Allows the user to extend reach to 30cm away from the measurement. This helps to further reduce the risk for an arc flash explosion. Kit includes:

- TP238 SureGrip slim reach test probes set with 2mm exposed metal reduces risk of short circuits. Probe has removeable finger guard for measuring in tight spaces
- TP280 SureGrip Test Probe extender keep hands away from live circuits
- TL224 SureGrip Silicone Test Lead Set

248494

Description	Mfrs. List No.	Order Code	Price Each
			1+
Industrial Test Lead Set	TL220	431-4189	113.00
Electrical Test Lead Set	TL223	145-4914	113.00
High Energy Test Lead Set	TL238	800-2231	113.00



Collaborative e-community

In addition to our best in class online store element14 also integrates a collaborative e-community and technology portal for design engineers.



www.element14.com

SureGrip™ Test Leads and Accessories



A range of high quality test leads, clips and probes that are designed to improve steadiness in slippery hands. The accessories include rubber, over-moulded surfaces and finger hugging curves to give the user a comfortable, reliable grip allowing them to focus on accurate measurements.

- Silicone, isolated test leads for maximum flexibility and resistance to high and low temperatures
- Reinforced strain reliefs ensure proper contact and increase lifetime
- IEC1010 CAT IV 600V, CAT III 1000V. 10 A rating. UL listed.

SureGrip™Silicon Test Lead Sets:Sets of 1.5m, red + black test leads with shoruded 4mm type plugs.Available in either 90° to 90° or straight to 90° plugs. Suitable for use with the SureGrip™ range of test probes and clips.

SureGrip™Alligator Clip Set:A pair (red + black) of insulated, trigger action alligator type clip probes with blunt heads for gripping objects up to 9.5mm OD.

SureGrip™Hook Clip Set:A pair (red + black) of insulated, trigger action hook type clip probes. The profiles narrow to 5.6mm at the tip, with the hook opening 6.4mm at the front, 2mm at the base.

SureGrip™ Pincer Clip Set:A pair (red + black) of insulated, pincer type clip probes consisting of a 114mm flexible shaft and trigger action, pincers that open to 5mm.

SureGrip™ Alligator Clip Set:A pair (red + black) of insulated, alligator type clips with multi-purpose tooth patterns to grip anything from fine wire gauges to a 20mm bolt.

SureGrip™Extension Lead Set:A pair (red + black) of insulated extension leads plus a 4mm socket to socket adaptor for extending SureGrip™ test leads.

248462

Description	Mfrs.	Price Per Pack	
Test Leads (Pair)	List No.	Order Code	1+
90° to 90°	TL222	431-4062	45.00
Straight to 90°	TL224	431-4074	45.00
Extension Lead Kit	TL221	431-4037	43.00
Probes and Clips (Pair)			
Alligator Probes	AC220	431-4098	56.00
Hook Probes	AC280	431-4130	49.00
Pincer Probes	AC283	431-4141	56.00
Alligator Clips	AC285	431-4165	35.00

SureGrip Test Accessories



A range of accessory kits to complement Fluke multimeters and multi-function test equipment. The kits offer significant savings of accessories bought separately and are supplied with carry cases.

TLK-220 EUR: SureGrip Accessory Kit

Handy all-in-one kit that includes:

- AC220 SureGrip™ Alligator Clip Set
- AC285 SureGrip™ Large Jaw Alligator Clip Set
- TP74 Slim Reach Test Probe Set (4mm)
- TL224 SureGrip™ Silicone Test Lead Set
- Zippered soft case with moveable divider
- Soft case is large enough to hold most Fluke multimeters

TLK-225: SureGrip Master Accessory Kit

This kit includes all the SureGrip™ leads and probes, combined in a handy soft carrying case. The kit includes:

- AC220 SureGrip™ Alligator Clip Set
- AC280 SureGrip™ Hook Clip Set
- AC283 SureGrip™ Pincer Clip Set
- AC285 SureGrip™ Large Jaw Alligator Clip Set
- TP220 SureGrip™ Test Probe Set
- TL224 SureGrip™ Silicone Test Lead Set
- 6-Pocket Storage Pouch

Mfrs.	Price Each	
List No.	Order Code	1+ +
TLK-220	491-7236	218.62 --
TLK-225	491-7248	224.99 --

339469

Fluke Fused Test Probes



FLUKE-FTP

FLUKE-FTPL



Fluke introduces test probes with built-in fuses for additional measurement protection. And, if the probe fuse does blow, these probes will still allow the meter to indicate live voltage helping to prevent a possible misreading of no voltage present. The new modular FTP probes can mount onto any Fluke modular lead format. Rated to CAT III 1000 V, these probes also have removable sheathed tips for additional safety.

- Built-in fuses for additional measurement protection
- Probes allow indication of live voltage even with blown fuse, helping to prevent the user from thinking no voltage is present
- 2 mm threaded probe tips include removable 4 mm lantern-style spring contacts and removable GS38 insulated IC caps for probing closely spaced leads
- CAT III 1000 V, CAT IV 600 V, 10 A rating
- FTPL Fused Test Probe and Lead Set includes Fluke TL224 test leads

549351

Mfrs.	Price Each	
List No.	Order Code	1+
FLUKE-FTP	177-2095	130.00
FLUKE-FTPL	177-2096	149.00

SMD Tweezer Set



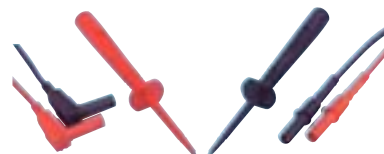
- Isolated contact tips connect to 4mm banana plugs
- 1m cable length
- Durable gold plated contact tips
- Rated 400V RMS 1A

SMD component testing tweezers designed to grip small components during testing.

230673

Mfrs.	Price Each	
List No.	Order Code	1+
76-001	356-2402	34.96

Surface Mount Test Lead Set



- Extra sharp tips for small surface mount components
- High flexible silicone leads
- Set includes 1 red, 1 black test probe body, 1 red, 1 black 60° 4 mm sheathed, straight to right-angle plus
- 1000V CAT III 20A probe body

230677

Mfrs.	Price Each	
List No.	Order Code	1+ +
76-090	356-2475	41.18 --

Test Leads, Probes & Accessories - continued

Miniature



A plunger action miniature hooked test probe with gold plated contacts, solder connections. Working voltage 50V ac.

Mftrs. List No. 575+ Colour

222587

		Price Each			
Colour	Order Code	1+	5+	10+	+
Red	119-3802	2.26	2.10	1.93	--
Black	119-3805	2.26	2.10	1.93	--
Blue	119-3807	2.43	2.23	2.08	--
Green	119-3808	2.26	2.10	1.93	--
Yellow	119-3809	2.26	2.10	1.93	--

Miniature



523-525
Solder L=61



523-549
2mm Plug L=69.5

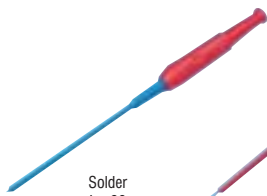
Miniature plunger action test hooks with gold plated hook. Two types are available for either solder or 2mm pin connection at side. Working voltage 50V.

Mftrs. List No. KLEPS 2 + Colour (Solder), KLEPS 2 BU + Colour (Plug)

222383

		Price Each		
Order Code		1+	5+	10+
Solder				
Red	523-525	19.54	13.76	12.30
Black	523-537	17.69	12.46	11.13
Plug				
Red	117-6451	9.74	8.97	8.30
Black	523-550	36.69	25.80	23.20

Miniature, 2mm



Solder
L=90



2mm Socket
L=86

Miniature test probes for testing the smallest of components or area of high density. Insulating and backing layers of printed circuit boards can be penetrated by the slim stainless steel tip. Two versions are available with solder connection for cables up to 0.5mm dia. or gold plated socket connection for 2mm measuring leads. Working voltage 50V.

Mftrs. List No. PRUF 1 + Colour (Solder), MPS 1 + Colour (Socket)

222393

		Price Each			
Order Code		1+	10+	50+	
Probe, Solder					
Red	523-483	16.38	11.38	10.16	
Black	523-495	16.20	11.26	10.05	
Probe, Socket					
Red	523-501	14.78	12.57	11.57	--
Black	523-513	17.73	15.08	13.88	--

Shatter-proof, 4mm Test Probe



L=97.5

Test probe with elastic shatter-proof insulating sleeve. Insulating and backing layers of printed circuit boards can be penetrated by the slim stainless steel tip. Socket connection for 4mm measuring leads. Working voltage 50V, Current 5A.

Mftrs. List No. PRUF 2 + Colour

222385

		Price Each			
List No.	Order Code	1+	20+	100+	
Red	523-665	8.47	7.59	7.19	
Black	523-677	7.60	6.81	6.33	

Test Probe - Safety 1000V



A rigid probe fitted with a 4mm socket to accept shrouded connecting leads and plugs. Each probe features a moulded finger guard/anti-roll body and a refined steel sharp point tip fitted with a removable safety cap. Manufactured to IEC1010-1, VDE0100/0110, approved by BG. Working voltage 1000V.

Mftrs. List No: 24.0235-1 = 152-730 24.0235-4 = 152-731
24.0231-1 = 152-732 24.0231-4 = 152-733

222346

		Price Each		
Colour	Order Code	1+	10+	25+
Red (slimline)	152-730	15.77	14.30	13.76
Black (slimline)	152-731	15.77	14.30	13.76
Red	152-732	15.77	14.83	13.88
Black	152-733	15.77	14.83	13.88

Insulated 2mm



Miniature crocodile clips with very fine serrated jaws. Cables can either be plugged into the 2mm socket or solder and crimp terminated.

Overall length = 41,
Clamping limit = 3

Current Rating 5A
Voltage Rating 30V ac, 60V dc
Temperature range -25°C to +80°C
Housing Material Hostalen
Brass, Tin plated

Mftrs. List No: 24.0154-1 = 152-427 24.0154-4 = 152-428

209749

		Price Each				
Order Code		1+	10+	50+	100+	+
Red	152-427	13.48	12.68	11.94	10.64	--
Black	152-428	13.48	12.68	11.94	10.64	--

Miniature Insulated Alligator Clips



MA1 and MA1S Series



- Miniature alligator clips with unbreakable insulation
- Capable of clamping flat components (soldering eyes) and wires up to a maximum diameter of 4 mm
- The flat part of the jaws (fine wire section) allows a secure contact to be made when clamping even the thinnest wires
- 2mm female connector
- Nickel-plated brass jaws (MA1 series)

- Stainless steel jaws - rust-proof, acid-proof, non magnetic (MA1S series)

Clamping Range 4mm
Jaw Strength 1N
Contact Resistance 5mΩ
Operating Temperature -25°C to +100°C

239842

		Price per Pack (5 pack)				
Mftrs. List No.	Order Code	1+	10+	50+	+	
MA1 BLACK	810-502	30.73	26.78	23.73	--	
MA1 RED	810-514	30.07	26.20	23.22	--	

Supplied in Pairs

		Price Pair			
MA1 RED+BLACK	496-145	14.98	13.05	11.80	9.98

Supplied Individually

		Price Each			
		1+	10+	25+	50+
MA1S BLACK	101-1419	5.51	4.84	4.30	3.89
MA1S RED	101-1421	5.51	4.84	4.30	3.89

Insulated 4mm 10A



A 10 Amp insulated crocodile clip that will accept 4mm plug or thin stranded wire which may be retained by using an integral screw.

Clamping limit = 15mm at point of jaws

Mftrs. List No: 307-0500 = 119-3801 307-0100 = 119-3804

209750

		Price Each			
Order Code		1+	15+	50+	100+
Red	119-3801	10.00	9.74	9.45	9.16
Black	119-3804	15.25	14.20	13.80	12.40

Insulated 4mm 15A



Touch-proof insulated clips for use with 4mm standard or shrouded plugs. Complies with IEC1010-2/3.

Overall length = 53.5, Clamping limit = 11

Current Rating 15A
Working Voltage 300V CATII
Temperature range -40°C to +80°C
Mfrs. List No: 24.0157-1 = 225-083

Housing Polyamide
Contacts Brass, Nickel plated

24.0157-4 = 225-095

209760

5 Per Pack

Price Per Pack

Order Code	1+	10+	20+	50+
Red 225-083	89.59	82.71	75.11	62.32
Black 225-095	89.59	82.71	75.11	62.32

Insulated 4mm 20A



Accepts 4mm standard plugs or can be screw terminated. Unbreakable insulation on all sides, conforming to DIN 57 470 Pt 1. Clamps fine wires and pins up to 9.5mm.

Mfrs. List No: AK2S RED AND BLACK

Overall length = 80.5, Clamping limit = 9.5

Current Rating 20A
Working Voltage 50V
Contact resistance 10mΩ
Clamping force at tip (max) 10N

Temperature range -25°C to +100°C
Housing Polypropylene
Material Brass, Tin plated

209821

1 Pair Per Pack

Price Per Pair

Order Code	1+	10+	25+	50+	+
Red / Black 495-311	27.58	23.77	21.71	18.08	--

Fully Insulated Alligator Clips



Features:

- Fully insulated 4mm alligator clips
- Wire insulated piercing feature
- Available individually (76-054 red, 76-055 black)
- CE marked meets IEC-1010, 1000V, CATII, 20A

230689

Mfrs.

Price Each

List No.	Order Code	1+	5+	10+
76-0124 Red	342-1715	10.49	10.19	9.68
76-126 Black	342-1727	9.27	--	--

Shrouded 4mm 32A 'Dolphin'



Clamping limit = 30

Touch proof insulated clips for use with 4mm standard or shrouded plugs. With a large clamping limit, easy grip body and flat clamp area for fine wires. Complies to IEC1010-2-031. Supplied in pairs of red and black.

Current Rating 32A
Rated Voltage 1000V CAT III
Temperature range to +80°C
Housing Polyamide, UL94V-2
Material Brass, Nickel plated

Mfrs. List No: 66.9575-22 = red 66.9575-21 = black

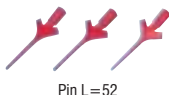
209797

1 Pair Per Pack

Price Per Pair

Order Code	1+	10+	25+	50+	+
Red and Black 338-3507	54.24	51.34	47.38	41.53	--

Miniature



Pin L=52

Miniature test hooks with revolving clip-on gripper. Suitable for extremely thin wires and densely packed circuits and contacts such as ICs. Can clamp diameters up to 3.5mm. With single 0.64mm diameter pin. Working voltage 50V.

222386

Single

Price Each

Pin	List No.	Order Code	1+	10+	50+
Black	KLEPS3ST BLACK	523-458	17.69	12.46	11.13
Red	KLEPS3ST RED	523-446	17.69	12.46	11.13

Micro



L=53.8

Micro-miniature test hook with revolving clip-on gripper. Designed for extremely thin wires, especially SMD technology and densely packed circuits and contacts such as ICs with a conductor spacing of 1.27mm. The powder-coated shaft can be bent to 35° and can clamp diameters up to 2.5mm. Two connections via gold-plated 0.64mm diameter pins. Working voltage 50V. Current 2A.

Mfrs. List No. MICRO-KLEPS + Colour

Test leads specifically for these connectors. order codes 518025 and 518050

222384

Price Each

Colour	Order Code	1+	10+	50+
Red	523-409	27.97	25.29	18.73
Black	523-410	26.88	24.30	18.00

4mm Plug/Cable Entry Test Probes



Clip-on (flexible)
L=158

KLEPS 30 + Colour

Features a flexible shaft which has a clip-on facility with a sprung easy push button action. Moulded with a 4mm socket which doubles up as a 4mm plug entry or a terminal block for a lead. Working Voltage 50V, Maximum Current 5A.

222388

Price Each

Order Code	1+	10+	50+	100+
Red 148-792	38.26	34.48	32.53	30.72
Black 148-793	38.13	34.38	32.27	30.62

4mm Plug Test Probes

KLEPS250



- Contact protected clamp-type test probe
- Flexible shaft, rotating grips
- 4mm socket connection

Rated Voltage: 300Vdc
Contact resistance: 100mΩ
Temperature Range: -25°C to +80°C

Mfrs. List No. 973528-100(black), 973528-101(red)

222538

Price Each

Colour	Order Code	1+	10+	50+	100+
Black	810-411	36.51	32.67	26.48	20.78
Red	810-423	36.51	32.67	26.48	20.78

Safety Test Probes

KLEPS2600



- Safety clamp-type test probe with rotating grip jaws and flexible shaft
- Max. clamp diameter 4mm
- 4mm socket

Rated Voltage: 1000Vdc

Contact resistance: 50mΩ

Temperature Range: -25°C to +80°C

Mfrs. List No. 972306-100(black), 972306-101(red)

222532

Price Each

Colour	Order Code	1+	10+	50+	100+
Red	858-973	41.55	37.19	30.12	23.47
Black	858-985	39.54	35.37	28.64	22.32

Test Leads, Probes & Accessories - continued

Safety, Long Reach, 4mm Socket Test Probes 1000V



Test clips with flexible shafts and open jaw clip on contacts, designed for three finger single hand operation. Fitted with 4mm sockets to accept shrouded connecting leads and plugs, manufactured to IEC1010-1, VDE0100/0110 approved by BG. Working voltage 1000V, maximum current 3A.

Mftrs. List No. 24.0224-1=152-734, 24.0224-4=152-735

Colour	Order Code	Price Each		
		1 +	10 +	25 +
Red	152-734	81.72	73.99	69.30
Black	152-735	81.72	73.99	69.30

4.0mm Test Lead Kit

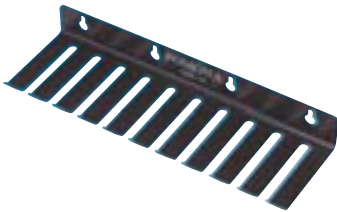


A kit of 4mm plugs sockets and highly flexible cable to make up test leads for standard and safety applications. Supplied in a plastic case. The kit comprises:

Order Code	Quantity	Colour
4mm Stackable Safety Plugs		
22.2300-4 + 22.1022.	14	Black
22.2300-1 + 22.1022.	14	Red
22.2300-2 + 22.1022.	6	Blue
22.2300-5 + 22.1022.	6	Yellow
22.2300-6 + 22.1022.	6	Green
4mm In Line Safety Sockets		
66.9500-21	4	Black
66.9500-22	4	Red
4mm In Line Safety Plugs		
22.2260-1 + 22.1025.	4	Red
22.2260-6 + 22.1025.	4	Black
4mm RA Safety Plugs		
22.2370-1 + 22.1042.	4	Red
22.2370-4 + 22.1042.	4	Black
Highly Flexible Double Insulated PVC Cable		
20546	5m	Blue
60.7033-23	5m	Yellow
60.7033-24	5m	Green
60.7033-22 RED 5M	5m	Red
60.7033-21 BLK 5M	5m	Black

	Mftrs.		Price Each		
	List No.	Order Code	1 +	+	+
4mm Test Lead Kit	20546	413-0297	470.00	--	--

Test Lead Holders



- Neatly stores leads up to 8.1mm diameter
- Attach to wall or cabinet (4408) or metal cabinet/tool box (4408M)
- Easy access

Model No.	Product Description
4408	Holder, Black with 10 slots
4408M	Holder, Magnetic

Mftrs. Model No.	Order Code	Price Each		
		1 +	5 +	10 +
4408	413-6111	22.51	18.44	--
4408M	413-6123	52.65	50.04	47.56

Stackable, 2mm

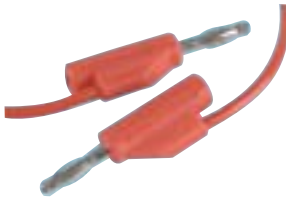


Miniature injection-moulded test lead with shatter-proof handle and PVC cable. Connector diameter 2mm, nickel-plated brass. 2mm dia. socket for stacking. Gold plated copper beryllium contact spring. Highly flexible 0.5mm² stranded wire. Working Voltage 50V, Current 6A. Available in two lengths.

Mftrs. Part No. MVL2/ +Length + Colour

Length/Colour	Order Code	Price Each			
		1+	5+	10+	25+
1000mm					
Red	523-604	10.49	9.44	8.59	7.72
Black	523-616	10.58	9.51	8.64	7.77

4mm Patch Leads with Stackable Plugs



- 4mm stackable plugs
- Voltage rating: 30V ac, 60V dc
- Highly flexible cable

Length	Colour	Order Code	Price Each			
			1 +	10 +	50 +	100 +
0.5m	Red	869-3994	5.84	5.40	5.01	4.21
0.5m	Black	428-4290	3.95	3.78	--	--
0.5m	Yellow	869-4010	4.08	3.79	3.46	3.00
0.5m	Green	869-4028	2.02	1.84	1.70	1.49
0.5m	Blue	869-4036	3.56	3.29	3.06	2.53
1m	Red	869-4044	7.12	6.47	5.86	5.01
1m	Black	869-4052	7.12	6.47	5.86	5.01
1m	Yellow	869-4060	7.12	6.47	5.86	5.01
1m	Green	869-4079	7.12	6.47	5.86	5.01
1m	Blue	869-4087	7.02	6.39	5.78	4.92
1.5m	Red	869-4095	4.76	4.24	3.90	3.23
1.5m	Green	869-4125	8.27	7.34	6.74	5.64
1.5m	Blue	869-4133	8.36	7.42	6.82	5.72

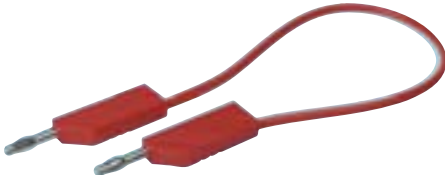
4mm Stacking Patch Cords



- 4mm stacking banana plugs
- Flexible silicone jacketed wire
- CE marked rated 1200V
- Max. current 12A @ 60V dc

Mftrs. List No.	Order Code	Price Each
		1 +
76-008 Red 1m	356-2426	11.89
76-009 Black 1m	356-2438	12.22
76-010 Red 1m	356-2440	15.16
76-011 Black 1m	356-2451	14.84

4mm Stackable Test Leads 2.5mm² MLN Series



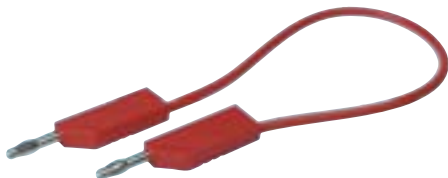
- Injection-moulded measuring lead
- 4mm diameter plug with caged spring and 4mm diameter socket for towerconstruction
- Nickel-plated copper beryllium contact spring
- High flexible double insulated stranded lead
- Shatter proof

Rated Voltage: 60Vdc Temperature Range: -15° to +70°C
Rated Current: 32A

Mftrs. List No. 972437 250mm 972435 500mm 972439 1000mm 972440 2000mm
+ Colour Code: 100(black), 101(red), 102(blue), 103(yellow), 104(green)

		Price Each			
Colour	Order Code	1+	10+	50+	100+
250mm, 6mohm					
Blue	401-7638	16.08	14.35	11.86	9.34
Yellow	401-7640	16.08	14.35	11.86	9.34
Green	401-7651	16.08	14.35	11.86	9.34
Red	401-7675	16.08	14.35	11.86	9.34
Black	401-7687	16.08	14.35	11.86	9.34
500mm, 8mohm					
Blue	401-7766	18.04	16.22	13.36	10.49
Yellow	401-7778	18.04	16.22	13.36	10.49
Green	401-7780	18.04	16.22	13.36	10.49
Red	401-7808	16.98	13.77	12.48	11.57
Black	401-7810	16.03	12.89	11.84	10.92
1000mm, 12mohm					
Blue	401-7833	20.18	17.89	14.80	11.62
Yellow	401-7845	20.18	17.89	14.80	11.62
Green	401-7857	19.39	17.20	14.23	11.39
Red	401-7870	20.18	17.89	14.80	11.62
Black	401-7882	20.03	17.77	14.71	11.55
2000mm, 20mohm					
Blue	401-7912	27.27	24.27	20.18	15.76
Yellow	401-7924	27.27	24.27	20.18	15.76
Green	401-7936	27.27	24.27	20.18	15.76
Red	401-7950	27.27	24.27	20.18	15.76
Black	401-7961	27.27	24.27	20.18	15.76

Test Leads With Stackable, 4mm Plugs



Injection-moulded PVC measuring lead with 4mm dia. shatter-proof connectors. Incorporates cage spring plugs and 4mm dia. sockets for stacking. Nickel-plated copper beryllium contact spring. Highly flexible, double insulated, 1mm² stranded lead. Working voltage 50V, Current 16A. Available in various lengths.

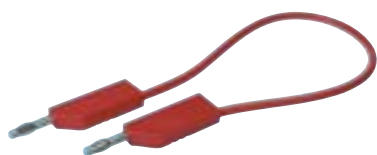
Mfrs. List No. ML + Length + Colour

222387

Length	Price Each				
Mfrs. List No./Colour	Order Code	1 +	10 +	25 +	50 +
250mm					
MLN25/1 RED	523-689	19.43	11.66	10.65	9.57
MLN25/1 BLACK	523-690	19.43	11.66	10.65	9.57
500mm					
MLN50/1 RED	523-719	21.80	13.18	11.96	10.61
MLN50/1 BLACK	523-720	21.84	13.20	11.98	10.63
MLN50/1 BLUE	523-732	21.84	13.20	11.98	10.63
1000mm					
MLN100/1 RED	523-744	23.05	13.89	12.94	11.45
MLN100/1 BLACK	523-756	24.41	14.71	13.70	12.12
MLN100/1 BLUE	523-768	24.41	14.71	13.70	12.12
MLN100/1 YELLOW.	871-801	12.61	11.67	10.27	9.59
MLN 100/1 GREEN	828-1874	14.57	13.07	11.77	10.38
1500mm					
MLN150/1 RED	523-770	27.93	16.82	15.62	14.21
MLN150/1 BLACK	523-781	27.93	16.82	15.62	14.21
MLN150/1 BLUE	523-793	27.93	16.82	15.62	14.21
MLN 150/1 GREEN	828-1882	17.73	15.92	14.35	12.64
2000mm					
MLN200/1 RED	523-800	28.39	17.07	15.84	14.46
MLN200/1 BLACK	523-811	31.54	18.95	17.60	16.06

Silicone Test Leads, 4mm

MLN SIL Series



- 4mm stackable plugs at both ends
- Nickel-plated copper beryllium caged spring contact
- Highly flexible, double insulated, stranded lead
- Shatterproof plugs

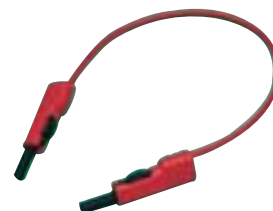
Conductor Area 1.0mm² Cable Material PVC
 Rated Current 16A Temperature Range -15°C to +70°C
 Rated Voltage 60V DC

373954

			Price Each			
Mfrs. List No.	Colour	Order Code	1+	10+	50+	100+
Length: 50cm						
MLN SIL 50/1	Red	828-2056	12.06	11.36	10.29	9.24
MLN SIL 50/1	Black	828-2064	12.06	11.36	10.29	9.24
MLN SIL 50/1	Yellow	828-2129	12.21	11.50	10.43	9.37
MLN SIL 50/1	Green	828-2137	12.29	11.57	10.51	9.44
MLN SIL 50/1	Blue	828-2099	12.29	11.57	10.51	9.44
Length: 100cm						
MLN SIL 100/1	Red	828-1998	14.98	14.12	12.81	11.56
MLN SIL 100/1	Black	828-2013	14.98	14.12	12.81	11.56
MLN SIL 100/1	Yellow	828-2102	14.87	13.98	12.71	11.48
MLN SIL 100/1	Green	828-2110	14.87	13.98	12.71	11.48
MLN SIL 100/1	Blue	828-2080	14.16	13.33	12.10	10.90
Length: 150cm						
MLN SIL 150/1	Red	828-2072	16.99	15.91	14.42	12.98
MLN SIL 150/1	Black	828-2048	16.99	15.91	14.42	12.98
MLN SIL 150/1	Yellow	828-2188	16.47	15.44	14.05	12.62
MLN SIL 150/1	Green	828-2170	16.47	15.44	14.05	12.62
MLN SIL 150/1	Blue	828-2153	16.47	15.44	14.05	12.62
Length: 200cm						
MLN SIL 200/1	Red	828-2030	20.08	18.92	17.19	15.50
MLN SIL 200/1	Black	828-2021	20.23	19.03	17.31	15.60
MLN SIL 200/1	Yellow	828-2161	19.24	18.01	16.47	14.74
MLN SIL 200/1	Green	828-2196	19.24	18.01	16.47	14.74
MLN SIL 200/1	Blue	828-2145	19.24	18.01	16.47	14.74

Contact Protected Test Lead

MLB/1V



- Contact protected measuring lead 1mm²
- 4mm diameter plug insulated by latching and sprung insulating sleeve which is only released by pressure on the side-mounted locking spring
- Highly flexible PVC insulation

Rated Voltage: 60Vdc
 Rated Current: 16A
 Temperature Range: -15° to +70°C

Mfrs. List No. 972644 250mm 972645 500mm 972646 1000mm 972647 2000mm
 + Colour Code: 100(black), 101(red), 102(blue), 103(yellow), 104(green)

222534

		Price Each			
Colour	Order Code	1+	5+	10+	25+
250mm, 8.5mohm					
Black	810-526	23.65	21.37	17.44	13.61
Red	810-538	24.89	22.50	18.36	14.32
Blue	810-540	25.09	22.68	18.51	14.43
Yellow	400-2957	25.09	22.68	18.51	14.43
500mm, 13mohm					
Black	810-551	19.62	18.19	16.89	15.43
Red	810-563	19.62	18.19	16.89	15.43
1000mm, 22mohm					
Black	810-587	21.07	19.79	18.19	16.56
Red	810-599	28.49	25.74	21.07	15.14
Blue	810-605	28.49	25.74	21.07	15.14
Yellow	400-2994	31.21	28.29	23.32	17.98
Green	400-6008	31.21	28.29	23.32	17.98
2000mm, 40mohm					
Black	810-617	31.21	28.29	23.32	17.98
Red	810-629	31.21	28.29	23.32	17.98
Yellow	400-6010	30.99	28.11	23.17	17.85

Safety Measuring Lead, 4mm

Series MLS WS



- Safety measuring lead, at either end 4 mm diametersafety connector with onward connection capability.
- Nickel-plated copper beryllium contact spring
- Highly flexible, double insulated stranded lead, shatter-proofgrip sleeve and lead

- In accordance to IEC 61010 standards
- Built in colour indicator for easy identification of insulation damages.

CSA: 1.0 / 2.5mm² Rated Voltage: 1000V AC/DC
 Isolation: PVC Class: Cat II
 Rated Current (1,0/2,5mm²): 16/32A Temperature Range: -15°C to +70°C

Test Leads, Probes & Accessories - continued

Safety Measuring Lead, 4mm - continued

Series MLS WS - continued

373962

Mfrs. List No.	Colour	Order Code	1+	5+	10+	25+
1,0mm² length: 50cm						
MLS WS 50/1	Red	828-1653	15.02	13.53	12.29	11.05
MLS WS 50/1	Black	828-1645	14.73	13.26	12.05	10.83
MLS WS 50/1	Yellow	828-1670	13.61	12.25	11.13	10.21
MLS WS 50/1	Green	828-1688	14.80	13.35	12.13	10.90
MLS WS 50/1	Blue	828-1661	15.14	13.63	12.38	11.13
length: 100cm						
MLS WS 100/1	Red	828-1700	15.95	14.36	13.07	11.75
MLS WS 100/1	Black	828-1696	15.81	14.23	12.93	11.62
MLS WS 100/1	Yellow	828-1726	15.95	14.43	13.12	11.78
MLS WS 100/1	Green	828-1734	15.81	14.23	12.93	11.62
MLS WS 100/1	Blue	828-1718	15.95	14.43	13.12	11.78
length: 200cm						
MLS WS 200/1	Red	828-1750	16.98	15.31	13.90	12.50
MLS WS 200/1	Black	828-1742	17.14	15.46	14.10	12.64
MLS WS 200/1	Yellow	828-1777	17.29	15.62	14.18	12.76
MLS WS 200/1	Green	828-1785	17.14	15.46	14.10	12.64
MLS WS 200/1	Blue	828-1769	16.98	15.31	13.90	12.50
2,5mm² length: 50cm						
MLS WS 50/2,5	Red	828-1807	16.22	14.54	13.21	11.88
MLS WS 50/2,5	Black	828-1793	16.22	14.54	13.21	11.88
MLS WS 50/2,5	Blue	828-1815	16.08	14.43	13.14	11.80

Stackable, 4mm Plugs



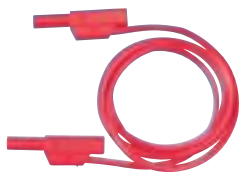
PVC test leads, 1m in length terminated at each end with 4mm gold plated hermaphrodite stackable plugs. Working voltage 240V ac. Maximum current 19A.

Mfrs. List No. 21.0830-1 = 152-748,
21.0830-4 = 152-749

222344

Colour	Order Code	1+	10+	25+
Red	152-748	27.13	21.70	17.44
Black	152-749	29.12	23.35	18.65

Safety, Shrouded, 4mm Plugs 1000V



Flexible 1m length PVC connecting leads fitted with 4mm plugs. The slimline stackable plugs feature fixed shrouds and insulated tip centre pins for additional safety. Manufactured to IEC1010-1, VDE0100/0110, approved by BG. Working voltage 1000V, maximum current 32A.

Mfrs. List No. 21.5430-1 = 152-736,
21.5430-4 = 152-737

222342

Colour	Order Code	1+	10+	25+
Red	152-736	44.27	35.49	28.33
Black	152-737	44.27	35.49	28.33

Test Lead and Tool Holder



H=43, L=350, D=82

A 350mm aluminium rail complete with 15 moulded hooks which can be snapped onto the rail in any desired position. The rail can be mounted on any vertical surface (mounting screws supplied).

222367

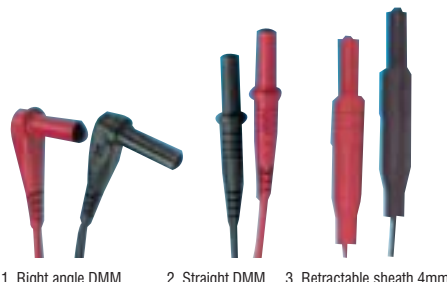
Order Code	1+	5+	10+
147-010	78.71	71.39	59.13

Pomona Test Accessories

Replacement DMM Test Leads



- Monolithic probes with fixed tips
- Durable 2 mm tips for long life
- Comfort-grip probe
- Fits most DMM's including Fluke, HP (Agilent), Wavetek (Meterman) and others
- Silicone insulated 1.2m leads



1. Right angle DMM 2. Straight DMM 3. Retractable sheath 4mm

Model No.	Application	Plug Type	Rating
5907A	Hand-held DMM modular test leads	1 - Right angle DMM	CAT III 1000V UL
5908A	Bench-top DMM modular test leads	2 - Straight DMM	CAT III 1000V UL
5909A	Hand-held DMM modular test leads	1 - Right angle DMM at both ends	CAT III 1000V UL
6358	Stainless steel heavy-duty Universal DMM test leads	3 - Retractable sheath DMM	CAT III 1000V UL

240910

Mfrs. Model No.	Order Code	1+	5+	10+
5907A	413-6056	32.36	24.28	23.05
5908A	413-6068	32.36	30.80	29.22
5909A	413-6070	32.36	24.28	23.05
6358	413-6081	35.03	33.20	31.59

Replacement DMM Test Lead Sets



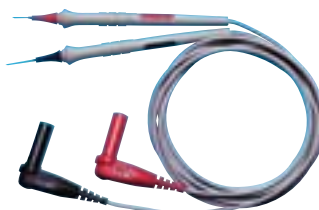
- Monolithic probes with fixed tips
- Durable 2 mm tips for long life
- Comfort-grip probe
- Fits most popular DMM's
- Silicone insulated 1.2m leads

Model No.	Probe Tip	Plug Type	Rating
5519A	Standard Nickel/brass	1 - Right angle DMM	CAT III 1000V 10A UL
6365	Standard Nickel/brass	2 - Straight DMM	CAT III 1000V 10A UL
5898	Stainless steel heavy-duty	1 - Right angle DMM	CAT III 1000V 10A UL
5309A	Stainless steel heavy-duty	3 - Stacking banana	30V ac, 60V dc, 10A

240901

Mfrs. Model No.	Order Code	1+	5+	10+
5519A	413-5945	32.05	24.00	22.82
6365	413-5957	29.28	27.94	26.43
5898	413-5970	34.78	26.06	24.27
5309A	413-5982	33.31	24.92	23.32

Precision Probe Set Small Outline



- Replaceable spring-loaded tips
- Comfort-grip textured surface
- Fits all meters including Fluke, HP (Agilent), Metrix, Wavetek (Meterman) and others
- Silicone insulated leads resist abrasion and heat
- CAT III, 1000V, 3A



1. Sharp-point gold spring-loaded tip
2. Tri-point gold spring-loaded tip
3. Quad-point gold spring-loaded tip
4. Sharp stainless steel rigid tip
5. 7.7cm long extended stainless steel tip

Model No.

6341
6342
6275
6354

Product Description

Precision probe with set of 5 tips
Probes with gold pogo tips
Probes with sharp stainless steel rigid tips
Set of 5 replacement probe tips

240831

Mfrs.	Order Code	1 +	5 +	10 +
Model No.				
6341	413-5775	85.22	64.54	--
6342	413-5787	49.17	36.86	--
6275	413-5799	43.19	32.27	32.26
6354	413-5805	44.34	34.61	--

Retractable Tip Test Probes

Sharp thin tips



- Silicone insulated 1.2m leads
- Fully insulated tip extends to 7.6cm
- Durable 1mm stainless-steel tip reaches into inaccessible areas
- Fits most meters from Fluke, Metrix, Wavetek (Meterman) and others
- Set of two probes, one black & one white

Model No. Product Description

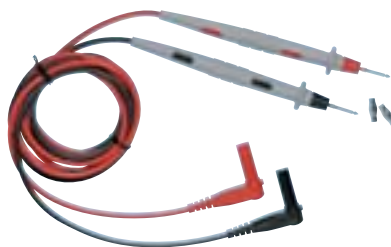
5953A Probe set with right-angle DMM plugs - CAT II 600V
5952A Probe set with stacking banana plugs - 30V ac, 70V dc rating

240870

Mfrs.	Order Code	1 +	5 +	10 +
Model No.				
5953A	413-5817	58.38	55.44	52.77
5952A	413-5829	58.38	55.44	52.77

2mm/4mm Test Lead Set

6601



- Designed for all DMMs with a safety style sheathed banana jack
- 2mm notched pin probe tip with screw on standard 4mm banana plug adapter
- Probe handle made of Santoprene rubber and Polypropylene
- Probe body and banana plug are molded directly to the wire
- Test leads are silicone, high wire strand count
- Banana adapter and banana plug spring are nickel plated beryllium copper
- IEC 1010-2-031 CAT III

Operating voltage 1000 VRMS/DC
Current 10 A

Rating IEC 1010-2-031, CAT III

382085

Mfrs.	Order Code	1 +	5 +	10 +
List No.				
6601	847-1819	47.05	45.63	44.27

Replaceable Tip Probe Set

Combination Lead Terminations



- Silicone insulated 1.2m leads
- Fully insulated tip extends to 7.6cm
- Durable 1mm stainless-steel tip reaches into inaccessible areas
- Fits most meters from Fluke, Metrix, Wavetek (Meterman) and others
- Set of two probes, one black & one red



1. Gold-plated sharp-point pogo
2. Gold-plated microtip pogo
3. Gold-plated triple-point pogo
4. Stainless-steel sharp-point
5. Standard tip, 060 nickel/brass



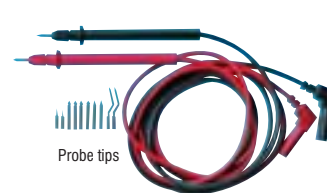
1. Right angle DMM plug
2. Straight DMM plug
3. Stacking banana plug
4. Straight banana plug
5. Retractable sleeve banana plug
6. Right angle banana plug

Model No.	Probe Tip	Plug Type	Rating
6469	2	1	CAT III 1000V UL
6477	4	1	CAT III 1000V UL
5951A	5	6	30V ac, 60V dc
5676A	All 5	1	CAT III 1000V

240881

Mfrs. List No.	Order Code	1 +	5 +	10 +
6469	413-5830	53.96	51.26	48.77
6477	413-5878	55.04	52.29	49.75
5951A	413-5891	55.04	52.29	49.75
5676A	414-6086	79.71	71.79	64.56

Probe Kit with Replacement Tips



- Two test probes with a set of all five probes tips
- Silicone insulated 1.2 m leads

Model No.	Product Description	Plug Type	Rating
6342	Probe set with sharp point gold pogo tips	1 - Right-angle DMM	CAT III 1000V
6275	Probe set with sharp stainless steel rigid tips	1 - Right-angle DMM	CAT III 1000V
6354	Replacement probe tips. Set of 5 types		

240891

Mfrs.	Order Code	1 +	5 +	10 +
List No.				
6342	413-5787	49.17	36.86	--
6275	413-5799	43.19	32.27	32.26
6354	413-5805	44.34	34.61	--

Lead Set with Kelvin Clips

6730



- True wire four wire lead set with gold plated alligator clips that open to 20.3mm
- Long leads: 188cm
- Standard banana plugs with retractable sheath
- Colour coded

Voltage RMS 1000V Cat III
Current 20 A

Temperature -10 to +55°C

382088

Mfrs.	Order Code	1 +	5 +	10 +
List No.				
6730	847-1851	280.33	209.42	205.14

Pomona Test Accessories - continued
Test Clip to 4mm Stacking Banana Plug
3782

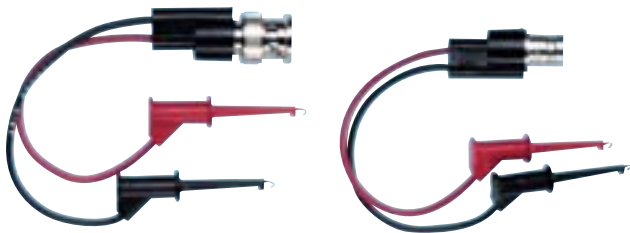
Pomona Electronics
Test & Measurement Instruments


- Provides a Minigrabber output from a Banana Jack
- Banana plug is capable of vertical and cross stacking
- Mates to any standard Banana Jack
- Choice of red or black
- Choice of 0.3, 0.6, 0.9 or 1.2 meter leads

Operating temperature 55°C
Operating voltage hand-held 60VAC/60VDC max
Operating hands free Current 300 WVDC 5 A

382074

Mftrs.		Price Each			
Description	List No.	Order Code	1+	5+	10+
Black, 0.3m	3782-12-0.	123-1236	13.04	9.76	9.08
Red, 0.3m	3782-12-2.	123-1182	15.60	11.67	10.89
Black, 0.9m	3782-36-0.	370-4257	9.01	8.67	8.43
Red, 0.9m	3782-36-2.	123-1200	14.10	10.54	9.83
Black, 1.2m	3782-48-0	123-1261	11.03	--	--
Red, 1.2m	3782-48-2.	123-1212	9.77	9.40	9.14

BNC to Micro Grabber Test Clips
Pomona Electronics
Test & Measurement Instruments


- Converts BNC connectors to micro grabber test clips
- Rated at 150V RMS
- Length: 7" (180mm)

311607

Mftrs.		Price Each			
Description	List No.	Order Code	1+	+	+
BNC Female to Micro Grabber Clips	5188	443-5734	26.62	--	--
BNC Male to Micro Grabber Clips	5189	443-5746	28.71	--	--

Test Lead Kit

5901B

Pomona Electronics
Test & Measurement Instruments


- High strand count silicone wire for extreme flexibility and high temperature resistance
- Banana plugs are moulded directly to the wire for strength
- Probes, alligator clips and spade lugs fit directly onto test leads
- Interchangeable test probe tips
- Tri-fold pouch of durable nylon
- IEC 1010-2-031

Kit consists of:

Model	Quantity	Description
5689A	1 red, 1 black	Modular test probe set
6248	1 red, 1 black	Minigrabber test clip with DMM jack set
5916A	1 red, 1 black	Medium alligator clip set
6364	1	Replacement probe tip set
5908A	1 red, 1 black	DMM test lead set
6203	1 red, 1 black	Insulated spade lug adapter set

382081

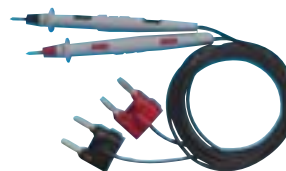
Mftrs.		Price Each			
List No.	Order Code	1+	5+	10+	
5901B/POM	847-1720	109.32	108.24	105.33	

Electrical DMM Test Lead Kit
Pomona Electronics
Test & Measurement Instruments


- Silicone insulated test leads with right angled plugs (4 ft)
- Modular electrical test probes
- Extended tip adaptors
- Insulated spade lugs
- Medium and large alligator clips
- Storage pouch
- Fits most DMM's from Fluke, Metorman, Agilent and others

311610

Mftrs.		Price Each			
List No.	Order Code	1+	5+	+	
5673B	443-5795	133.75	101.42	--	

Kelvin Probes
4-Wire and 2-Wire measurement
Pomona Electronics
Test & Measurement Instruments


- Designed for high precision and rapid testing
- 30V ac, 70V dc Rating
- For use with 4-Wire Kelvin meters

240917

Mftrs. Model No.		Price Each			
	Order Code	1+	3+	5+	
6303	413-6019	253.25	246.84	241.75	

DIY Micrograbber®
Pomona Electronics
Test & Measurement Instruments


- Ideal for connecting to small circuit board components
- Supports 20 to 22 AWG wire
- Operating voltage: 150V dc RMS
- Current: 3A
- Overall length: 44mm
- Packs of 10

311582

Mftrs.		Price Per Pack			
List No.	Colours	Order Code	1+	5+	10+
4233-0	Black	412-7584	44.19	40.61	36.54
4233-2	Red	443-5953	56.13	53.66	52.51

Alligator Clip Set
Pomona Electronics
Test & Measurement Instruments

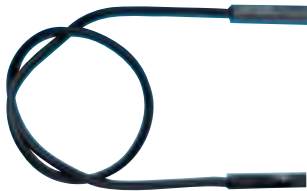

- Fits on any DMM or banana plug test lead
- Jaws open to 7.6mm
- Rated CAT III 300V 5A
- Supplied as a red and black pair

240964

Mftrs.		Price Each			
Model No.	Order Code	1+	5+	10+	
5916A	414-6104	27.74	20.86	19.44	

0.64mm Square Pin Receptacle Patch Cord

Pomona Electronics
Test & Measurement Equipment



- Ideal for jumping 0.64mm square pins on PC test boards
- Receptacle is gold plated to optimize the electrical connection
- Operating voltage: 45V RMS
- Current: 3A max.

311583

Mfrs. List No.	Order Code	1+	5+	10+
4741-6-2	443-5709	16.17	15.45	15.14

BNC Male Cable with Moulded Strain Relief

Pomona Electronics
Test & Measurement Equipment



- Body: Brass, Tarnish resistant plating
- Dielectric: PTFE
- Centre Contact - Gold plated brass
- Strain relief: PVC moulded directly to cable and connectors

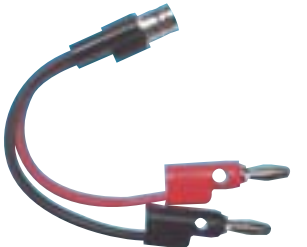
Mfrs. List No.	Specification
2249-C	50Ω RG58 C/U cable, for general test and measurement purposes
2249-E	75Ω cable for use with TV, Video and LAN signals
2249-K	50Ω RG58 C/U cable with superior flexibility

311497

	Mfrs.		Price Each		
Length	List No.	Order Code	1 +	5 +	10 +
30cm	2249-C-12	443-5242	37.23	28.72	—
60cm	2249-C-24	443-5254	48.35	46.30	45.27
300cm	2249-C-120	443-5266	70.25	67.25	65.83
300cm	2249-E-120	443-5291	72.56	69.46	67.94
30cm	2249-K-12	443-5308	70.50	67.46	65.98
60cm	2249-K-24	443-5310	70.50	67.46	65.98
300cm	2249-K-120	443-5321	89.83	85.99	84.08

BNC Female Connector to Multi Stacking 4mm Banana Plugs

Pomona Electronics
Test & Measurement Equipment



Converts BNC cables with male plugs to stackable banana plugs for versatility.

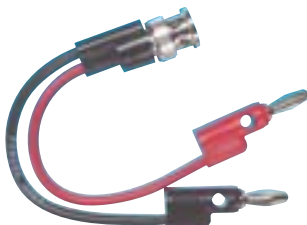
- Moulded directly to the wire for pull strength durability and environmental resistance
- BNC center contact is gold plated beryllium copper
- Overall length 180mm
- Rated 500V RMS

311501

Mfrs. List No.	Order Code	1+	5+	10+
3073	443-5370	48.13	43.30	39.40

BNC (Male) to Multi-Stacking Banana Plugs

Pomona Electronics
Test & Measurement Equipment



- Converts BNC (female) cable to stackable banana plugs
- Moulded directly to the wire for pull strength durability and dust/moisture resistance
- BNC dielectric is PTFE for superior temperature performance BNC centre contact is gold plated for corrosion and environmental resistance
- Overall length is 180mm
- 500V RMS

311579

Mfrs. List No.	Order Code	1+	5+	10+
3957	443-5515	28.05	--	--

4mm Adapters

Pomona Electronics
Test & Measurement Equipment

6728



- Adapter provides an easy and quick conversion from a standard sheathed banana plug / patch cord to a standard exposed banana plug
- Allows standard sheathed banana plugs / patch cords to connect to non-sheath style banana jacks or blinding post
- Ideal for environments using a mixture of sheathed and non-sheathed style patch cords
- Choice of red or black

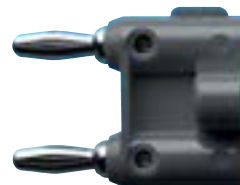
Voltage	600 Vrms	Temperature	-10 to +55°C
Current	20 A max		

382087

Description	Mfrs. List No.	Order Code	1+	5+	10+
Black Adapter	6728-0	847-1835	9.52	7.18	--
Red Adapter	6728-2	847-1843	9.52	7.18	--

Double Banana Plug, Solderless, with Set Screws

Pomona Electronics
Test & Measurement Equipment



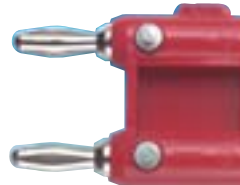
- Features a recessed area for mounting small discrete components
- Nickel plated
- Beryllium copper for tarnish resistance & long insertion life

311494

Colour	Mfrs. List No.	Order Code	1+	5+	10+
Black	1330-0	443-5187	7.24	5.70	--
Red	1330-2	443-5199	7.62	5.70	--

Double Banana Plug with Wire Guide

Pomona Electronics
Test & Measurement Equipment



- Double banana plug
- Set screws to secure leads (MDP)
- Simplifies cable construction or component mounting (MDP)
- Nickel plated finish
- MDP-S internally fitted with shorting bar

311612

Description	Mfrs. List No.	Order Code	1+	5+	10+
Double banana plug with wire guide, Black	MDP-0	443-5898	6.02	5.93	5.65
Double banana plug shorting bar, Black	MDP-S-0	443-5904	8.83	8.50	8.10
Double banana plug shorting bar, Red	MDP-S-2	443-5916	8.80	8.75	8.70

BNC Female Connector to 4mm Stackable Banana Plug

Pomona Electronics
Test & Measurement Equipment



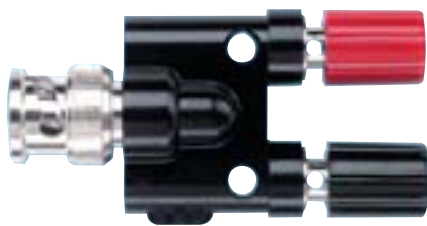
- Black ABS body
- Nickel plated banana plug
- Gold plated copper BNC center
- Rated 500V rms

385795

Connector	Mfrs. List No.	Order Code	1+	5+	10+
Female	1269..	443-5163	17.50	13.22	--

Pomona Test Accessories - continued

BNC Male Connector to 4mm Stackable Binding Posts

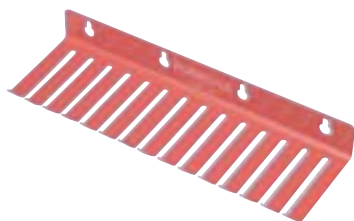
Pomona Electronics
Test & Measurement Accessories

- Black ABS body
- Gold plated copper BNC center
- Nickel plated copper banana plug
- Rated 500V rms

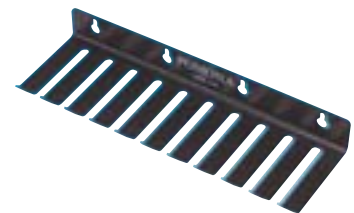
385794

Mfrs.		Price Each		
Connector	List No.	Order Code	1+	5+ +
Male	1296	443-5175	36.41	27.62 --

Test Lead Holders

Pomona Electronics
Test & Measurement Accessories

- Neatly stores leads
- Attach to walls
- 4408M is magnetic so will attach to cabinets
- Easy access



Model No.	Colour	Max Cable Dia.	No. Slots
4408	Black	8.13 mm	10
4408M	Black	8.13 mm	10
1508	Orange	5.33 mm	14
2708	Blue	11.43 mm	9

385792

Mfrs.		Price Each		
Model No.	Order Code	1+	5+ 10+	
4408	413-6111	22.51	18.44	--
4408M Magnetic	413-6123	52.65	50.04	47.56
1508	847-1592	27.47	20.56	19.18
2708	847-1606	29.16	21.82	20.36

Anemometers

Handheld Anemometers

EA3000 and EA3010



These handheld anemometers are ideal for the outdoor professional, being water resistant and having a backlight makes them ideal for all weather conditions.

EA3000 features

- Wind speed measurement in mph, Km/h, m/s or Knots
- LCD backlight
- Auto power off
- Neck band included
- Water resistant

EA3010 extra features

- Beaufort wind graph display
- Wind chill display
- Max wind speed memory
- Temperature display in degrees Celsius or Fahrenheit

381131.344352

Mfrs.		Price Each		
List No.	Order Code	1+	3+	
EA3000	838-8733	81.74	81.01	
EA3010	838-8741	116.88	114.23	

Vane Anemometer

72-6638

TENMA



A small, low cost meter that can accurately measure air velocity and wind speed in air conditioning and heating systems.

- 3½ digit LCD
- Accurate $\pm(3\% + 2 \text{ digit})$ air velocity measurement
- Measurement in ft/min, m/sec, knots and km/hr
- Low-friction ball bearing wheel
- Includes owner manual
- Requires 9V battery (not included)
- CE marked

H=76.2, W=38.1, L=110

Resolution		Resolution	
m/sec	0.8 to 30.0m/sec	0.1m/sec	1.6 to 58 knots
Km/hr	2.8 to 108 km/h	0.1km/hr	160 to 5900 ft/min
			0.1 knots
			10 ft/min

228156

Mfrs.		Price Each		
List No.	Order Code	1+	+	
72-6638	356-2669	193.24	--	--

Compact Thermal Anemometer

425

Sesto



An easy to use, compact anemometer with an attached thermal probe on a telescopic handle (max. 820mm). Duct measurements are easily entered and the volume flow measurement is calculated and shown on the clear display. In addition, it is possible to switch easily between flow and temperature readings.

- Temperature, flow and volume flow measurement
- Multi-point or timed mean calculation
- Max/min values
- Hold button to freeze readings
- Display light
- Auto-Off function
- 2 years warranty

Probe Type	NTC	Thermal Anemometer
Measurement range	-20 to +70°C	0 to 20 m/s
Resolution	0.1°C	0.01 m/s
Accuracy	$\pm 0.5^\circ\text{C} \pm 1 \text{ digit} \pm (0.03\text{m/s} + 5\% \text{ of mv}) \pm 1 \text{ digit}$	
Operating Temperature	-20 to 50°C	
Battery	9V	
Battery life	20 hours	

418065

Description		Price Each		
Order Code	1+	+	+	
Thermal Anemometer	108-2992	1,332.80	--	--
Instrument and Probe Case	108-3011	68.39	--	--
TopSafe - Protective Carry Case	108-2989	63.45	--	--

Temperature Humidity Meter

971

FLUKE



Temperature and humidity are two important factors in maintaining optimal comfort levels and good indoor air quality. In the wrong combination, they can adversely affect occupant comfort and create an environment that is conducive to fungal growth.

Use the Fluke 971 to respond to building occupant complaints, or as part of a regular HVAC maintenance plan. The Fluke 971 is built for the field, with a rugged holster, convenient belt clip, and bright, backlit dual display. Technicians no longer need to consult complicated charts or make calculations - the Fluke 971 calculates wet bulb and dew-point temperatures instantly.

L=194 W=60 D=34mm. Weight 190g

Temperature Measurement		Range	Resolution	Accuracy
		-20°C to 60°C	0.1°C	$\pm 0.5^\circ\text{C}$ (0 - 45°C) else $\pm 1.0^\circ\text{C}$
Sensor Type		NTC		
Response Time		500 ms		
Operating Temperature		-20°C to 60°C		
Humidity Measurement		Range	Resolution	Accuracy
		5% to 95% RH		$\pm 2.5\%$ (10% - 90% RH) else $\pm 5.0\%$
Sensor Type		Electronic capacitance polymer film sensor.		
Response Time		For 90% of total range - 60 sec. with 1m/s air movement		
Operating Temperature		0°C to 60°C		
General Specifications				
Data Storage		99 points		
Battery type		4x AAA batteries		
Battery life		Approx 200 hours		

418731

Description		Price Each		
List No.	Order Code	1+	3+	+
Temp & Humidity Meter	FLUKE-971	107-6963	385.00	356.13 --

Airflow Meter

Fluke 922



A simple solution for diagnosing ventilation issues. The Fluke 922 makes airflow measurements easy by combining three tools: differential pressure, airflow, and velocity into a single, rugged meter.

- Measure pressure drops across key HVAC equipment to drive peak performance and extend equipment life
- Match ventilation to occupant loads
- Monitor indoor vs. outdoor pressure relationships and manage the building envelope
- Promote indoor comfort and quality
- Perform duct traversals for accurate airflow readings
- Powerful meter provides differential and static pressure, air velocity and flow readings
- Convenient coloured hoses help proper interpretation of pressure readings
- Easy to use without sacrificing performance
- Bright, backlit display for clear viewing in all environments
- User-defined duct shape and size for maximum airflow accuracy
- Resolution down to 0.001 in H₂O
- 99 point data storage capacity
- Min/Max/Average/Hold functions for easy data analysis
- Auto power off saves battery life

Feature	Range	Accuracy
Air Pressure	4000 Pa	±(1% + 1Pa)
	16 in H ₂ O	±(1% + 0.01 in H ₂ O)
	400mm H ₂ O	±(1% + 0.1mm H ₂ O)
	40mbar	±(1% + 0.01mbar)
	0.6 PSI	±(1% + 0.0001PSI)
Air Velocity	250 to 16000fpm	±2.5% of rdg
	1 to 80 m/s	±2.5% of rdg
Air Flow (Volume)	0 to 99,999 cfm	
	0 to 99,999 m ³ /hr	
	0 to 99,999 l/s	
	0°C to 50°C	±(2% + 2°C)
Dimensions	W=78 x H=175 x D=42mm. Weight 640g	

Fluke 922 includes:

Meter, 2x Rubber Hoses, 4x AA Batteries, Users Manual Soft Carrying Case

Fluke 922 Kit additionally includes: 12" pitot tubes, TPAK Magnetic Strip, TPAK Strap, TPAK Latch Tab, Hard Carrying Case.

469774.469766

Description	Mfrs. List No.	Order Code	1+	3+	5+
Thermo-Anemometer	922	132-7237	869.00	803.83	--
T-A with velocity probe	922/KIT	132-7238	1,075.00	994.38	--
Air Velocity Probe	PT12	132-7241	270.40	262.29	254.42

Heating & Refrigeration

Combustion Meter

KANE 250



The KANE 250 is the lowest priced combustion analyser that does not compromise on performance or features. Its unique rotary switch also makes it the simplest and quickest to use.

The KANE 250 is also available as a kit, consisting of infra red printer, charger/mains adapter and carry case.

- O₂, CO, CO₂, CO/CO₂ ratio and efficiency readings
- Multi fuel
- Professional quality sensors (CO readings to 1ppm)
- Detachable flue probe
- Real time clock
- Infra-red output to optional printer
- Rubber sleeve with integral magnet
- Designed to meet BS7927

L=200, W=90, D=45mm



	Range	Resolution	Accuracy
Temperature Measurement			
Flue Temperature	0 - 600°C	1°C	±2°C±0.3% of reading
Inlet Temperature (Internal Sensor)	0 - 100°C	1°C	±1°C±0.3% of reading
Temp (Nett)	0 - 600°C	1°C	±2°C±0.3% of reading
Gas Measurement			
Oxygen	0 - 21%	0.1%	±0.2%
Carbon Monoxide	0 - 1000ppm 4000ppm max for 15 mins	1ppm	±10ppm<100ppm ±5% of rdg
Carbon Dioxide	0 - 30%	0.1%	±0.3% reading
Efficiency	0 - 99.9%	0.1%	±1% reading
Excess Air	0 - 250%	0.1%	±0.2%
CO/CO ₂ ratio	0 - 0.9999	0.0001	±5% reading
General			
Pre Programmed Fuels	Natural gas, light oil (28/35 sec), propane, butane, LPG		
Battery life	4x AA type, approx 12 hours		
Weight	1kg		

339526.409900

Description	Mfrs. List No.	Order Code	1+	2+	5+
Combustion Analyser	KANE250	505-7670	1,365.27	1,260.24	1,170.25
Combustion Analyser Kit	KANE250 KIT	505-7681	2,098.68	1,937.22	1,798.85

Light Meters

Lux Meter

540



- Sensor is adjusted to the spectral sensitivity of the eye
- Hold reading function
- Max./min. values
- Backlit display
- Auto-off

Supplied with Calibration protocol, wrist strap, belt holder, protective cap & batteries

Measuring Range	0 to 99,999 Lux 1 Lux (0 to 19,999 Lux) 10 Lux (20,000 to 99,999 Lux)
Accuracy	± 3% (Compared to reference)
Units	Lux, Footcandle
Operating Temperature	0 to 50°C
Battery Type	Alkaline (2 x AAA)
Battery Life	20 hrs (average, without display illumination)
Dimensions (Incl. Protective Cap)	133 x 46 x 25mm

488530.503099

Mfrs. List No.	Order Code	1+	2+	5+
540	147-1404	424.38	391.74	363.72

Digital Sound Level Meter

SM-70



The SM-70 is a hand held, general purpose sound meter for type 2 measurement.

- A and C weighting
- 4 digit LCD
- 35-130dB measurement
- 2 ranges
- Meets IEC 651, ANSI S1.4 standards
- 1/2" condenser microphone
- Dynamic range 65dB
- Over is shown when input is out of range
- Maximum level hold
- Internal oscillator for calibration
- AC and DC signal output
- Includes owners manual, 9V battery, carrying case and adjustment screwdriver

Range	35-100dB(low), 65-130dB(high)
Resolution	0.1dB
Frequency Range	31.5 Hz to 8KHz
Accuracy	+/- 2.0dB (under reference conditions)
AC output	.065 Vrms at FS (full scale), output impedance approx. 600Ω
DC output	10mV/dB output impedance approx. 100Ω
Dimensions mm	68 (W) X 240 (L) X 25 (H)

532261

Mfrs. List No.	Order Code	1+	+	+
SM 70	169-6718	694.96	--	--

Light Meters - continued

Digital Light Meter

72-6693



W=72, D=32, L=180

An easy to use, versatile, hand-held, microprocessor controlled, digital light meter.

- 3 ranges 2,000/20,000/50,000 LUX
- 3 ranges 200/2,000/10,000 Ft-cd
- Extra large, dual function display with contrast adjustment
- User selectable lighting type (tungsten, fluorescent, daylight and mercury)
- Records max./min./avg. readings
- Data hold and auto power off
- Includes owner manual
- CE marked

Range	Resolution	Range	Resolution	Power	9V Battery (not included)
2000 LUX	1 LUX	200 Ft-cd	0.1 Ft-cd	Dimensions	W = 55mm, L = 85mm, D = 12mm
20,000 LUX	10 LUX	2,000 Ft-cd	1 Ft-cd	(sensor probe)	
100,000 LUX	100 LUX	10,000 Ft-cd	10 Ft-cd		

228182

Mfrs.	Order Code	1+	+
List No.			
72-6693	356-2670	151.60	--

Light Meter



Easy-to-use light meter with wide measuring range up to 400,000 lux, large LCD display, 41-segment analogue bargraph, relative mode and user-selectable measuring units. Ideal for environmental monitoring, health and safety checks, and industrial applications.

- Measures both Lux and Foot Candles (FC), user selectable
- Manual range selection of 5 ranges (Lux), 4 (FC)
- Impact-resistant ABS case with protective rubber boot
- Silicon photo diode sensor and spectral response filter

- W=80 H=170 D=43mm. Weight=390g
- Fully cosine corrected
- Sensor connected to the instrument by a fixed approx 1.5 metre coiled cable
- Measuring rate of 1.5 times per second
- Easy to read - large 43mm backlit LCD display with 41 segment bar graph and function indicators
- Peak hold, Data hold and Max/min hold
- Relative reading
- Over range indication
- Reset function
- Auto power off and low battery indication
- Supplied with carry pouch, rubber boot, protective lens cap & 9V battery

Range	Resolution	Accuracy
40,400,4000,40000,400000 Lux	0.01, 0.1, 1, 10, 100 Lux	±(5%+10d) <10kLux, ±(10%+10d) >10kLux,
40, 400, 4000, 40,000 FC	0.01, 0.1, 1, 10 FC	±(5%+10d) <10kLux, ±(10%+10d) >10kLux,

450419.460952

Mfrs.	Order Code	1+	3+	5+
List No.				
LX-1308	129-7753	384.94	338.75	314.61

Light Meter Auto Ranging



- Measure in Lux or Footcandles, front panel switchable
- Measuring Range to 200,000 Lux or 20,000 Foot candles
- Silicon photodiode sensor and filter
- Data Hold to freeze reading on the digital display
- MIN / MAX ability to show high and low readings
- Autoranging plus Manual Range
- Zero function to null display before a reading
- Auto Power Off to save battery life
- Includes protective sensor cap
- Large, 3-1/2 digit display

525725

Mfrs.	Order Code	1+	5+
List No.			
LM-120	167-1223	403.22	391.14

Liquid Testers

Waterproof pocket pH Meters



- Dual level display shows pH and °C
- Battery life indication
- Replaceable pH electrode
- Waterproof and floating case
- Automatic calibration

		HI 98127	HI 98128
pH	Range	0.0 to 14.0	0.00 to 14.00
	Resolution	0.1	0.01
	Accuracy (@20°C)	±0.1	±0.05
Temperature	Range	0.0 to 60.0°C	0.0 to 60.0°C
	Resolution	0.1	0.1
	Accuracy	±0.5°C	±0.5°C
Calibration		Automatic 1 or 2 points with 2 sets of memorised buffers (pH 4.01/7.01/10.1 or pH 4.01/6.86/9.18)	
Temperature compensation		Automatic (user may disengage)	
Environment		From 0 to 50°C; RH 100%	
Battery type/life		4 x 1.5V with BEPS (battery error prevention system)/350 hours	
Auto shut off		After 8 minutes	
LCD		Custom, dual-level	
Casing		Waterproof, 100% buoyancy	
Stability indicator		Illuminates when pH reading is stable	
Dimensions		163x40x26	
Weight		85g	

234810

Mfrs.	Order Code	1+	2+	5+
List No.				
HI-98127	pH meter	369-5876	246.42	235.17
HI-98128	pH meter	369-5888	278.63	265.90
HI-73127	pH electrode	369-5890	153.36	146.87

pH/EC/TDS Meter

HI-9812



- Measures both pH and conductivity using the same sensor
- More robust and accurate than the pocket version
- Microprocessor control provides automatic temperature compensation

Range	0-14pH 0 to 1990 ppm 0 to 1990 µS/cm
Resolution	0.1 pH 10 ppm 10 µS/cm
Accuracy	±0.2 pH ±2% pH ±2% µS/cm

Compensation	Automatic from 0 to 50°C	Dimensions	182mm x 82mm x 45mm
Battery Life	approx 150 hours	Weight	520g

228178

Mfrs.	Order Code	1+	5+	10+	20+
List No.					
HI-9812	725-9189	409.62	402.56	383.73	369.60

Combined pH/Conductivity/TDS Meter and Thermometer

HI-991300



Simply press a button to go from one parameter to the next. Calibration is automatic for ease of use with auto-buffer recognition. The LCD is dual level with a continuous temperature display in either °C or °F, and with a stability indicator to ensure accuracy. Ideal for industrial, production and field use, saving both time and resources. Supplied with combination probe/electrode and battery.

- Measuring pH, conductivity, TDS and temperature all with one probe

Range pH	0 to 14	Resolution	0.01	Accuracy	±0.02
Conductivity	0 - 3999 µS/cm 0 - 1999ppm		1 µS/cm 1ppm		2% full scale
Temperature °C	0 - 60°		0.1		±0.5

Calibration	1 or 2pt(4.01, 6.86, 7.01, 9.18, 10.01)	Battery/life	4 x AAA, 500h
Conductivity	1 pt at 1382ppm or 1413µS/cm		

Mfrs.		Price Each		
List No.	Order Code	1+	+	+
HI-991300	327-7197	895.12	--	--

224550

Pre-mixed Calibration Solution pH and Conductivity



- 460ml plastic screw top bottles
- Available for both conductivity and pH calibration
- Ready to use calibration standards
- Supplied with calibration chart

pH buffer solution		Price Each
Order Code	1+	
pH4.01	710-5423	41.14
pH7.01	710-5435	41.14
pH10.01	710-5447	41.14
Conductivity calibration solution		
12880 μ S/cm	710-7365	56.73
1413 μ S/cm	710-7377	56.73
84 μ S/cm	710-7389	56.73

222570

Moisture Meters

Moisture Meter



Measures the moisture level in sawn timber (also cardboard or paper) and hardened materials (plaster, concrete and mortar).

W=47 H=139 D=25mm. Weight 93g

Measuring Principle Electrical Resistance Accuracy Wood: $\pm 1\%$ Material: $\pm 0.05\%$
Electrodes 8mm integrated electrodes, replaceable Power 3x AAA
Measuring Range Wood: 6-44% Material 0.2-2%

446883.430817

Price Each		
Order Code	1+	5+
127-0535	110.05	94.77

Pressure & Calibration

Pocket Manometer - Differential Pressure 510



- Measuring range of 0 to 100 mbar
- Temperature compensation
- Magnetic base for hands free instrument mounting
- Flow velocity measurement with Pitot tube
- Air density compensation
- Backlit display
- Auto-off

Supplied with Calibration protocol, wrist strap, belt holder, protective cap & batteries

Measuring Range 0 to 100 mbar
Resolution 0.01 mbar
Accuracy ± 0.03 mbar (0 to 0.30 mbar)
 ± 0.05 mbar (0.31 to 1.00 mbar)
 ± 0.1 mbar $\pm 1.5\%$ of m.v. (1.01 mbar to 100 mbar)
Units hPa, mbar, Pa, mmHg, inHg, psi, m/s, fpm
Operating Temperature 0 to 50°C
Battery Type Alkaline (2 x AAA)
Battery Life 500 hrs (average, without display illumination)
Dimensions (Incl. Protective Cap) 119 x 46 x 25mm

488182.503092

Price Each		
Mfrs. List No.	Order Code	1+ 2+ 5+
510	147-1394	469.24 420.19 402.22

Hand Held Digital Manometers 2000 Series



- The 2000P series of hand held manometers represents a new standard in pressure measurement, ease of use and accuracy of reading. Selected models feature automatic leak testing and logging
- Pressure ranges from 25mbar to 7 bar
 - Scales in mbar, bar, psi, inHg, mmHg, mmH₂O, mm/cm/mHg, Pa and kPa
 - Accuracy performance 0.2% of reading
 - Automatic zero calibration for added accuracy

- Logging mode for storage, retrieval and output readings
- Long battery life 200 hours
- 200BT protective holder with tilt stand
- Sealed to IP67

Model	2001P	2002P	2003P	2005P	2021P	2022P	2023P	2082P	2083P
Operating Range	130 mBar	1999 mBar	7 Bar	7 Bar	130 mBar	2 Bar	7 Bar	2 Bar	7 Bar
Backlight	●	●	●	●	●	●	●	●	●
Zeroing	●	●	●	●	●	●	●	●	●
Hold	●	●	●	●	●	●	●	●	●
Range Lock	●	●	●	●	●	●	●	●	●
Max/Min	●	●	●	●	●	●	●	●	●
Smoothing	●	●	●	●	●	●	●	●	●
Units of Pressure	●	●	●	●	●	●	●	●	●
Datalogging	●	●	●	●	●	●	●	●	●

Operating Temperature 0°C to 50°C

Battery Type 2AA

493259

Mfrs.		Price Each		
List No.	Order Code	1+	3+	5+
2001P	151-1085	848.11	800.79	765.26
2002P	151-1086	848.11	800.79	765.26
2003P	151-1088	882.37	833.15	796.18
2005P	151-1089	869.33	820.81	784.41
2021P	300-3360	825.85	--	--
2022P	493-855	825.85	--	--
2023P	493-867	825.85	--	--
2082P	493-880	935.16	--	--
2083P	207-597	935.16	--	--
2000BT Protective Holster	300-3413	75.44	--	--
Nylon Tubing, 30m, 6mm ID	314-3326	149.10	144.04	140.25

Sound Level

Mini Sound Level Meter



- Wide dynamic range from 30 to 130dB
- 1.5dB accuracy
- Max hold and data hold
- Frequency weighting A and C to respond for human sense or machine monitoring
- Fast and slow time constant setting
- Meets IEC651 type 2

Level Range Low = 30 - 100dB
High = 60 - 130dB
Accuracy ± 1.5 dB (ref 94dB @ 1kHz)
Frequency Range 31.5Hz to 8kHz
Frequency Weighting A, C
Time Weighting Fast, Slow
Battery Type 9V battery

W=55 H=210 D=32mm.
Weight 230g

414852.403927

Price Each		
Description	Order Code	1+ 5+ 10+
Sound Level Meter	100-3031	171.36 162.99 158.70

Sound Level - continued

Digital Sound Level Meter



An easy to use, hand-held, digital sound level meter.

- A weighting
- 3 ranges, 35-130dB measurement
- 3½ digit LCD
- Fast response
- Meets IEC 651 type 2 standards
- Over and under range indicator
- Data hold
- Includes owner manual
- Requires 9V battery (not included)
- CE marked

Range 35-80dB/50-100dB/80-130dB
Resolution 0.1dB
Accuracy ± 1.5dB at 1kHz(94dB level)

H=25, W=67

228191

Mfrs.	Order Code	1+	3+	5+
List No.				
72 - 6635	356-2657	254.19	246.76	239.33

Digital Sound Level Meter

72-860A



The 72-860A is a hand held, general purpose sound meter for type 2 measurement.

- A and C weighting
- 3½ digit LCD
- 35-130dB measurement
- 2 ranges
- Meets IEC 651 type 2 standards
- ½" condenser microphone
- Fast and slow dynamic response
- Over and under range indicator
- Maximum level hold
- Internal oscillator for calibration
- AC and DC signal output
- RS232 interface
- Includes owners manual, 9V battery, carrying case, RS232 interface cable wind screen and adjustment screwdriver

Range 35-90dB(low),75-130dB(high)
Resolution 0.1dB
Frequency Range 30Hz-12kHz
Accuracy ± 2.0dB at 1kHz(94dB level)
AC output 0.65 V RMS corresponding to each range step
DC output 10mV/dBm nominal
Dimensions 66.68 (W) X 241.3 (L) X 25.4 (H)

336783.343913

Mfrs.	Order Code	1+	+	+
List No.				
72-860A	490-8430	492.04	--	--

Sound Level Meters

815



testo 815: The ideal instrument for daily use. Whether it is for air conditioning or heating, disco noise, machine noise or noise in combustion systems.

Common Features:

- Accuracy class 2 according to IEC 60651
- Easy to adjust (calibration screwdriver included)
- Frequency weighting according to characteristic line A and C
- Max / Min memory
- Built-in stand screw / (1/4 inch)
- Switchable time weighting Fast / Slow

Measuring Range 32 to 130dB°C
Accuracy ±1 digit Class 2 ± 1.0dB
Resolution 0.1dB
Battery Life 70 hours

W=55 H=255
D=43mm. Weight 195g



Sound Level Calibrator: Sound level measuring instruments should be re-calibrated in case of changes in place or temperature. With the help of the calibrator, available as an accessory, both instruments can easily be controlled and adjusted. Two levels can be adjusted (94 and 114 dB). It is as well suited for 1/2 inch and 1 inch microphones of other makes.

Accuracy ± 0.5dB in accordance with Class 2 to IEC60942
Sound Pressure Level 94dB / 114dB switchable
Frequency 1kHz
Battery Life 40 hours

418997

Description	Order Code	1+	3+	5+
815 Sound Level Meter	108-3015	883.67	791.34	757.39
Sound Level Calibrator	108-3018	1,369.60	1,226.48	1,173.97

Thermometers

Thermometer Strips



These self-adhesive thermometer foils are ideal for situations in which ordinary thermometers cannot be used, such as small or moving parts. Once the temperature sensitive elements react there is a colour change (to black) – this is permanent and is irreversible.

- Supplied in booklets of 10

Size 50 x 18mm
Accuracy ±1°C of temperature rating
Storage Up to 2 years (longer if stored in a fridge)
Maximum storage temperature 25°C

339938.268073

Temperature Range	Order Code	1+	5+
Range: +116°C to +154°C	499-0389	79.22	71.32
Range: +160°C to +199°C	499-0390	79.22	71.32

Mercury Free Thermometer

12/408/3

Brannan



200mm white case with blue temperature scale and push button re-set. Unique blue filling (Patent pending no. 00/54014) for a safer environment

- Environmentally Friendly
- Reliable and Accurate
- Capable of Low Temperatures
- Easy to Read
- Push Button
- Centigrade and Fahrenheit Scale

339920.277155

Mfrs.	Order Code	1+	5+	10+
List No.				
12/408/3	505-3778	31.09	28.90	28.28

Pen Type Test Thermometer

31/160/0

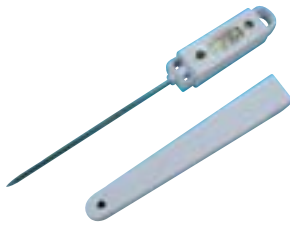


- 120mm stainless steel probe
- Battery included
- Range -50 to +150°C

446667.434979

Order Code	1+	10+	25+
127-1860	26.00	23.59	21.98

Waterproof Pen Type Thermometer



The thermometer offers low cost, rapid response, high accuracy and ease of use with a robust waterproof design. It is ideal for liquid and semi-solid sampling. The probe protection sheath has a vent hole in the end so that the instrument can be used as a stirrer and display the sample temperature. The sheath can be connected to the head of the unit and used as a handle extension. Powered by 1 x 1.5V button cell battery.

- IP-65 waterproof polycarbonate case and sheath
- Push button membrane keypad and display

- 133mm length, 4mm dia. stainless steel probe
- 10mm high contrast LCD display
- Supplied with probe protector sheath, battery and instructions for use

Range -50°C to +150°C
Resolution 0.1°C (-19.9° to 149°), 1° (others)

Accuracy ±1°C

333721.275379

Order Code	Price Each		
	1+	10+	25+
127-1859	31.46	29.19	26.14

Min/Max Thermometer with Alarm

MST-9258



W=60 H=120 D=20mm. Weight 77g

Range -50 to +150°C
Resolution 0.1°C

Accuracy ±1°C
Battery 1.5V Button Cell (included)

447222.435089

Order Code	Price Each	
	1+	5+
127-6192	63.76	57.38

Digital Thermometers

Check Temp



- Low cost high accuracy thermometer
- Fast acting stainless steel probe
- Inbuilt calibration test

Check temp: Stick meter with pointed tip probe
Check temp 1: With pointed tip probe and 1m cable

Range -50 to +150°C
Resolution 0.1°C
Accuracy ±0.3°C (-20 to +90°C)
±0.5°C (-50 to +20°C)
±0.5°C (+91 to +150°C)

Battery-life 3000 hrs continuous
Weight 80g

222470

Mfrs. List No.	Order Code	Price Each		
		1+	5+	10+
CHECKTEMP 1	710-5769	176.16	151.34	144.24
CHECKTEMP	710-5757	108.20	92.95	89.24

Hand-held Thermometer

FM31



- Supplied complete with hand-held instrument with Lumberg connector, rubber boot and general purpose probe
- Water resistant
- Auto off after 3 mins
- Open circuit indication

Thermistor probe range -40°C to 110°C
Accuracy ±0.5°C (0°C to 70°C)
Battery type 1 x 9V
Battery life 3000 hours

333727.277397

Description	Mfrs. List No.	Order Code	Price Each		
			1+	5+	+
Thermometer	FM31	465-8607	221.19	213.15	--
UKAS Calibration Charge	N				

Digital Thermometer



- Ideal for education
- Uses a miniature silicon sensor which is precalibrated in factory to measure a wide temperature range
- Highly accurate with a very fast response time
- Sensor is housed in a rugged, stainless steel penetration probe
- Large LCD display provides clear, easy to read digits

Range -40 to +150°C
Resolution 0.1°C
Accuracy ±0.5% full scale for one year
Battery life approx. 900 hours
Dimensions 180 x 83 x 40mm
Weight 280g

224539

Mfrs. List No.	Order Code	Price Each			
		1+	5+	10+	20+
HI-8751	725-9256	199.27	196.59	193.93	165.92

Digital Thermometers

72-2060/72-2065



Two rugged, K type single and dual input thermometers, ideal for field or bench use - includes protective holster.

- 3½ digit LCD
- Selectable °C/°F, 1° resolution
- Front panel offset adjustment
- Dual thermocouple input (72-2065)
- Displays T1 and T2 and T1-T2 in differential mode (72-2065)
- Data hold
- Maximum record
- Includes holster, 9V battery, owner manual, thermocouple probe (72-2065 includes two thermocouple probes)

Temperature range -50 to 1300°C -58 to 1999
Accuracy -15°C to 0°C: ±0.2°C, 0°C to 1000°C: ±(0.3% + 1°C)
Dimensions 69.85 (W) x 146.05 (H) x 38.14 (D)

228184

Description	Mfrs. List No.	Order Code	Price Each		
			1+	+	+
Single Channel	72-2060	342-1557	133.78	--	--
Dual Channel	72-2065	342-1569	251.22	--	--

Dual Channel Digital Thermometers



Models: 72-7712, 72-7715

Dual channel digital thermometers with backlit LCD displays and multiple probe type compatibility.

Model	72-7712	72-7715
Total Range	-250°C bis +1372°C	-250°C bis +1767°C
Best Accuracy	±0.5%	±0.2%
Resolution	0.1°C	0.1°C
Data Logging	100 Aufzeichnungen	100 Aufzeichnungen
LCD Size (WxH)	32x30mm	
Dimensions (WxHxD)	85x175x30mm	
Weight	270g	

- 4 Digit LCD display with dual readings and backlight
- °C/°F/°K measurements
- Dual probe inputs
- K, J, T and E type probe compatibility
- Max/Min/Dif/Avg temperature display with hold function
- Sleep mode and low battery warning
- USB data transfer and datalogging (software supplied)
- USB or 9V battery Power
- Supplied with 9V battery, software, USB lead, K type probe and user manual
- 72-7715 Additional Features
- Hi/Lo alarm and signal output
- User self-calibration
- Additional R, S and N type probe compatibility

Thermometers - continued

Dual Channel Digital Thermometers - continued

510032.509478

Mfrs. List No.	Order Code	1 +	5 +
72-7712	156-3717	198.12	196.15
72-7715	156-3718	230.81	228.48

Dual Input Thermometer
TMD90A

The TMD90A is a dual input thermometer that accepts K, J, T, R, S, and E type thermocouples and is ideal for HVAC/R technicians, electricians, research, industrial process and quality control. The dual inputs allow easy super-heat and sub-cool temperature measurement as well as cut-out and in temperature. The triple display with backlight shows T1, T2, and T1 - T2 and includes Hold, Min/Max, Relative, and Timer / Date stamp function. The TMD90 supports dual channel real time data acquisition using the built-in RS-232 interface and optional software and data transfer cable (Model TM-SW). The TMD90 includes a standard Type K thermocouple probe, hard carrying case, battery and manual.

- High accuracy, multiple Type input thermometer
- Measures to 3200°F / 1760°C
- Accepts Type J, K, T, R, S, E Inputs
- Triple display of T1, T2, T1 - T2, and relative time
- Deluxe hard carrying case included
- RS232 output with optional cable and software

Thermocouple	Range	Resolution	Accuracy
K	-200 to 650°C 651 to 1370°C -328 to 1000°F 1000 to 2498°F	0.1°C 1.0°C 0.1°F 1.0°F	(0.1% rdg + 0.7°C) (0.1%rdg + 1.4°F)
J	-200 to 500°C 501 to 760°C -328 to 940°F 941 to 1400°F	0.1°C 1.0°C 0.1°F 1.0°F	(0.1% rdg + 0.7°C) (0.1 % rdg + 1.4°F)
T	-200 to 390°C -328 to 730°F	0.1°C 0.1°F	(0.1% rdg + 0.7°C) (0.1% rdg + 1.4°F)
R/S	0 to 1000°C 1001 to 1760°C 32 to 1000°F 1001 to 3200°F	0.1°C 1.0°C 0.1°F 1.0°F	(0.3% rdg + 0.7°C) (0.1% rdg + 1.4°F)
E	-200 to 380°C 381 to 736°C -328 to 720°F 721 to 1832°F	0.1°C 1.0°C 0.1°F 1.0°F	(0.3% rdg + 0.7°C) (0.1% rdg + 1.4°F)

489621.502904

Mfrs. List No.	Order Code	1 +	3 +	+
TMD90A	146-6473	303.26	280.50	--

Hand Held Digital Thermometers

2000 Series



A new range of microprocessor thermometers with ease of use and accuracy of reading. The 2000T's ability to self calibrate achieves long-term accuracy and stability, and eliminates readings caused by long term drift. They have a robust design, strengthened display, re-enforced key pad and isolated battery compartment.

- SpeedRead for quicker readings
- Logging mode for storage, retrieval and output of readings
- Accurate performance: 0.2% of reading
- Automatic zero calibration
- Wide temperature range
- Last settings memorised
- Simple to operate

- Long battery life: typically 500 hours
- 200BT protective holder with tilt stand
- Three K type probes designed to give a long life. The handles are ultrasonically welded and can be scrub washed
- Rugged construction
- Fast response

Common Specification

Resolution	0.1° from -199.9°C to +199.9°C 1°C elsewhere
Operating temperature	-10°C to +50°C (ambient)
Battery type	2x AA batteries
Battery life	Typically 500 hours
Display	12.7mm custom LCD
Sensor open circuit	Indicated by O-C on display
Overrange/Underrange	Out displayed
Environmental	IP65
Auto switch off	12 minutes
Dimensions	155x67x40mm
Weight	180g

Instrument Accuracies

2000T and 2088T

Range	-200°C to +1350°C
Accuracy	0.1% rdg ±0.2°C above -100°C 0.5% rdg ±0.2°C below -100°C

2006T

Range	-250°C to +400°C
Accuracy	±0.2°C over range -20°C to +70°C 0.1% rdg ±0.2°C elsewhere

2029T and 2098T

K range	-200°C to +1350°C
T range	-250°C to +400°C
J range	-750°C to +750°C
N range	-200°C to +1300°C
R and S range	0°C to +1750°C
Accuracy	0.1% rdg ±0.2°C above -100°C 0.5% rdg ±0.2°C below -100°C

Series Option Table

Model	2000T	2006T	2088T	2029T	2098T
Sensor type	K	T	K	KT JNRS	KT JNRS
Connector type	2 pin mini	2 pin mini	2 pin mini	2 pin mini	2 pin mini
°C/°F	●	●	●	●	●
Hold			●	●	●
Range lock			●	●	●
Max./Min			●	●	●
Averaging			●	●	●
Logging			●		

222543

Price Each

Mfrs. List No.	Order Code	1 +	5 +	10 +
2000T	493-508	347.40	340.39	334.79
2006T	500-4366	347.40	340.39	334.79
2029T	500-4391	427.08	419.50	413.17
2098T	493-521	646.64	621.85	592.14
K0234 Type K general probe	493-533	102.23	100.58	98.18
2000BT Protective holster	300-3413	75.44	--	--

Digital Thermometers

Fluke 511I/Fluke 52 II



51 and 52 Series II:

- Large backlit dual display shows any combination of T1, T2 (52 only), T1-T2 (52 only) plus MIN, MAX, or AVG
- Relative time clock on MIN, MAX, and AVG provides a time reference for major events
- Electronic Offset function allows compensation of thermocouple errors to maximise overall accuracy
- Measures J, K, T and E-types of thermocouples
- Readout in °C, °F, or Kelvin (K)
- Sleep mode increases battery life

- Battery door allows easy battery replacement without breaking the calibration seal
- Optional Tool Pak accessory for hanging your thermometer (302-9578)

The new Fluke 50 Series II contact thermometers offer fast response and laboratory accuracy (0.05% +0.3°C) in a rugged handheld test tool

Temperature range

J-type Thermocouples	-210°C to 1200°C (-346°F to 2192°F)
K-type Thermocouples	-200°C to 1372°C (-328°F to 2501°F)
T-type Thermocouples	-250°C to 400°C (-418°F to 752°F)
E-type Thermocouples	-150°C to 1000°C (-238°F to 1832°F)

Temperature accuracy

Above -100°C (-148°F)	± [0.05% +0.3°C (0.5°F)]
J, K, T, E and N-type**	J, K, E ± [0.20% +0.3°C (0.5°F)]
Below -100°C (-148°F)	T-type ± [0.50% +0.3°C (0.5°F)]

Battery life

Weight	1000 hours typical, AA 400g
--------	--------------------------------

222579

Mfrs. List No.	Order Code	Price Each		
		1+	3+	+
FLUKE 51 SERIES II	318-3361	445.50	--	--
FLUKE 52 SERIES II	318-3373	582.21	--	--
TPAK	302-9578	62.00	57.35	--
C101 Carry Case	947-9783	89.00	82.33	--
Standard Calibration		S		

Digital Thermometers

Fluke 53/54 Series II



The new Fluke 53/54 Series II contact thermometers offer fast response and laboratory accuracy (0.05% + 0.3°C) in a rugged handheld test tool.

- Large backlit dual display shows any combination of T1, T2, T1-T2, plus MIN, Max or AVG
- Relative time clock on MIN, MAX and AVG provides a time reference for major events
- Electronic Offset function allows compensation of thermocouple error to maximize overall accuracy
- Measures J, K, T and E-types of thermocouples
- Readout in °C, °F or Kelvin (K)
- Sleep mode increases battery life
- Battery door allows easy battery replacement without breaking the calibration seal
- Optional Tool Pak accessory for hanging your thermometer (302-9578)
- Data Logging up to 500 points of data with user adjustable recording interval
- Additional thermocouple types R, S and N (for a total of 7 different types)
- Real time clock captures the exact time of day when events occur
- Recall function allows logged data to be easily reviewed on the meter display
- IR communication port allows data to be exported to optional Fluke View Temperature PC software

Fluke View Forms Software

Here's a fast and easy way to document, store and analyse temperature measurements.

- Produce professional-looking documents
- In-depth analysis with records, charts and graphs
- Standard and customisable forms
- Export data to the measurement analysis programs
- Infra-red interface between thermometer and PC makes data transfer fast and easy
- Optional IR adaptor and cable for PCs without an IR port

Thermocouple types	K, J, T, E, N, R, S	Min./Max./Avg recording	Yes
Number of inputs	53-II (Single), 54-II (Dual)	Compatible with optional toolpack	Yes
Time stamp	Time of day	Differential (T1-T2) readout	54-II only
Splash/dust resistant	Yes	Data logging up to 500 points	Yes
Dual display with backlight	Yes	IR data port for interface to PC	Yes

Temperature Range

J-type Thermocouples	-210°C to 1200°C (-346°F to 2192°F)
K-type Thermocouples	-200°C to 1372°C (-328°F to 2501°F)
T-type Thermocouples	-250°C to 400°C (-418°F to 752°F)
E-type Thermocouples	-150°C to 1000°C (-238°F to 1832°F)
N-type Thermocouples	-200°C to 1300°C (-328°F to 2372°F)
R and S-type Thermocouples	0°C to 1767°C (32°F to 3212°F)

Temperature Accuracy

Above -100°C (-148°F):	± [0.05% + 0.3°C (0.5°F)]
J, K, T, E and N-type	± [0.05% + 0.4°C (0.7°F)]
R and S-type	
Below -100°C (-148°F):	± [0.20% + 0.3°C (0.5°F)]
J, K, E and N-types	± [0.50% + 0.3°C (0.5°F)]
T-type	

Battery	1000 hours typical, AA
Weight	400g
Warranty	3 years

220406

Mfrs. List No.	Order Code	Price Each		
		1+	3+	+
FLUKE 53 SERIES II	318-3385	655.29	--	--
FLUKE 54 SERIES II	318-3397	773.14	--	--
Meter Hanging Kit TPAK80-4	302-9578	62.00	57.35	--
C101 Carry Case	947-9783	89.00	82.33	--

Thermometers - Non Contact (IR)

Pocket Infrared Thermometer



A pocket size infrared thermometer that can check all types of heating ventilation and air-conditioning (HVAC) systems. Monitor performance of appliances such as refrigerators, dishwashers, freezers and ovens to ensure proper cooking, grilling and storage temperatures.

- 6:1 distance to spot size ratio
- Easy to use
- Large LCD display
- Backlit display
- User selectable °C or °F
- Automatic data hold
- Auto power off
- Low battery indication

H=94, W=56, D=28mm
Weight = 76g

Range	-30 to +270°C (-22 to +518°F)	Optical resolution	6:1 distance to spot size ratio
Basic accuracy	±2% of reading	Emissivity	0.95 fixed
Resolution	1°F/°C	Power	2x 1.5V AAA batteries (supplied)
Response time	< 1 second		

381015.345256

Order Code	Price Each	
	1+	5+
838-8580	58.24	53.68

Infrared Food Thermometers

FoodPro Series



FoodPro - Quick surface scanning

The perfect companion to contact thermometers

- Fast non-contact temperature measurement without danger of contamination
- Signals potentially risky temperatures with lighted LEDs
- Measurement spot illumination

FoodPro Plus - Complete food inspection

The all-in-one temperature monitoring tool

Features same as FoodPro with added:

- Integrated contact probe for confirmation of vital core temperatures
- Timer with alarm function

	FoodPro	FoodPro Plus
Infra red thermometer		
Temperature range	-30 to +200°C	-35 to +275°C
Accuracy		0 to +65°C: ±1°C <0°C: ±1°C ±0.1 degree/degree > 65°C: ±1.5% of reading
Response time		<500ms after initial reading
Spectral response		8 - 14µm
Emissivity		Pre-set for food applications
Distance to spot size		2.5:1 @ 90% energy
Working range		25 to 250mm
Minimum target size		12mm
Illumination to IR channel offset		13mm
Probe Thermometer		
Temperature Range	-	-40 to 200°C
Accuracy	-	-5 to +65: ±0.5°C <5°C: ±1°C > 65°C: ±1% of reading
Response time	-	7 - 8 seconds (3 time constants)
Probe dimensions	-	ø: 3mm, Length: 80mm
Sensor type	-	Thin film platinum, class A RTD

339609.409820

Mfrs. List No.	Order Code	Price Each	
		1+	3+
FP	127-2819	199.00	184.08
FP PLUS	127-2820	358.00	331.15

Thermometers - Non Contact (IR) - continued

Infrared Non Contact Thermometer


Model: 72-820

A general purpose infrared, non-contact thermometer with adjustable emissivity. Simply target the unit using the built-in laser pointer and squeeze the trigger to take fast and accurate surface temperature measurements.

Range	-18°C to +550°C
Accuracy	±1.8%
Resolution	0.1°C
Repeatability	±0.5%
Emissivity	0.10 to 1.00
Response Time	250ms
LCD size (WxH)	29x32mm
Dimensions (WxHxD)	53x169x138mm
Weight	270g

- 4 Digit LCD with backlight
- °C/°F measurements
- 12:1 distance to spot ratio
- Max/Min/Dif/Avg temperature display with hold function

- Sleep mode and low battery warning
- USB or 9V battery power
- Tripod mount
- Supplied with 9V battery, carry bag, USB lead and user manual

510028.509462

Description	Order Code	Price Each		
		1+	5+	
Infrared Thermometer	156-3715	153.14	151.61	

Infrared Non Contact Thermometer


Model: 72-823

A general purpose infrared, non-contact thermometer with a wide temperature measurement range. Simply target the unit using the built-in laser pointer and squeeze the trigger to take fast and accurate surface temperature measurements.

Range	-32°C to +650°C
Accuracy	±1.8%
Resolution	0.1°C
Repeatability	±0.5%
Emissivity	0.10 to 1.00
Response Time	250ms
LCD size (WxH)	29x32mm
Dimensions (WxHxD)	53x169x138mm
Weight	270g

- 4 Digit LCD with backlight
- °C/°F measurements
- 20:1 distance to spot ratio
- Max/Min/Dif/Avg temperature display with hold function
- Sleep mode and low battery warning
- USB or 9V battery power
- Tripod mount
- Supplied with 9V battery, carry bag, USB lead and user manual

510029.509474

Description	Order Code	Price Each		
		1+	5+	
Infrared Thermometer	156-3716	199.75	197.73	

Infrared Thermometer

IR608A



The IR 608A non-contact thermometer is the ideal tool for customers who want to measure temperature in a variety of applications. The unit has the following additional features:

- "Pistol grip design" for comfortable grip
- Measuring range -18°C to 275°C
- Laser sighting for accurate targeting
- Display hold (7 seconds)
- Distance to spot size ratio 8:1
- Accuracy to 2%
- Backlit display
- One year "no hassle" warranty

W=60 H=230 D=165mm. Weight 300g

489625.502382

Description	Order Code	Price Each		
		1+	3+	+
Infrared Thermometer	146-6481	194.14	179.57	--
Price Each				
Standard Calibration Charge	S			
NATA Calibration Charge	N			

Infrared Thermometer

Model 62

FLUKE
W=101 H=152 D=38mm.
Weight 200g

- Laser guided sighting system for easy targeting with 1% accuracy
- Display in °C or °F
- Backlit display for easy reading in the dark
- MAX temp reading

Form factor	Pistol grip
Temperature range	-30 to 500°C
Optical resolution	10:1

Response time	≤0.5 seconds
Resolution	0.2°C
Repeatability	2%

Accuracy	
<10°C:	± 1.5°C
10 to 30°C:	±1°C ±1.5% of reading
30 to 500°C:	± 1.5°C
Distance to target	1.5m
Emissivity	Fixed at 0.95

413770.429079

Description	Mfrs List No.	Order Code	Price Each		
			1+	3+	+
IR Thermometer	62	947-9813	220.00	203.50	--
HOLSTER FLUKE H6	H6	828-3931	67.00	61.98	--
CASE, HARD FLUKE C101	C101	947-9783	89.00	82.33	--

Infrared Thermometers

FLUKE


- Enhanced optics allow the user to measure smaller objects from farther away
- Pistol grip for easier target pointing
- Backlit display for poorly lit areas
- Holds temperature readings
- Displays Min/Max measurements & saves readings in memory
- Rugged rubber over-molding
- Includes Durable case, 9V battery & user manual

Meter	Fluke 63	Meter	Fluke 63
Temperature Range	-32 to 535°C	Laser Sighting	Single point, offset
Resolution	0.2°C	Emissivity	Fixed at 0.95
D:S (Distance to spot size)	12:1		

Display Accuracy*	
Target Temperature	Fluke 63
Above 510°C	±1.5% of reading
23°C to 510°C	±1% of reading or ±1°C, whichever is greater
-18°C to 23°C	±2°C
-26°C to -18°C	±2.5°C
-32°C to -26°C	±3°C

Meter	Fluke 63
Response Time	500 ms
Repeatability	±0.5% of reading or ±1°C, whichever is greater
Spectral Response	8µm to 14µm
Laser Sighting	Laser turns off above ambient temperature of 40°C
Laser Power	Class 2(II) operation; Output <1mW, wavelength 630-670 nm
Relative Humidity	10% to 90% RH non-condensing, at <30°C
Tripod Mount	1/4in. 20 UNC threading
Battery Type	9V Alkaline or NiCd
Battery Life (Alkaline)	10-20 hours
Display Hold	7s
Operating Temperature	0°C to 50°C
Storage Temperature	0°C to 50°C

* Assumes ambient operating temperature of 23°C to 25°C

374521

Type	Mfrs List No.	Order Code	Price Each		
			1+	3+	+
THERMOMETER, INFRARED FLUKE 63	63	921-0083	478.00	--	--
PROBE, RTD	80PR-60	828-3923	124.00	114.70	--
HOLSTER FLUKE H6	H6	828-3931	67.00	61.98	--



Access to leading brands
element14 offers you access to 3,500 leading brands!



1300 361 005



au.element14.com

Infrared & Contact Thermometer

561 HVACPro



- IR thermometer for quick measurements up close or at a distance, without a ladder
- Compatible with all standard mini-connector K-type thermocouples
- Velcro pipe probe for superheat, sub-cooling or other contact and ambient measurements
- Single-point laser sighting
- Temperature range optimized for HVAC/R applications
- Easy emissivity adjustment for measuring pipes and ducts more accurately
- Lightweight, portable and very easy to use
- Efficient - no need to shut down equipment when making IR measurements
- MIN, MAX and DIF temperature readings help you quickly identify problems
- Scan large areas or small objects quickly and efficiently
- HVAC/R measurement guide included to maximize your productivity

W=52 H=177 D=164mm. Weight 340g

- Backlit LCD display with dual temperature measurements
- MAX, MIN and DIF functions
- 7 second Data Hold
- Two year warranty

Supplied with: K-type velcro pipe probe, hard carry case, 2x AA batteries, user manual and measurement guide.

Temperature range	-40°C to 550°C
Optical resolution	12:1
Emissivity	Three settings: 0.3 / 0.7 / 0.95
Response time	≤500 ms
Accuracy	
0°C to 550°C	±1% of reading or ± 1°C whichever is greater
<0°C	±(1% of reading + 1°C)
Resolution	0.1°C
Repeatability	0.5%
Velcro Pipe Probe (Range 0 -100°C)	±2.2°C

Physical
Power 2x AA batteries, giving 12 hours operation 440686.502109

Description	Mftrs List No.	Order Code	Price Each		
			1 +	3 +	+
Thermometer	561	121-8793	370.00	342.25	--
HOLSTER FLUKE H6	H6	828-3931	67.00	61.98	--
			Price Each		
Standard Calibration Charge			S		
NATA Calibration Charge			N		

Infrared & Contact Thermometers

566 and 568



- Measure -40°C to 800°C / -40°F to 1472°F (568) or -40°C to 650°C / -40°F to 1202°F (566)
- Easily access advanced features with the soft-key buttons and graphical display
- Measure smaller objects from further away, with a distance-to-spot ratio of 50:1 (568) or 30:1 (566)
- Compatibility with all standard miniconnector K-type thermocouples allows you to preserve your thermocouple investments
- Confidently measure a wide variety of surfaces with the adjustable emissivity feature, including a built-in material table
- Capture up to 99 points (568) or 20 point (566) of data, for downloading and recalling later

- Easily trend and analyze data with included FlukeView Forms software (568) Two-in-one infrared and contact thermometers with an innovative dot matrix display.
- See your data right away without leaving the site, using the USB (568) and your laptop for "Hands-free" datalogging
- Confidently troubleshoot equipment with 1% measurement accuracy
- Versatile interface with six languages from which to choose
- 98 x 96 pixel dot matrix display with two level backlight
- Hi / Low Alarms
- Min / Max / Avg / Diff
- Trigger Lock

Includes: Infrared thermometer with contact thermometer capabilities, FlukeView Forms software (568 only), USB cable (568 only), K-type thermocouple bead probe, hard carrying case, quick start guide, and users manual.

	566	568
Optical resolution	30:1	50:1
Emissivity	Adjustable from 0.1 to 1.00	
Response time	≤500 ms	
Infrared Measurement Specs		
Temperature range	-40°C to 650°C	-40°C to 800°C
0°C to 550°C	±1% of reading or ± 1°C whichever is greater	

Infrared Measurement Specs

<0°C ±(1% of reading + 1°C)

K-Type Thermocouple Measurement Specs

Temperature range -270°C to 1372°C
-40°C to 1372°C ±1% or 1°C whichever is greater
-270°C to -40°C ±(1°C + 0.2°)

K-Type Bead Thermocouple Measurement Specs

Temperature range -40°C to 260°C
-40°C to 260°C ±1.1°C

Physical

Data Storage 20 points 99 points
Power 2x AA batteries, giving 12 hours operation

492395.503400

Description	Mftrs List No.	Order Code	Price Each		
			1 +	3 +	+
Thermometer	566	150-3751	735.00	679.88	--
Thermometer	568	150-3752	969.00	896.33	--
			Price Each		
Standard Calibration Charge			S		
NATA Calibration Charge			N		

Thermal Imagers

Infrared Thermal Imager



- Intuitive operation with clear-cut icons
- No focusing needed at a distance of 1.3m or further
- Minimum focal length of 10cm
- Allows to add an external finder, LED light or other camera accessories from the marketplace
- weighs approximately 300g

Measuring Range	-20 to 350°C
Resolution	0.2°C/0.1°C
Spectral Range	8 to 13μ
Frame Time	8.5 frames/sec
Thermal Image Pixels	160 (H) x 120 (V) pixels
Field of View	28° (H)° x 21 (V)
I.F.O.V	3.1mrad
Focusing Range	10cm to infinity (Temp accuracy not assured at 50cm or closer)
Focus	Manual (at 1.3m or over: Focus-free)
Accuracy	±2°C or ±2% whichever is greater
Batteries	Rechargeable NiMH batteries (3pcs)
Operating Temperature	-15 to 50°C

615353

Description	Mftrs List No.	Order Code	Price Each
			1 +
THERMAL IMAGER, INFRARED, F30W	F30W	182-5490	5,467.14

Infrared Thermal Imager



- Easy temperature measurement overlay on visible images
- One-handed operation
- Fully radiometric high quality IR images
- Multi-Lingual GUI with joystick control for easy operation
- Dust/Splash proof with IP54-rated construction
- Software included for image fusion, analysis & report generation
- Alarm and isotherm
- 2 year warranty

Measuring Range	-20 to 350°C
Thermal Sensitivity (NETD)	0.2°C (at 30°C) 0.1°C (with S/N improvement) (at 30°C)
Spectral Range	8 to 13μ
Frame Time	8.5 frames/sec
Field of View	28° (H)° x 21 (V)
I.F.O.V	3.1mrad
Focusing Range	10cm to infinity (For temperature Accuracy: 50cm to infinity)
Focus	Manual (Focus-free beyond 1.3m)
Accuracy	±2°C or ±2% whichever is greater
Batteries	Li-Ion Rechargeable
Operating Temperature	-15 to 50°C

615354

Description	Mftrs List No.	Order Code	Price Each
			1 +
THERMAL IMAGER, INFRARED, G30	G30	182-5491	6,095.00

Intelligent Online Buying system providing



- Complete cost control
 - Reduced administration time
 - Visibility of your company's spend
 - Flexible and personalised to your company's needs
- au.element14.com/ibuy

Thermal Imagers - continued

Thermal Imagers

G100 and G120



- Wide-angled shot - Panoramic thermal image
- Thermal image movie - Direct recording on SD card in fully radiometric
- IR/Visual integrated display
- Macro shot - minimum focus distance: 10cm
- Alarm function
- Wide field of view
- 3.5 inch LCD screen
- Easy operation

Measuring Range	-40°C to 500°C
Resolution (NETD)	0.08°C (at 30°C, 60 frames/sec)
Spectral Range	8 to 14µm
Frame Rate	60 frames/sec
Field of View	30° (H) x 24° (V) (standard lens f = 14mm)
Spatial Resolution (I.F.O.V.)	1.78mrad
Focal Distance	10cm to infinity (standard lens)
Battery	Rechargeable Lithium-ion battery pack (2,500mAh), 4 hours of continuous use
Operating Temperature	-15°C to 50°C

616966

	Mftrs. List No.	Order Code	Price Each 1 +
THERMAL IMAGER, PANORAMIC, G100	G100	182-5492	13,130.00
THERMAL IMAGER, PANORAMIC, G120	G120	182-5493	16,930.00

Thermal Imager



The Fluke Ti32 is intended for Industrial diagnostic applications and will provide the ability to find, fix and prove problems and repairs fast. The Fluke Ti32 thermal imager combines a powerful 320x240 FPA sensor with field upgradable lenses, removable batteries, and many new features. The Fluke Ti32 deliver amazingly clear image quality in a package that will withstand the toughest environments.

- Industry leading ≤50mK thermal sensitivity (NETD) to see even the smallest temperature differences which could indicate a problem
- Two replaceable, rechargeable Li-Ion batteries for extended use situations

- External charging bay or in-imager charging
- Field-installable optional telephoto and wide angle lenses
- Patented Fluke IR-Fusion® Technology both in camera and software combines visible (visual) image with IR image in full screen or picture views for easy identification and reporting problems
- Rugged and reliable: Engineered to withstand a 2 meter (6.56 feet) drop
- 640 x 480 large 3.6" diagonal colour LCD display (landscape format)
- SmartView® analysis and reporting software (with free upgrades through life of product)
- Removable 2 GB SD memory card for easy storage and transfer of thermal and visible images
- Multi-function memory card reader
- Complete solution includes hardware and software to get you going
- Two-year warranty

Temperature range	-20°C to +600°C
Detector type	320x240 Focal Plane Array, uncooled microbolometer
Infrared spectral band	7.5µm to 14µm (wave length)
Thermal sensitivity	≤0.05°C at 30°C target temp. (50 mK)
Minimum span (manual/auto)	2.5°C / 5°C

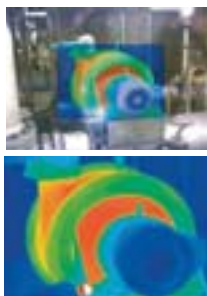
544306

	Mftrs. List No.	Order Code	Price Each 1 +
THERMAL IMAGER, TI32, 9HZ	FLUKE-TI32	175-7747	15,995.00

Thermal Imager

Ti10

The Ultimate Tools for Troubleshooting and Maintenance!



The Fluke Ti10 is the perfect tool to add to your problem solving arsenal. Built for tough work environments, this high-performance, fully radiometric images are ideal for troubleshooting electrical installations, electro-mechanical equipment, process instrumentation, HVAC equipment and others.

New IR-Fusion™ Technology, combines both visual and infrared images at the same time, making the images easier to understand.

- Engineered and tested to withstand a 2 meter drop, when was the last time you dropped a tool?
- Withstands dust and water-tested to an IP54 rating
- Innovative protective lens cover protects the lens when not in use. The cover is securely attached and out of the way while images are being taken.
- Works in ambient temperatures as low as -10 °C and high as +50 °C
- Delivers the clear, crisp images needed to find problems fast
- Identify even small temperature differences that could indicate problems with excellent thermal sensitivity (NETD)
- High performance, low noise sensor provides high quality image and stable temperature reading
- Even the smallest details become visible with the large, widescreen full VGA color LCD display
- Intuitive, three-button menu is easy to use... simply navigate with the push of a thumb.
- Store more than 3,000 screen images
- (.bmp format) for easy reporting direct into Microsoft Word™ and other programs or 1,200 IR-Fusion images, including thermal image, visual image, temperature data and voice recorded comments for reporting and analysis purpose. Data is stored on included 2 GB SD memory card.

Fluke SmartView™ software is included with each Fluke thermal imager.

- Powerful, modular suite of software tools for viewing, annotating, editing and analyzing of infrared images.

- Generate customizable, professional-looking reports in a few easy steps.

- Full support of IR-Fusion Technology lets you edit images in five viewing modes.

Compatibility: Windows® 2000 SP4 with update rollup 1/XP SP2/Vista

Ti10		Price Each		
Thermal sensitivity @ 30°C	≤ 0.2°C (200mK)			
Minimum span (Auto/Manual)	10 °C / 5 °C			
Picture in Picture Modes	Standard			
Measurement range	-20 °C to 250 °C			
Accuracy	± 5°C or 5% (whichever is greater)			
Markers	Centre			
Voice memo recorder	—			
Protection	IP54			
Field of view				
Spatial resolution				
Minimum focus distance				

531608

Mftrs. List No.	Order Code	1 +	+	+
TI25AU	169-7144	12,750.00	—	—
TI10AU	169-7142	9,950.00	—	—
Accessories				
TI-CAR CHARGER	155-3578	259.29	—	—
Standard Calibration Charge		\$	☎	
NATA Calibration Charge		N	☎	

Thermal Imager

Ti20



W=102 H=254 D=178mm. Weight 1.2kg

- Fully radiometric for detailed temperature analysis and tracking of critical components
- Complete solution with InsideIR software for analysis, reporting and routing
- Large colour LCD displays uncluttered image with data and routing instructions
- Uses revolutionary detector technology to provide a clear thermal image while accurately measuring the temperature
- Measures up to 350°C to cover a broad range of industrial applications
- Protected against dust and moisture (IP54 rated) to withstand harsh industrial environments
- Provides 3 hours continuous operation per battery charge
- Facilitates one-handed point-, shoot- and image capture operation
- Assists fast inspections with clear on-screen step-by-step routing instructions
- Comes complete with all necessary accessories and professional application training material to ensure a fast return on investment

Representing a price/performance breakthrough in thermal imaging, the Fluke Ti20 lowers the entry threshold for this powerful technology. Designed for industrial applications, the Ti20 puts the capabilities of thermal imaging within the hands of service and maintenance personnel who know the facility and equipment best.

Typical Applications

Electrical power distribution systems: three-phase systems, distribution panels, fuses, wiring and connections

Electro-mechanical equipment: motors, pumps, bearing and gear boxes

Process instrumentation: process control equipment, pipes, valves, steam traps and vessels

Facility maintenance: HVAC systems, buildings and roofs

An overheated motor may be an indication of electrical power problems, an underrated motor or insufficient cooling. Temperature differences between phases may indicate unbalanced loads, harmonics, component problems, bad connections or bad wiring. Ball bearings running hot are an early indication of upcoming failure. Monitoring process installations is made easy using thermal imaging.



Powerful InsidelR Software

The Fluke Ti20 comes with the powerful InsidelR software for storing and analyzing thermal images and creating professional reports. The software makes it possible to adjust key parameters in a stored image downloaded from the camera such as emissivity, reflected temperature compensation, level, gain, and colour palette in the comfort, quiet and safety of the

office. This not only improves inspection safety and convenience, but also makes it unnecessary to re-scan equipment if different settings are desired in a previously captured thermal image.

Fluke Ti20 Thermal Imager includes:

InsidelR software, USB cable, AC power adapter, 2x rechargeable battery packs, 1x AA battery case, hard case, soft case, wrist strap, printed "Getting Started" guide and manual on CD.

Thermal Specifications

Temperature Range	-10°C to 350°C
Detector Type	128 x 96 thermal element focal plane array
Accuracy	±2% or ±2°C (whichever is greater)
Repeatability	±1% or ±1°C (whichever is greater)
Resolution	0.1°C

Optical/IR Specifications

Spectral Range	7.5 - 14 microns
Target Sighting	Single laser dot
Optical Resolution	75:1
Image Frame Rate	9 Hz
Field of View	20° Horizontal and 15° Vertical
Palettes	Grey, Reverse Greyscale, Ironbow or Rainbow.
Adjustable Emissivity	0.10 to 1.00 in 0.01 increments

Electrical Specifications

Power	Rechargeable battery pack giving 3 hours continuous use
Supported OS	Windows 2000 and Windows XP
Data Transfer	USB - 25s to transfer 50 frames
Storage	Flash memory - capacity of 50 images

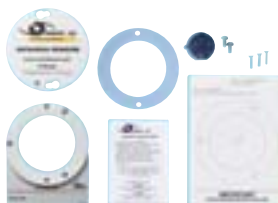
Prices where indicated by a are subject to change. Please call your local sales office or visit www.far-nellinone.com for the latest prices.

Description	Mfrs.		Price Each	
	List No.	Order Code	1+	
Thermal Imager	Ti20AU	169-7143	13,870.00	

Hawk IR Windows

FLK-075-CLKT / FLK-100-CLKT

FLUKE



Allows thermographers to carry out thermal imaging on live and fully energised electrical installations without opening panel doors and covers.

- Opening live switchgear for thermal imaging exposes the thermographer to arc flash risk. The use of arc flash resistant Hawk IR Windows minimizes that risk
- An electrician no longer needs to accompany the thermographer, a major cost saving.

- Engineered and tested to withstand electric - arcs up to 50kA for a huge 30 cycles
- Certified by UL & CSA for type 3/12 (outdoor) environments in North America and Canada, the C range windows are tested to withstand the long term aging effects of UV exposure
- CLIRVU®coating - exclusive to Hawk IR Windows - seals the optic prior to assembly to protect against moisture degradation

New

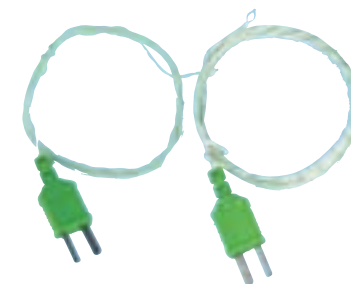
	FLK-075-CLKT 173-7154	FLK-075-CLKT 173-7155
Gaskets	250°C	250°C
Body	659°C	659°C
Optic	1400°C	1400°C
Gaskets	Low smoke and fume (LSF) compliant Silicone IP65	Low smoke and fume (LSF) compliant Silicone IP65
IP Rating	IEC60068-2-6	IEC60068-2-6
Vibration Rating	IEC60068-2-3	IEC60068-2-3
Humidity Rating	Up to 630kg	Up to 630kg
Pull-out strength		
	Mfrs.	Price Each
	List No.	Order Code

Metric	FLK-075-CLKT	173-7154	580.00
IR WINDOW, HAWK C RANGE	FLK-100-CLKT	173-7155	840.00

Temperature Probes & Accessories

Fine Wire Probes

KA Series



K type fine wire thermocouple sensors in a choice of temperature ranges.

- PTFE fine wire sensors for KA01 and Fibre Glass for KA02
- Class 1 material
- Moulded thermocouple miniature connector

Mfrs.	Temperature Range	Order Code	Price Each		
			1+	10+	25+
KA01	-100 to + 250°C	492-0971	17.95	16.43	15.29
KA02	-100 to + 650°C	492-0983	23.25	20.98	19.46

Surface Probes

KS Series



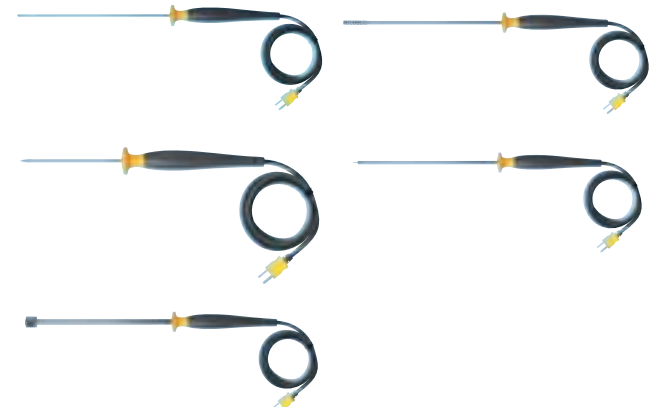
A range of K type surface probes for measuring within different temperature ranges.

- Excellent accuracy
- Fast response
- Fitted with 2m curly cable and miniature plug

Mfrs.	Measuring Range	Order Code	Price Each		
			1+	10+	25+
KS08	-50 to +950°C	492-0831	198.38	172.91	168.90
KS07	-50 to +600°C	492-0843	130.85	115.29	112.48
KS01	-50 to +250°C	492-0855	113.40	100.54	97.98

Temperature Probes

FLUKE



Temperature Probes & Accessories - continued

Temperature Probes - continued

A range of thermocouple probes designed for use with Fluke test meters for contact temperature measurements. SureGrip™ accessories are designed to improve steadiness in slippery hands. Rubber overmoulded surfaces and finger-hugging curves give the user a comfortable, reliable grip on the accessory so they can focus on making an accurate measurement.

80PK-22 SureGrip™ Immersion Probe

- Type-K thermocouple for use in liquids and gels
- Measurement range: -40°C to 1090°C

80PK-24 SureGrip™ Air Probe

- Type-K thermocouple for use in air and non-caustic gas measurements
- Bead protected by perforated baffle
- Measurement range: -40°C to 816°C

80PK-25 SureGrip™ Piercing Probe

- Type-K thermocouple suitable for food industry, liquids and gels
- Measurement range: -40°C to 350°C

80PT-25 SureGrip™ Piercing Probe

- 80PT-25: operates with T-type thermometers
- Measurement range: -196°C to 350°C

80PK-26 SureGrip™ General Purpose Probe

- Type-K thermocouple with tapered tip for use in air, non-caustic gas and surface applications

- Measurement range: -40°C to 816°C

80PK-27 SureGrip™ Industrial Surface Probe

- Type-K thermocouple for surfaces in rugged environment
- Durable ribbon sensor
- Measurement range: 127°C to 600°C

Mfrs. List No.	Order Code	1+	3+
80PK-22	491-7169	136.00	125.80
80PK-24	491-7170	170.00	157.25
80PK-25	491-7182	158.00	146.15
80PT-25	491-7194	158.00	146.15
80PK-26	491-7200	170.00	157.25
80PK-27	491-7212	451.00	417.18

339464

Environmental Dataloggers

Temperature Data Logger with USB Interface



Module: H=20.5, W=20.5, L=94

Measurement Range	Internal Resolution	Accuracy (Overall Error)	Logging Rate	Operating Temperature	Battery Life
-35 to +80°C	0.5°C	±1°C (typ.), ±2°C (Max.)	10 Sec. to 12 Hrs	-25 to +80°C	1 Year (Min.)

338605.344023

Mfrs. List No.	Order Code	1+	+	+	+
EL USB-1	491-3437	121.00	--	--	--

Real-Time USB Temperature and Humidity Monitor



EL-USB-RT



L = 77, W = 19, D = 11MM

When plugged into the USB port of a PC installed with the purpose designed software under Windows XP and Vista, EL-USB-RT measures temperature and relative humidity. The PC displays the temperature, humidity and dew point in real-time and saves it to a file which can store up to 7 day's worth of data. This data file is overwritten at the beginning of each new logging session. The software provides the option for the user

to save the data file permanently to the hard-drive. Temperature, relative humidity and dew point can be graphed, printed and exported to other applications.

- -10 to +60°C (+14 to +140°F) Temperature measurement
- 0 to 100%RH Relative humidity measurement
- Dew point indication via Windows Control Software
- USB Interface
- User-Programmable alarm thresholds for %RH & T

Windows Control Software

Easy to install and use. It provides an environment whereby the user can view the current temperature and humidity or graph in real-time either the current data file or previously saved files. The software can also show the current temperature and humidity in the notification area within the Window's tool-bar. Right-clicking on the EL-USB-RT icon in the notification area enables the user to access the full functionality of the software with just one click.

Contents: Data capture device, software on CD

Relative Humidity	Temperature
Measurement Range	Measurement Range
0 to 100 %RH	-10°C to 60°C
Repeatability	Repeatability
±0.5 %RH	±0.3°C
Accuracy (overall error) (20-80 %RH)	Accuracy (overall error)
±4.5 %RH	±1.5°C
Response Time	Response Time
5s	20s

489306

Mfrs. List No.	Order Code	1+	5+	+	+
EL-USB-RT	146-9295	114.92	108.37	--	--

USB Relative Humidity and Temperature Data Logger



EL-USB-2



L = 103, W = 27, D = 27mm

EL-USB-2 measures and stores relative humidity and temperature readings. Offers LED status indication, user settable logging rate, start-time and alarms. Downloads are stored via a PC's USB port, software requires Win 98/2000 or XP and also allows humidity, temp and dewpoint data to be graphed and printed.

- 16 000 RH readings
- 16 000 temperature readings
- 4 user-programmable alarms

- Status indicated by flashing red and green LED

Humidity measuring range	0 to 100% RH	Resolution	0.5% RH
Resolution	0.5% RH	Accuracy	±2°C
Accuracy	±3.5% RH	Logging rate	10 sec to 12 hours
Temperature measuring range	-35 to +80		

381902.381932

Mfrs. List No.	Order Code	1+	+	+	+
EL-USB-2	852-2898	170.50	--	--	--

Temperature Dataloggers

DigiTag Series



DigiTag Dataloggers are truly independent and therefore ideal for tracking critical temperature conditions of sensitive products during transport and storage.

Easy Download Programming

Plugs directly into the serial port of your PC for programming and data download. A USB to serial port adapter can be used to connect to computers without serial ports. Console software is available as a download free from www.digitron.co.uk. Continuous back-ground logging ensures key data is available should the user forget to start the logger.

Start Button

Start recording cycle, or countdown to the start, by holding down the button for over one second. Scroll through the statistics on the multifunctional display by pushing the button during the logging cycle.

Multifunctional Display

Alarm status is always visible. Analyse recorded data by viewing the statistics on the multifunctional display: Highest, Average and Lowest readings. Time spent over and under specifications limits. Standard display shows the latest reading, or the status of the logger.

Replaceable Battery

The logger battery typically lasts 1 to 2 years and can easily be replaced without loss of data.

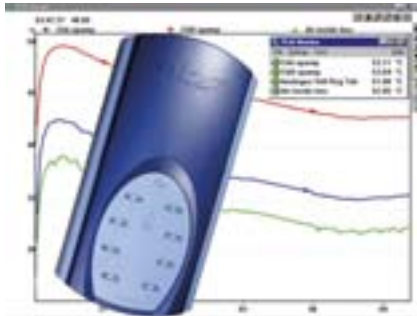
Temperature Measurements	Range: -40°C to 70°C; Accuracy: ±0.5°C; Resolution: 0.5°C
Memory	1868 readings
Sample rate	1 min to 255 mins
Battery type	User replaceable coin cell
Dimensions (WxHxD)	57 x 80 x 20mm
Weight	70g

493113

Description	List No.	Order Code	1+	3+	5+
Temp. Datalogger & Probe	MI-OED2L	151-1079	367.30	328.93	316.02

Temperature Datalogger

USB TC-08



- Measures and records up to 8 thermocouples
- Works with all popular thermocouple types
- High resolution and accuracy
- Wide temperature range (-270°C to 1800°C)
- Multiple units can be used on the same PC if more than 8 channels are required
- No power supply required
- Built in cold junction compensation

- Supplied with PicoLog data logging software
- USB interface ensures easy installation
- S

upports Windows XP, Vista and 7.

An 8 channel, PC based temperature data logger with USB interface. It can measure temperatures from -270°C to +1800°C and works with all popular types of thermocouple (B, E, J, K, N, R, S, T). There is also a 60mV range that can be used for other types of sensor. Supplied with PicoLog software for handling and analysis of all data.

Number of channels	8
Accuracy	±(0.3%+0.5°C)
Overload Protection	±10V
Conversion time	200ms for cold junction compensation + 200ms per active channel
Input connectors	Miniature thermocouple
Common mode voltage	±5V max
Output connector	USB1.1 connector cable supplied
Dimensions (WxDxH)	85 x 145 x 25mm

347749.344426

Mfrs.	Order Code	1+	3+
List No.			
TC08 USB	782-0178	835.14	820.39

Barometers, Weather Stations & Office Equipment

Hygrometer 608



- Standard Testo 608-H1 hygrometer for continuous measurement of humidity, temperature and dew point
- The Testo 608-H2 alarm hygrometer with accuracy of ±2%RH and LED alarm function reliably warns you if limits have been exceeded
- Monitors ambient conditions and dew point in garden centres, storage and clean rooms, museums and laboratories
- Stand alone or attachable

- With td dew point calculation and max/min display
- Humidity sensor not affected by water
- Testo 608-H2 comes with LED alarm to warns if limits are exceeded

	608-H1	608-H2
Storage temperature	-40°C to +70°C	
Battery type	9V block battery	
Battery life	8736h	
Measuring rate	18s	
Weight	168g	
Warranty	1 year	
Measuring range	+10 to +95% RH 0 to +50°C -20 to +50°C	+2 to 98% RH -10 to +70°C -40 to +70°C
Accuracy	±3% RH (+10 to +95% RH) ±1 digit	±2% RH (+2 to +98% RH) ±1 digit
Resolution	0.1% RH (0 to +100% RH)	0.1% RH (0 to +100% RH)
Probe type	NTC	NTC
Accuracy	±0.5°C (at 25°C) ±1 digit	±0.5°C (at 25°C) ±1 digit
Resolution	0.1°C (0 to +50°C)	0.1°C (-10 to +70°C)
Operating temperature	0 to +50°C	-10 to +70°C

234384

Mfrs.	Order Code	1+	2+	5+
List No.				
608-H1	369-5797	233.78	229.38	224.99
608-H2	369-5803	405.96	397.34	391.57

Distance Measurement

Distance Meter, Ultrasonic w/Laser Pointer



- Quickly measure the area of a room
- Laser pointer for easy targeting
- Choose between feet or meter measurement results
- Calculates area and volume
- Adds together two measurement results
- Measures up to 15m (50 ft)

525728

Mfrs.	Order Code	1+	3+
List No.			
UDM45	167-1226	111.42	103.06

Distance Meter, Laser



411D



416D

Features and benefits:

Both meters offer:

- Reduction of estimation errors, saving both time and money
- The most advanced laser technology for distance measurement
- Instant measurement with one-button operation
- Easy targeting with bright laser
- Quick calculation of area (square footage) and volume
- Easy addition and subtraction of measurements
- Improved battery life from automatic shut-off feature
- Pythagoras calculation for determining distance indirectly from two other measurements
- Pouch with Fluke logo

The 416D additionally offers:

- Improved visibility with backlight, three-line display
- Ability to measure up to 60 m (200 ft)
- Enhanced Pythagoras calculation for determining distance indirectly from three other measurements
- Audible feedback of on and off modes
- Storage of the last ten measurements for quick recall of distance
- Minimum and Maximum function
- Strong environmental protection with IP54 (water spray and dust proof) sealing

Technical specifications	Fluke 411D	Fluke 416D
Range (for extended distances, use a target plate)	0.1 m to 30 m (0.33 ft to 100 ft)	0.05 m to 60 m (0.16 ft to 200 ft)
Measuring accuracy	± 3 mm (0.118 in)	± 1.5 mm (± 0.059 in)
Units displayed	00.000 m, 000 ft 00 in 1/8, 000.00 ft	00.000 m, 000 ft 00 in 1/16, 000.00 ft
Laser class	II	II
Laser type	635 nm, < 1 mW	635 nm, < 1 mW
Automatic power off	after 180 seconds	after 180 seconds
Continuous measurement	●	●
Addition/subtraction	●	●
Battery life	up to 3,000 measurements	up to 5,000 measurements
LCD illumination	—	●
Data locations	—	●
Min/Max	—	●
Audible feedback	—	●
Pythagoras (Indirect measurement)	Simple	Full
Ingress protection	IP40	IP54

Distance Measurement - continued

Distance Meter, Laser - continued

Technical specifications	Fluke 411D	Fluke 416D
Dimensions	123 mm x 50 mm x 26 mm (4.84 in x 1.97 in x 1.02 in)	135 mm x 46 mm x 31 mm (5.31 in x 1.81 in x 1.22 in)
Weight	150 g (5.29 oz)	110 g (3.88 oz)
Temperature range:		
Storage	-25 °C to 70 °C (-13 °F to 158 °F)	-25 °C to 70 °C (-13 °F to 158 °F)
Operation	0 °C to 40 °C (32 °F to 104 °F)	0 °C to 40 °C (32 °F to 104 °F)
Operating altitude (ISO 9022)	up to 3500 m	up to 3500 m
Storage humidity (at 35 °C)	maximum 85 % for 24 h	maximum 85 % for 24 h
Batteries	AAA (2)	AAA (2)

524995

Mfrs.	Order Code	Price Each
List No.		1+
FLUKE-411D	165-9634	226.00
FLUKE-416D	165-9635	445.00

Tachometers & Stroboscopes

Laser Optical/Contact Tachometers



Optical/Contact tachometer for measuring speeds of rotating objects in RPM or for measuring surface speeds in meters per minute or feet per minute. High accuracy is achieved by combining CPU, photoelectrical and laser techniques.

- Laser spot for easy identification of target (optical)
- Optical detector distance 50mm to 500mm
- Last measured value and Min/Max memory updated automatically
- Supplied with foam padded carry case, 700mm reflective tape and instructions for use
- Includes contact adaptor, cone, funnel and surface wheel

Accuracy	±0.05% ±1 digit	0.05 to 1999.9 M/min
Resolution	0.1 up to 999.9 rpm, 1 above	0.2 to 6560 Ft/min
Ranges	1 to 99999 Counter	Auto-Ranging 0.01 Up to 100 M/min, 0.1 above
Auto-Ranging	1 Counter	0.1 up to 1000 Ft/min, 1 above
Ranges	0.5 to 19999 rpm (contact)	

333736.276729

Description	Order Code	Price Each
Optical/Contact	462-5973	89.20

Photo Tachometer



An accurate, small, hand-held, non-contact photo tachometer. Simply place a reflective marker on a rotating object, point and measure.

- Large 5 digit LCD
- One second response time at distances from 2" to 6"
- Safe and precise
- Stores last/min/max readings
- Includes 23" of reflective tape, carry case and manual
- Requires four 1.5V batteries (not included)

Range 5 to 99999rpm
Resolution 0.1 rpm<1000 rpm, 1 rpm≥1000rpm
Accuracy ± (0.05% + 1 digit)

W=70, D=38.1, L=190.5

228177

Mfrs.	Order Code	Price Each
List No.		1+ 3+
72-6633	356-2633	390.96 379.06

Non-Contact and Mechanical Tachometer

Testo 470



Testo 470 has the advantage of a combination of both optical and mechanical rpm measurement. Simply attach the reflector to the the object being measured and point the red modulated beam on the reflector.

By attaching an adaptor and cone or running wheel converts this instrument into a mechanical measuring device.

- Optical and mechanical measurement
- Measures rpm, speeds and length
- Easy to switch type of measurement
- Kit includes: case, adaptor, cone, running wheel, reflectors and instruction manual.
- Low battery warning

Sensor:	Optical with modulated light beam, mechanically with adapter and cone or running wheel
Measuring range	1 to 99999rpm (Optical) 1 to 19,999rpm (Mechanical)
Speed	0.10 to 1,999 m/min 0.30 to 6500 ft/min 4 to 78,000 in/min 0.02 to 99,999 m 0.01 to 99,999 ft 1 to 99,999 in
Lengths	
Accuracy	± 0.02% of measured value, ± 1 digit (±1 digit/0.02m/1.00 inch dependant on resolution)
Operating Temperature	0°C to 50°C
Storage Temperature	-20 to +70°C
Battery	2 x 1.5v AACells
Autot Off	30 seconds (Average/Max/Last value measurements saved)
Dimensions	175 x 60 x 28mm
Weight	190g

228175

Mfrs.	Order Code	Price Each
List No.		1+ 5+ 10+
470	321-4059	901.00 882.72 868.35

Weighing - General Purpose & Industrial

Electronic Pocket Balance



CM 60-2N



- CM 50-C2 N only: Test weight included. Balance test software "BalanceCal Light" free downloadable on our website under "Software"
- Hard case cover. Protection against pressure and dust, with integrated pocket calculator.
- Ready for use. Batteries size AAA (2x 1.5 V) are included. AUTO-OFF function after 4 min without a change of load to preserve the batteries, disengageable.

W=85, D=130, H=25mm

The balance with hinged cover is highly protected against all kinds of pressure. The wallet-size can be conveniently kept in a jacket pocket so is especially suited for mobile use. The weigh in function, e.g. for mixing is extremely practical. Batteries included.

	Weighing Range (g)	Linearity (g)	Resolution (g)	Plate size (mm)
CM 60-2N	60	0.01	0.01	70 x 80

339631.409399

Mfrs.	Order Code	Price Each
List No.		1+
CM 60-2N	483-8440	601.22

Intelligent Online Buying system providing



- Complete cost control
 - Reduced administration time
 - Visibility of your company's spend
 - Flexible and personalised to your company's needs
- au.element14.com/ibuy**



Collaborative e-community

In addition to our best in class online store element14 also integrates a collaborative e-community and technology portal for design engineers.


www.element14.com