

TRAQC-1 DPG

Digital Pressure Gauge

Type B 0.5% FS

Type P 0.1% FS

User Manual



TRAQC

Contents

1. Warranty3
2. Introduction.....4
2.1 Notes on safety / production selection.....4
2.2 Device versions and range of delivery5
3. Commissioning.....6
3.1 Replacing the batteries.....6
4. Functions and keys7
4.1 Display.....7
4.2 Keys7
4.3 Display mode.....8
4.4 Menu functions.....8
5. Connection 10
6. Operating 11
6.1 Turning on (ON) 11
6.2 Turn off (OFF) 11
6.3 Turn on backlight 12
6.4 MIN/MAX indication 12
6.5 FS FullScale display 12
6.6 Erasing MIN/MAX values..... 12
6.7 OFL Display 12
6.8 Zero point correction (ZERO) 13
6.9 Resetting the zero point correction 13
6.10 Automatic power off..... 14
6.11 Changing the unit..... 15
6.12 Filter settings..... 16
6.13 Display serial number 17
7. Technical data..... 18



1. Warranty

During the design and manufacturing of this instrument the at most attention has been given to quality and durability.

This manual contains information needed for the safe and effective use of the capabilities of the instrument.

Please read the manual carefully before operating the instrument. By doing so possible damage to the instrument or damage caused by the incorrect use of the instrument can be avoided.

TRADINCO INSTRUMENTS warrants the instrument in accordance with the Standard Terms and Conditions of the Instrument Trade as issued by the Association bearing the name "Federation Het Instrument" (The Instrument Federation, (filed with the Clerk of Utrecht District Court on 13 January 1993 under number 16/93 and with the Chamber of Commerce and Industry in Amersfoort on 18 January 1993. A copy is available on request.

TRADINCO INSTRUMENTS warrants that this product will be free from defects in materials and workmanship for a period of 5 years from the date of shipment. If any such product proves defective during this warranty period, TRADINCO INSTRUMENTS, at its option, will either repair the defective product without charge for parts or labour, or will provide a replacement in exchange for the defective product.

In order to obtain service under this warranty, Customer must notify TRADINCO INSTRUMENTS of the defect before the expiration of the warranty period and make suitable arrangements for the performance of the service.

Customer shall be responsible for packaging and shipping of the defective product to the service centre designated by TRADINCO INSTRUMENTS, with shipping charges prepaid.

If no defect can be found Customer may be charged for costs of the investigation.

This warranty does not apply to any defect, failure or damage caused by:

- a. Improper use of the instrument.
- b. Battery leakage.
- c. Normal wear of the product.
- d. Modification or repair carried out by or on behalf of the owner or by a third party.
- e. Implementation of modifications to the product that are not supplied or implemented by TRADINCO INSTRUMENTS.

TRADINCO INSTRUMENTS and its vendors will not be liable for any indirect, special, incidental or consequential damages irrespective of whether TRADINCO INSTRUMENTS or the vendor has advance notice of the possibility of such damages.

The type number of the product, as listed on the instrument tag plate, should always be mentioned in any correspondence concerning the product.

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2. Introduction

The Traqc-1 DPG is a digital pressure gauge featuring a Min/Max display function. Full scale (FS) accuracy of type B is +/- 0.5%, the accuracy of type P is +/- 0.1%, based on the upper limit of the measurement range. Dynamic pressure peaks are measured at a scanning rate of 10 ms (100 measurement values/second). The MIN/Max memory is continuously updated and rewritten.

2.1 Notes on safety / production selection

The correct functioning of the Traqc-1 DPG can only be guaranteed when the specifications detailed in these operation instructions are adhered to. In particular, specifications relating to the permitted upper limit of the measurement range as well as the permissible temperature range must be observed.



Caution!

Serious malfunctions leading to personal injury or damage to property can result from using the chosen product in applications that do not comply with the specifications or from disregarding the operating instructions. In particular, incorrect mounting of the pressure gauge and the corresponding adapter can cause the pressure gauge to be torn out of the assembly. For repairs or calibration of the measurement instruments, please contact TRADINCO.

2.2 Device versions and range of delivery

Basic setting to unit 'bar'		
Pressure connection, male thread G1/4		
Measuring range	Type B (0.5)	Type P (0.1)
-1...3 bar	0.5%FS	---
-1...40 bar	0.5%FS	0.1%FS
-1...60 bar	0.5%FS	0.1%FS
0...400 bar	0.5%FS	0.1%FS
0...700 bar	0.5%FS	0.1%FS
0...1000 bar	0.5%FS	0.1%FS

3. Commissioning

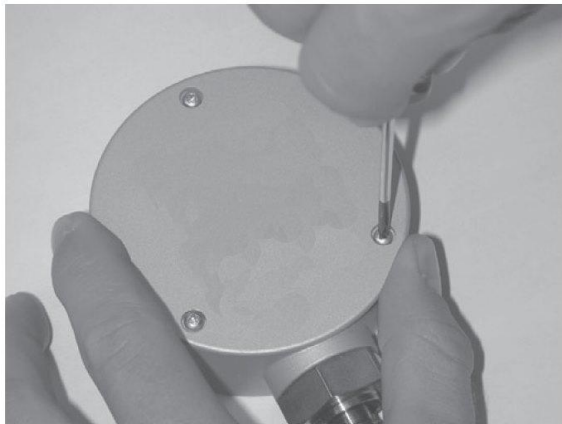
The Traqc-1 digital Pressure gauge is supplied with batteries fitted. The device is operational as soon as it is turned on.

3.1 Replacing the batteries

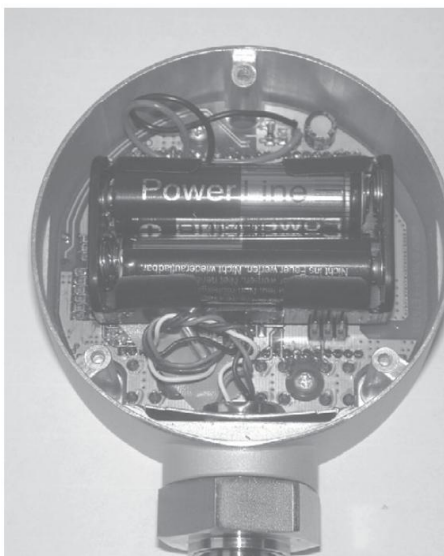


Caution!

Turn off the device before replacing the batteries. Open the battery compartment. Insert the new batteries as depicted. Ensure correct polarity of the batteries. Batteries: 2 x 1.5 V (LR6 - AA)



When in continuous operation (without light), the service life of the batteries is 1,500 hours. A battery symbol permanently displays the actual battery status.



4. Functions and keys





4.1 Display

- 4 ½ digit LCD with backlight
- Displays measurement values and menu functions
- Bargraph with Peak & Hold function
- Actual value display (15 mm)
- MIN/MAX or Full Scale (8 mm)
- Battery status



4.2 Keys



Key	Function	
	ON/OFF ☀	Turns the device on / off. Press for 2 seconds. Turns on the backlight (stays on for 20 seconds).
	MIN MAX FS	Selects display unit: MIN, MAX or FS Minimum value Pressure peak Displays the upper limit of the scale (e.g. 400 bar)
	MENU ZERO	Press for 2 seconds. Changes the unit. Auto Power Off – on/off. Zero point calibration.
	RESET OK	Erases MIN and MAX values from the memory. Confirms the MENU functions.

4.3 Display mode

The actual pressure (ACT) is indicated in the display mode. The ACT measured value is displayed in the corresponding unit. The MIN, MAX or FS values is indicated in the lower part of the display.

Display	Discription
Bargraph	Graphic indication of the actual pressure. A pressure peak is indicated by means of a pixel (graduation mark). The indicated value is refreshed at intervals of 50 ms (20 measurements/sec).
ACT	Indicates the actual pressure. The indicated value is refreshed at intervals of 300 ms (3 times/sec).
MIN/MAX	Indicates the MIN, MAX or FS value according to setting. The indicated value is refreshed at intervals of 300 ms (3 times/s).
FS	Upper limit of the scale (e.g. 400 bar).
Units	Indicates the chosen unit.
Battery	Indicates the battery status (5 segments).

4.4 Menu functions

The following settings can be made in the MENU function:

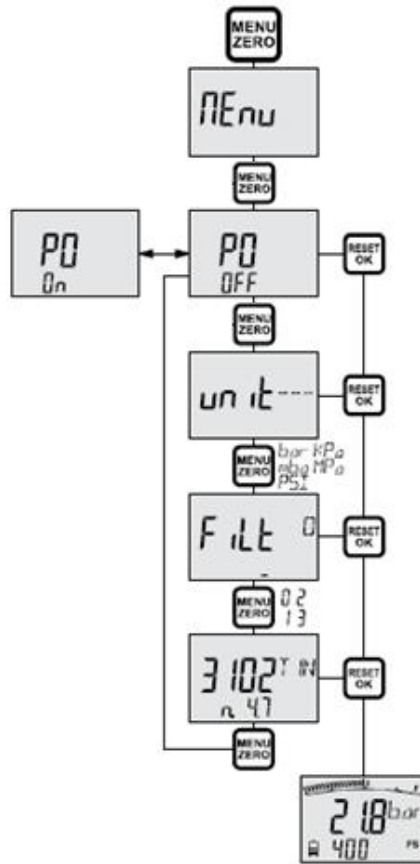
- Auto Power Off – **on** or **off**
- Unit selection (bar, mbar, PSI, kPa, MPa)

Press the MENU key for 2 seconds to activate the functions menu.

Press the MENU key again to select the next function.

Press the OK key to save the function setting.

The device then switches to the display mode.



5. Connection

The Traqc-1 digital pressure gauges are delivered with male thread G1/4 (BSPP).
When fitting directly, please ensure the references can be rotated freely.



Caution!

Observe specified torques of 25 Nm when fitting the references. The spanner size of the pressure connection is 27 mm.








Caution!

Safety Instructions for using 1.000 bar operating range:

The connection adapter (hex size 27) is approved up to nominal pressure of 1,000 bar. Please pay attention to built in test points acc. to rated nominal pressure and specified safety factor.

6. Operating


6.1 Turning on (ON)

		<p>A self-test procedure is carried out</p>
		<p>The measuring range is indicated (FS), Unit (bar)</p>
		<p>Auto Power Off function is active. Power off activates automatically after 5 minutes. This function can be altered in MENU.</p>
		<p>Display mode: ACT value displayed</p>


6.2 Turn off (OFF)

	<p>Press once (briefly)</p>
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6.3 Turn on backlight

	<p>Press for 2 seconds. The backlight goes out automatically after 20 seconds.</p>
---	---

6.4 MIN/MAX indication

	<p>MIN/MAX/FS value is indicated in the display.</p>
---	--

Use this key to toggle the required value. The key function is sequential; the values are indicated in the display in sequence. The MIN/MAX function is used to measure pressure peaks. The respective lowest (MIN) and highest (MAX) measured values are stored in the MIN/MAX memory. Values in the MIN/MAX memory are erased when the device is turned off. If different pressure tests are to be carried out in succession, the MIN/MAX memory must be erased after each measurement.

6.5 FS FullScale display


	<p>FS is displayed</p>
--	------------------------

Displaying the upper limit of the scale (FS) is designed to increase readability of the bar graph function.
 The upper limit of the measurement range is indicated numerically.
 FS is indicated in sequence after MIN and MAX.

6.6 Erasing MIN/MAX values

	<p>Erases MIN/MAX values.</p>
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6.7 OFL Display

		<p>This indicates that the applied pressure is outside given full scale range.</p>
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If the message will remain displayed, while the reference is pressure less, please consult TRADINCO.





6.8 Zero point correction (ZERO)

The zero point can be corrected manually should undesired deviations occur when no system pressure is being applied (atmospheric pressure).




Caution!

The zero point correction sets the current ACT value to zero. In order to exclude erroneous measurements, ensure **no system pressure** is being applied when carrying out this function.

		
	<p>This initiates the zero point correction. The ACT (actual) value is indicated in the display as 0.0 bar. The correction remains active until the device is turned off.</p>	
		<p>OFL/Zero is displayed for 3 seconds if the measured pressure (0 bar) is greater than 5% of the measurement range. Zero point correction cannot be carried out. Please ensure that no system pressure is being applied.</p>



6.9 Resetting the zero point correction

	<p>Turn off the device. Zero point correction is no longer active when the device is turned off and on again.</p>
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6.10 Automatic power off

	Press for 2 seconds
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Depending on the device configuration, two different displays are possible:








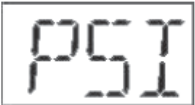
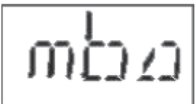
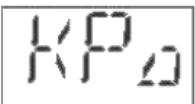
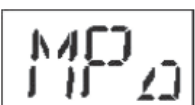

Auto Power Off	Continuous operations
	
<p>PO On Press „RESET / OK“: Auto Power Off is activated after 5 minutes.</p>	<p>PO OFF Press „RESET / OK“: The device must be turned off manually.</p>



Caution!







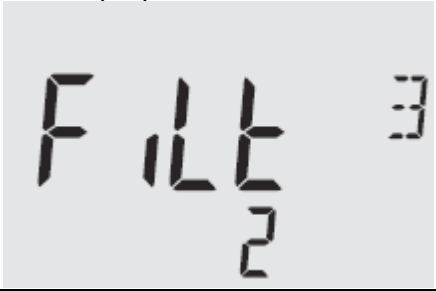

The settings Auto Power Off or Continuous operations remain stored and are active when the device is turned off and on again.


6.11 Changing the unit

	Press for 2 seconds.	
	it is displayed 	or 
	Press	
	it is displayed 	
	Press once (briefly)	
	The next unit is indicated	     




	Confirm unit selection.	
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6.12 Filter settings

	Press for 2 seconds.	
	it is displayed 	or 
	Press	
	it is displayed 	
	Press	
	it is displayed 	
	Press once (briefly)	
	The next filter selection is indicated	0 1 2 3

	Confirm filter configuration	
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6.13 Display serial number

	Press	
	it is displayed 	Display of serial number (1. line). Display of software version (2. line).
		

7. Technical data

Version	<ul style="list-style-type: none"> • Traqc-1 Digital pressure gauge with ACT - MIN and MAX Display • Bargraph display 33 segments (with peak and hold function) • 4 ½ digit LC display (15 mm) with back light illumination (50 x 34 mm) • switchable units bar, mbar, kPa, Mpa • ZERO function
Input	<ul style="list-style-type: none"> • Piezzo resistive pressure cell -1...3 bar • DMS pressure cell -1...40/60 bar and 0.../400/700/1000 bar • sampling rate 10 msec.
Pressure connection	<ul style="list-style-type: none"> • Pressure port stainless steel 1.4404 • 1/4 " BSPP (ISO 1179-2) • Standard NBR sealed
Accuracy (25°C)	<ul style="list-style-type: none"> • internal resolution ADC 12 bit = 4.096 steps • Model B: 0.5%FS +/- 1 digit • Model P: 0.1%FS +/- 1 digit • temperature influence 0.05%FS / 10 K
Housing	<ul style="list-style-type: none"> • Ø = 79 mm, D = 33 mm • Zinc Die Cast • Rubber Protection TPE
Weight	<ul style="list-style-type: none"> • 540 g
Ambient conditions	<ul style="list-style-type: none"> • Operating temperature: 0...50 °C • Fluid temperature: -20...80 °C • Storage temperature: -20...60 °C • Rel. humidity: < 85 % • Protection: EN 60529 / IP 67 • Vibration: IEC 60068-2-6 / 10...500 Hz / 5 g • Shock: IEC 60068-2-29 / 11 msec. / 25 g
Power supply	<ul style="list-style-type: none"> • Battery 2 x1.5 VDC (LR6 -AA) Alkaline (Mignon) • Battery powered with low power electronic system • programmable Auto-power OFF with battery status indication • Life time cycle 1,500 h (No back light function)

Measuring range	Display resolution				
	Bar (kg/cm ²)	PSI	mbar	kPa	MPa
-1...3 bar	-,999...3,000	-15,0...45,0	-999...3000	- 100,0...300,0	-
-1...40 bar	-1,00...40,00	-15...580	-	-100...4000	-0,10...4,00
-1...60 bar	-1,00...60,00	-15...870	-	-100...6000	-0,10...6,00
0...400 bar	0,0...400,0	0...5800	-	0...4000(x10)	0,00...40,00
0...700 bar	0,0...700,0	0...10000	-	0...7000(x10)	0,00...70,00
0...1000 bar	0,0...1000,0	0...14500	-	-	0,0...100,0

Measuring range	Overload	Burst pressure
-1...3 bar	17 bar	20 bar
-1...40 bar	80 bar	400 bar
-1...60 bar	120 bar	550 bar
0...400 bar	800 bar	1700 bar
0...700 bar	1200 bar	2500 bar
0...1000 bar	1500 bar	2500 bar



Caution!

Exceeding the maximum overload values (Pmax) can lead to malfunctions and result in the digital pressure gauge being destroyed.

The Traqc-1 DPG meets the guidelines of the European Community (EU). It is confirmed that this product is approved acc. to following standards:

- DIN / EN 61000-6-2
- DIN / EN 61000-6-3

Technical subject to change

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