




PYROMETER AND THERMOCOUPLE INSTALLATION INSTRUCTIONS



Models: *R11021 R11031 R12021 R12031 R13021 R13031
R14021 R14031 R15021 R15031 R16021 R16031
R17021 R17031 R11022 R11032 R12022 R12032
R13022 R13032 R14022 R14032 R15022 R15032
R16022 R16032 R17022 R17032 R18022*

-  **Disconnect batteries.** Do not reconnect battery power until system is fully configured to avoid risk of shock or fire.
-  **Install Thermocouple.** The Thermocouple mounts into a 1/8" pipe thread. If the exhaust manifold is already drilled and tapped, the thermocouple can be installed at the location. If none is provided, drill (with letter "R" bit) and tap the hole using 1/8" NPT tap. Apply a small amount of anti seize lubricant to the exposed threads of the fitting and tighten using the hex (wrench flats) which are closer to the tip of the thermocouple. Adjust the depth of the probe (tip of the probe should be approximately at the center of the exhaust flow), and tighten the outermost nut no more than one full turn past finger tight.

ICON KEY	
	CAUTION
	Tools may be required
	Shown in picture

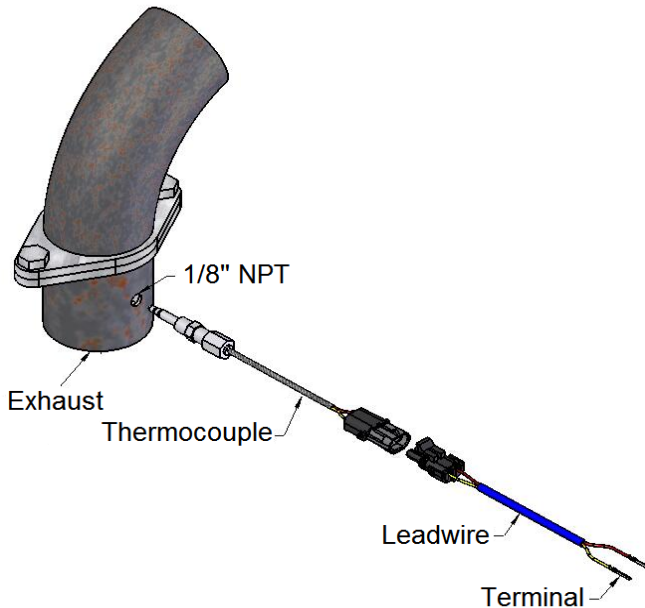


Figure 1:

Exhaust, thermocouple and lead wire.

- Install Lead Wire.** The lead wire assembly and the thermocouple are supplied with Delphi connectors for assembly convenience. Simply snap together the connectors at either end of the thermocouple and lead wire assemblies.
- Route the sensor harness to the intended gauge mounting location, using grommets as appropriate when passing through the firewall. Connect the sensor harness to the gauge connector as follows:

Form No. IS171 (Rev. D 8/27/09)

5 ✂️ Trim wires to desired length. The yellow, red, and copper wires are the [+]sensor, [-]sensor and ground connection, and connect to cavities 4, 5 and 6 of the orange connector respectively (see Figure 2).

✂️ Install the three wires into the insulation displacement connector (orange connector). Carefully lay the wires across the connector cavities, hold the connector steady with a vice or pliers and press the wires into each cavity with a small screwdriver. Each wire must be pushed completely to the bottom of its groove in the connector, to ensure a good electrical connection.

6 ✂️ An optional wiring harness is available (ISSPRO P/N R72022) to simplify wiring and provide a potentiometer for reducing the brightness of the gauge lights while still following the vehicle dimmer level. If this dimming function is not required, you can substitute your own 18 gauge wires in place of the harness, using a single wire in place of the orange and orange/black wires. Connect one end of each of these wires as follows:

- *Ground* – The black wire should connect to a clean ground on the vehicle such as the battery negative terminal or a factory ground bolt.
- *Ignition* – The red wire should be connected to a circuit that switches on with the key switch.

💡 **Wire should be fused so as not to exceed 3 amps. If the circuit does not have a fuse, or the existing fuse is higher than 3 amps, use an inline fuse.**

- *Dimmer* – Connect the orange/black wire to the factory gauge dimmer circuit by either tapping into the in-cab fuse block or by connecting directly to the wire running from the dimmer on the headlight switch.

Connect the red, orange and black wires to the orange connector as described above, in positions 1, 2, and 3 respectively. Slide the white dust cover over the orange connector once the wires are securely installed. **NOTE:** The gauge backlighting will only illuminate if both the ignition supply AND the backlighting circuits are on.

💡 **The lighting harness is designed to be used with Performax EV²™ gauges. DO NOT attempt to use this harness and potentiometer with any other gauge types.**

OPTIONAL: Daisy Chain Your Gauges – If multiple Performax EV²™ gauges are being installed in one location (such as a pod), you may use a single set of the Ignition, Ground, and Dimmer wires to connect all of the gauges. Simply pass the wires from one orange connector to the next one in a “daisy chain” configuration.

7 ✂️ Install the connector onto the back of the gauge (angled portion on end of connector pointing up as in Figure 2), and then secure the gauge in its mounting location. If drilling a mounting hole in a panel to mount this gauge, the hole size should be 2.040”. Mounting Kit R19999 is available for larger mounting holes up to 2.200”.

8 💡 Secure all wiring so that it does not interfere with moving parts or chafe on sharp edges. This may be accomplished by routing the wiring within the factory wire harness sheath, using wire ties and sheathing, and using appropriate grommets when passing through the firewall.

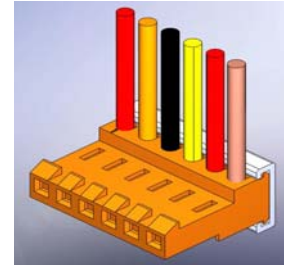


Figure 2: Connector.

1	Red	Ignition
2	Orange	Dimmer
3	Black	Ground
4	Yellow	[+] Sensor
5	Red	[-] Sensor
6	Bare	Ground