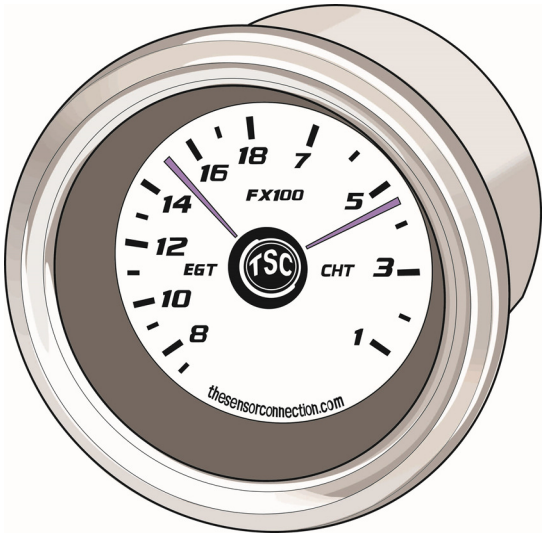
Instruction Manual

DPD Dual Series Digital Pyrometer Gauge

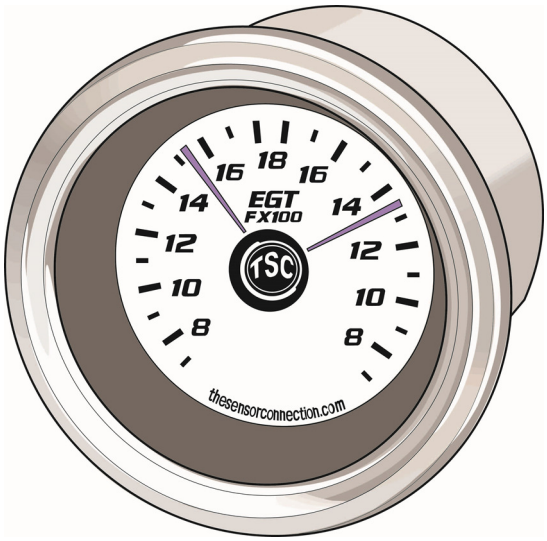
DPD Series CHT/EGT Pyrometer

Part Number	CHT Scale	EGT Scale
DPD-CHT/EGT-C	0 to 400 °C	350 to 900 °C
DPD-CHT/EGT-F	100 to 700 °F	700 to 1800 °F



DPD Series EGT/EGT Pyrometer

Part Number	EGT Scale
DPD-EGT/EGT-0700-C	150 to 700 °C
DPD-EGT/EGT-0900-C	350 to 900 °C
DPD-EGT/EGT-1200-F	200 to 1200 °F
DPD-EGT/EGT-1800-F	700 to 1800 °F



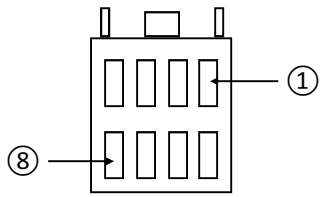
Wiring Harness:

Pin Number	Color	Function
1	**Brown**	Probe 1 Analog Output + Note: For use with data logger
2	**Red**	Probe 2 Analog Output + Note: For use with data logger
3	**Brown / White**	Probe 1 High Temperature Alarm Output
4	**Pink**	Nighttime Mode Display Dim Input * Note: Hi/LO Function activated with input voltage > 5 V
5	**Black**	Variable Display Dimming Input **
6	**Red / White**	Probe 2 High Temperature Alarm Output
7	**Orange**	System Power Input *** Note: +10 to +26 VDC
8	**Green**	System Power Ground (Connect to Vehicle Chassis)

* Typically connected to parking light (front sidelights) switch

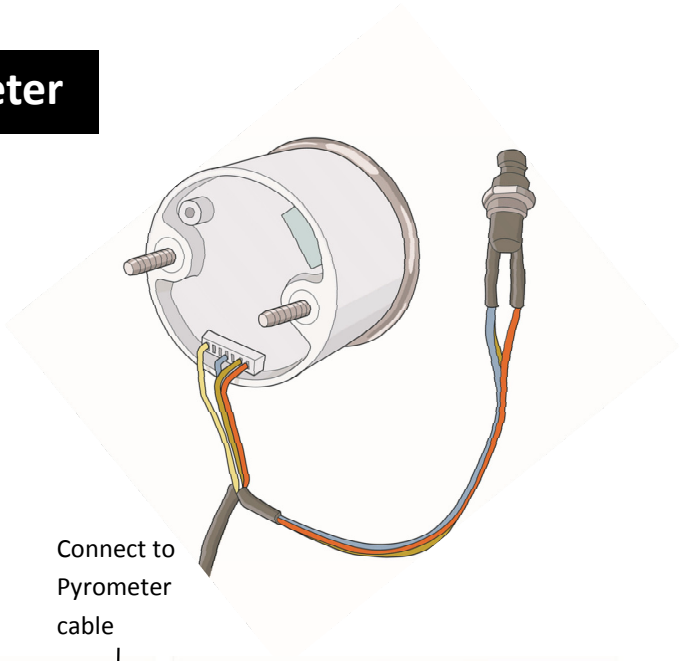
** This wire is normally connected to the dimmer resistor where the resistor is fitted in the negative end of the dash lights. If dash light dimming is performed by varying the positive voltage of the dash lights, then leave this wire dis-connected

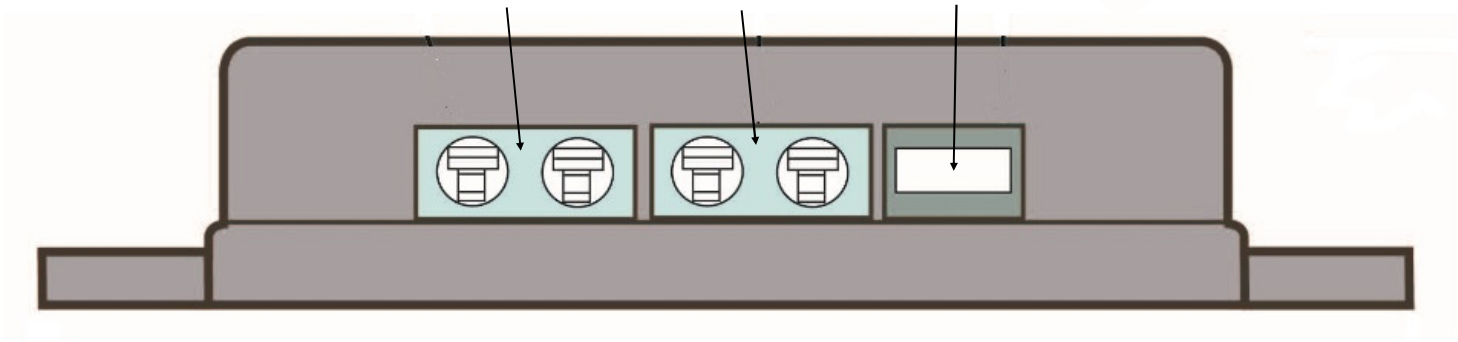
*** **CAUTION:** As a safety precaution, the +12V terminal of this product should be fused before connecting to the 12V ignition switch. We recommend using a 1 Amp, 3AG fast-acting type cartridge fuse (Littlefuse® # 312 001 or an equivalent).



Connector (Front View)

Connecting to the Amplifier:





Wiring the Probe Connector:

Use a Type K Thermocouple Mini Connector (with flat pins)

The Sensor Connection p/n: CON-MP-MINI-K

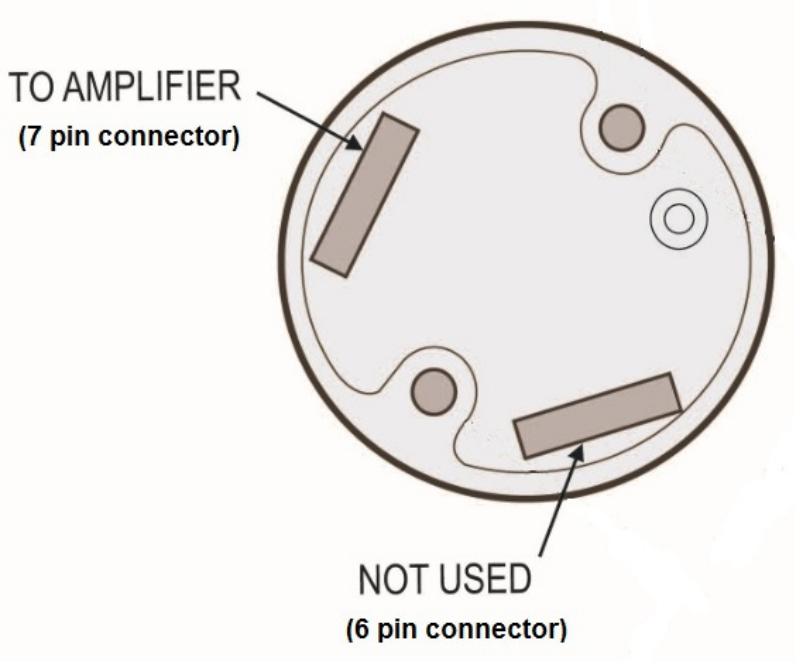
Type K Thermocouple International Color Codes:

Country Made:	USA & Canada*	Japan	Germany	British	France
(+) Positive Wire	YELLOW	RED	RED	BROWN	YELLOW
(-) Negative Wire	RED	WHITE	GREEN	BLUE	PURPLE

* Note: All EGT and CHT sensors from The Sensor Connection follow USA color codes

Connecting to the Gauge:

The back of the gauge is fitted with 2 connectors; a 6 pin connector and a 7 pin connector. Plug the cable from the amplifier in to the 7 pin connector only. The 6 pin connector is not used.



Push Button Functions:

Display Stored Peak Hold Readings	During normal operation, a momentary press of the push button will recall the stored peak temperature values. When in peak recall mode, the letters “PH” are displayed in the lower portion of the pyrometer dial face. The peak values will stay on the display for about 3 seconds before the display will return to showing the actual temperature values.
Reset Stored Peak Hold Readings	During normal operation, pressing and holding the push button for 3 seconds will reset the stored peak values
Enter Programming Mode	To enter Programming mode, press and hold the push button with ignition and park lights off. Then keep the push button pressed down while turning the ignition on. The pyrometer will power up in Programming mode.

Programming Functions:

To enter Programming mode, press and hold the push button with ignition and park lights off. Then keep the push button pressed down while turning the ignition on. The pyrometer will power up in Programming mode.

Display Value	Function	Instructions
1	**Change Display Backlight Color** Options: 11 user selectable colors	Pressing and holding the push button will cause the gauge to cycle through all of the backlight color options. Simply keep the button depressed until the desired color is on the display and then let go of the button. The gauge will then step to the next Programming function.
2	**Change Display High Temperature Warning Color** Options: RED or AMBER	Pressing and holding the push button will cause the gauge to cycle through both of the 2 warning background color options. Simply keep the button depressed until the desired color is on the display and then let go of the button. The gauge will then step to the next Programming function.
3	**Change Probe 1 Alarm Set-point**	Pressing and holding the push button will cause the gauge to step through all of the Probe 1 Alarm points. Simply keep the button depressed until the desired Alarm point is reached on the display and then let go of the button. The gauge will then step to the next Programming function.
4	**Change Probe 2 Alarm Set-point**	Pressing and holding the push button will cause the gauge to step through all of the Probe 2 Alarm points. Simply keep the button depressed until the desired Alarm point is reached on the display and then let go of the button. The gauge will then step to the next Programming function.
+ILL	**Increase Display Nighttime Brightness Level** Note: Make sure you turn on the parking lights when making adjustments otherwise you will not be able to see the effect of the adjustment	Pressing and holding the push button will cause the gauge to increase the Nighttime brightness setting. Simply keep the button depressed until the desired brightness is reached on the display and then let go of the button. The gauge will then step to the next Programming function.
-ILL	**Decrease Display Nighttime Brightness Level** Note: Make sure you turn on the parking lights when making adjustments otherwise you will not be able to see the effect of the adjustment	Pressing and holding the push button will cause the gauge to decrease the Nighttime brightness setting. Simply keep the button depressed until the desired brightness is reached on the display and then let go of the button. The gauge will then step to the next Programming function.

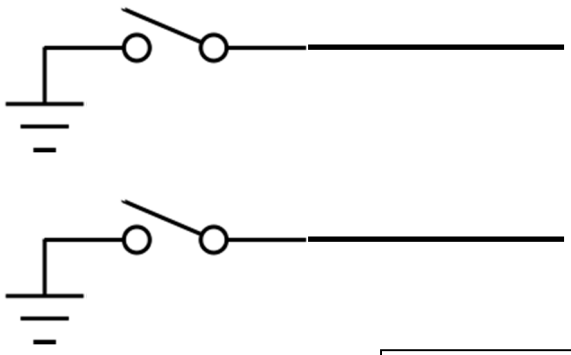
To exit Programming mode, turn off ignition and parking lights off. When you turn the ignition back on, the pyrometer will power up in Normal Operation mode with all of the settings saved.

Error Codes:

The DigiLite DPD Series gauge has an intelligent warning system that annunciates a Warning Code in the bottom portion of the gauge display. The Error Code is symbolized by the letter "E", followed by a number.

Display Value	Error	Comment
E0	**Loss of Communication with Amplifier Module**	This can be caused by a break or short in the Yellow wire coming from the Amplifier module, or possibly a failure in the Pyrometer gauge or interface that prevents communication
E3	**Probe 1 Open Circuit**	This can be caused by a break or short in the EGT probe wire that plugs onto channel #1 of the Amplifier module. Check to make sure that the connector is plugged in to the Amplifier, or that the wire connections have not come loose in the connector.
E7	**Probe 2 Open Circuit**	This can be caused by a break or short in the EGT probe or CHT sensor wire that plugs onto channel # 2 of the Amplifier module. Check to make sure that the connector is plugged in to the Amplifier, or that the wire connections have not come loose in the connector.

High Temperature Warning Alarm:



Brown/White wire (Channel #1 alarm)

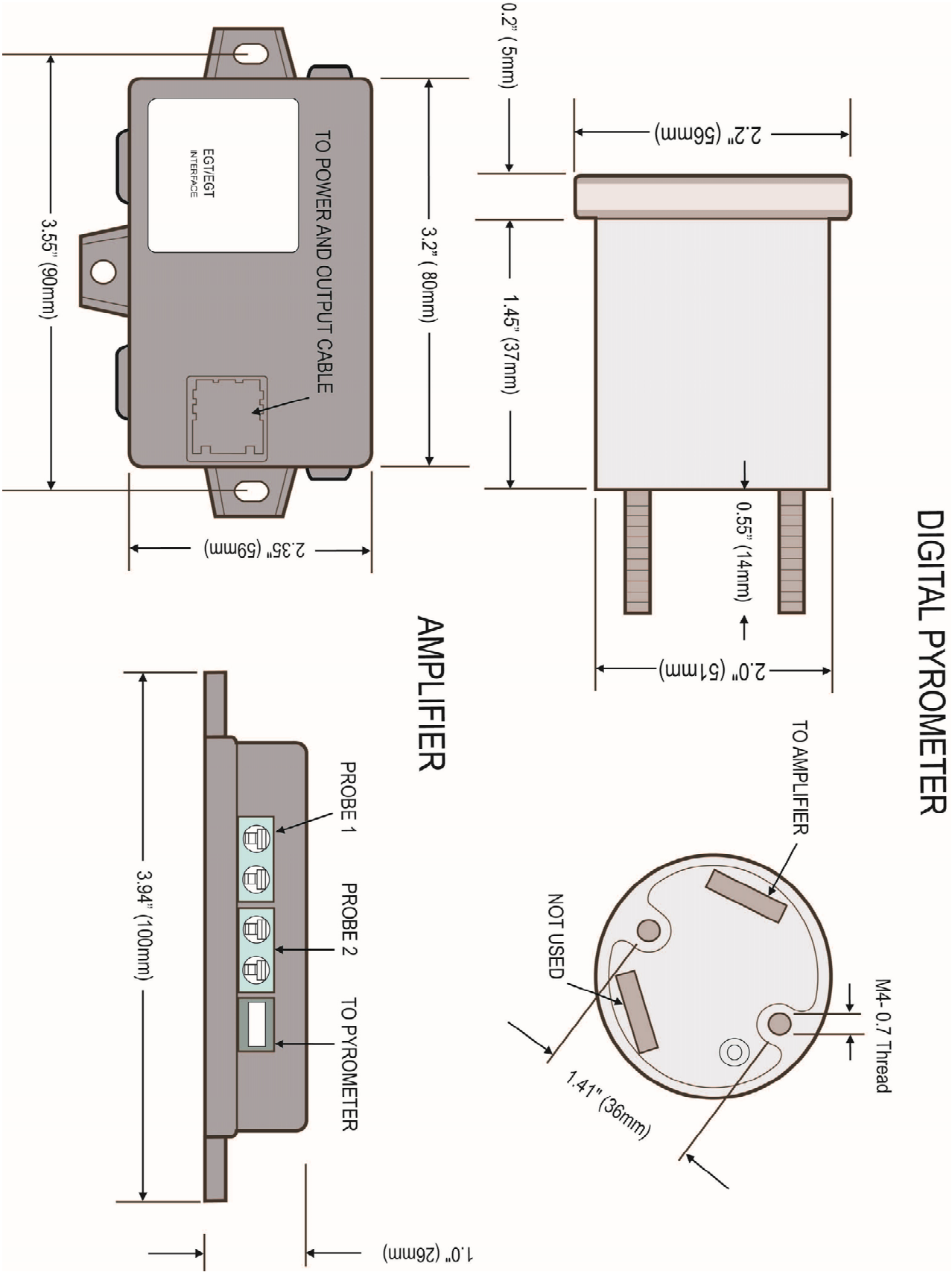
Red/White wire (Channel # 2 alarm)

Switch is Normally Open:

Switches to ground upon alarm activation

Specifications:

Probe Input #1	Type K thermocouple
Probe Input # 2	Type K thermocouple
Pyrometer Gauge Display Range **EGT/EGT degrees F** **EGT/EGT degrees C** **EGT/CHT degrees F** **EGT/CHT degrees C**	 200 to 1200 °F |or| 700 to 1800 °F 150 to 700 °C |or| 350 to 900 °C EGT: 700 to 1800 °F |and| CHT: 100 to 700 °F EGT: 350 to 900 °C |and| CHT: 0 to 400 °C
LCD Display Pointer Segments	23 discreet positions
Display Update Rate	320 mS
Pointer Sweep (each channel)	120°
Gauge LCD Display Viewing Angle	12:00 O'clock,30 degrees off axis
Panel Mount Hole Cutout	2-1/16” (52 mm)
Environment	0 to 95% RH, non-condensing
Electronics Operating Temperature Range	-5 °F to 175 °F (-20 °C to +80 °C)
Excitation Power	10 to 26 VDC (reverse polarity protected)
Current Draw	< 50 mA @ 12 VDC (at full display brightness setting)
Analog Retransmission Scale Factor **Degrees F scale** **Degrees C scale**	 2.5 mV/°F 5 mV/°C
Analog Output Update Rate	320 mS
Peak Hold Capture Rate	320 mS
High Temperature Warning Alarms	200 mA short circuit protected , normally open, switches to ground upon activation
Internal Alarm Buzzer Sound Pressure Level	90 dba at 10 cm



THE SENSOR CONNECTION
A Division of Harold G. Schaevitz Industries

⚠ Danger

• Ensure that the vehicle will remain stationary and turn off the engine before installing this product. Failure to do so could result in a fire, and could make the vehicle move during installation.

● Remove the key from the ignition and disconnect the negative (-) battery terminal prior to installation of this product. Failure to do so could result in a fire caused by an electrical short circuit.

● Take care not to install this product in a way that interferes with safety equipment such as seat belts and air bag systems or vehicle operation equipment such as engine controls, steering wheel or brake systems. Interference with normal operation of the vehicle can result in an accident or fire.

● Solder or use a solderless connector for wiring connections and make sure connections are insulated. In areas where there could be tension or sudden impacts on the wiring, safeguard the wiring with corrugated tubing or other shock absorbent material. Accidental shorts can cause fires.

⚠ Warning

● Carefully consider the installation location and driver's operation of the product before installation. Do not install the product where it interrupts driving and the safety deices of vehicle such as the air bag system. Be sure not to install the unit where it could fall. Improper installation or operation could cause the product to fall and damage the vehicle or cause serious danger by impeding driving.

● Do not disassemble or modify this product. Such actions can not only damage or destroy the product but will also void the warranty.

● Do not perform installation of this product immediately after the engine has been switched off. The engine and exhaust system are extremely hot at this time and can cause burns if touched.

● Ensure that the wiring of this product does not have an adverse impact on the other wiring of the vehicle. Any controlling devices or other electronic components of the vehicle could be damaged.

● Please keep children and infants away from the installation area. Children may swallow small parts or be injured in other ways.

⚠ Caution

● Insulate any unused wires. If any wires or connectors loosen during installation, please make sure they are correctly reattached.

● Dropping any of the components of this product will result in damage to the product.

● Excessive force on switches/terminals may result in damage to the product.

● Use only the wires provided. If additional wires are required, use the same of quality and gauge wire as is provided with the kit.

● Do not attach wires on the body of the vehicle or engine parts as this may result in damage to the product.

● Install wires away from ignition and also radio signal frequency interference as this could cause the gauges to malfunction.

● Do not place wires near the engine, exhaust pipe or turbine. It may result in damage or fusion of wires.

● Make sure the waterproof processing is done when routing wires in the engine compartment.

● When installing the sensor, do not bend the wire near the sensor body.

● Wear gloves to avoid burns when soldering and cuts when working with wiring.

● Do not share a single fuse with multiple gauges. Every gauge requires an independent fuse.

● Install gauge away from hot or wet places.

● Do not pull the wires out of connectors forcefully. The connectors may be broken and the wires may be cut. When pulling out the wires, press the lock firmly and unclip the locks of connectors.

12 MONTH LIMITED WARRANTY

The Sensor Connection LLC (TSC) warrants to the consumer that all TSC products will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12 month warranty period will be repaired or replaced at TSC's option to the consumer, when it is determined by TSC that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of parts in the TSC instruments. In no event shall this warranty exceed the original purchase price of the TSC instruments nor shall TSC be responsible for special, incidental or consequential damages or costs incurred due to the failure of this product. Warranty claims to TSC must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12 month warranty period. Breaking the instrument seal, improper use or installation, accident, water damage, abuse, unauthorized repairs or alterations voids this warranty. TSC disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured or supplied by TSC.

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