




Auto Meter 21-16 Pyro Meters Instruction Manual

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Auto Meter 21-16 Pyro Meters



Product Information

The product is a pyrometer, a sensitive and high accuracy instrument used for measuring temperature. It is available in two sizes: 2 1/16 and 2 5/8. The pyrometer must be handled and installed with care to ensure proper performance. The pyrometer comes with a 12-month limited warranty provided by Auto Meter Products, Inc.

Product Usage Instructions

Lighting

1. The 2 5/8 gauges can be mounted in a 2 5/8 diameter hole, while the 2 1/16 gauges can be mounted in a 2 1/16 diameter hole. The hole can be in the dash, a gauge panel, or an Auto Meter Gauge Pod.
2. It is recommended to connect all wiring to the gauge before mounting it into the gauge hole.
3. Refer to the general wiring diagram to connect 12-volt lighting.

Probe Installation

Start by installing the thermocouple probe in the exhaust, then work back to the gauge. For turbo engines, install the probe 1-2 inches from the turbo exhaust outlet. For non-turbo engines, install the probe 1-2 inches from the cylinder head. Proper probe location ensures accurate temperature readings.

Pre-existing 1/8 NPT Threaded Hole

- Screw the threaded fitting into the pre-existing hole.
- Insert the probe and tighten the nut already on the probe.
- Ensure the probe is oriented so that the wires do not come in contact with, or become too close to, the manifold

or other hot engine parts.

Weld Fitting

- Drill a 9/16 hole and weld the supplied bushing into the manifold or exhaust header.
- Screw the threaded fitting into the hole.
- Insert the probe and tighten the nut already on the probe.
- Ensure the probe is oriented so that the wires do not come into contact with, or become too close to, the manifold or other hot engine parts.

Stainless Clamp Method

- Use the stainless clamp to secure the probe in place.
- Adjust the probe tip screw collar to position the probe correctly.

Important: Pyrometers are sensitive, high accuracy instruments. They must be handled and installed with care to insure proper performance. Carefully read and follow these instructions, and your pyrometer will provide you with a long and accurate life.

Important



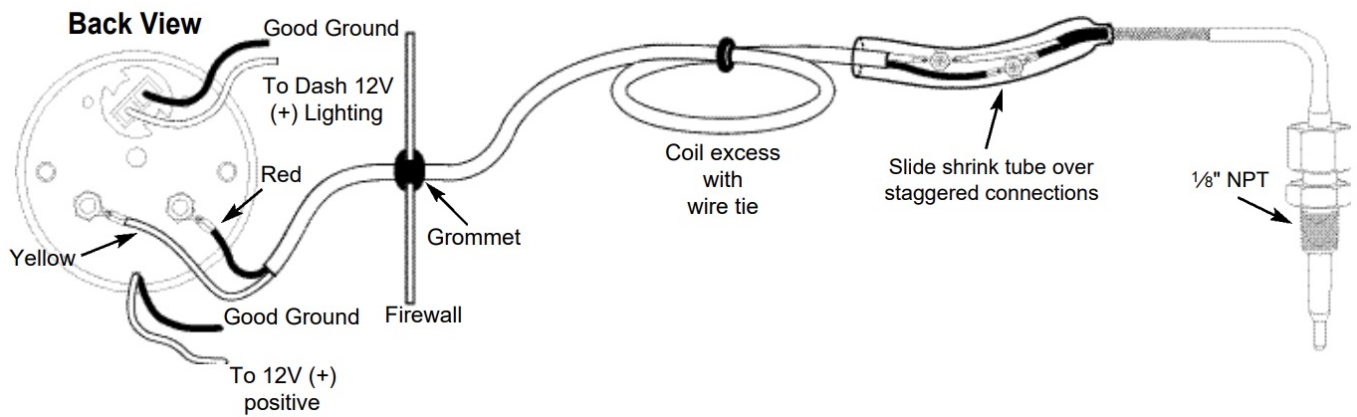
Caution: Wear Safety glasses and disconnect the battery before making any electrical connections.

Installation Instruction

Lighting

1. The 2 5/8" gauges may be mounted in a 2 5/8" diameter hole. The 2 1/1 6" gauges may be mounted in a 2 1/1 6" diameter hole. The hole may be either a hole in the dash, a gauge panel or an Auto Meter Gauge Pod. (It is best to connect all wiring to the gauge before mounting it into the gauge hole.)
2. Follow the GENERAL WIRING diagram to connect 12 volt lighting. See PROBE INSTALLATION below to install the probe.

Back View

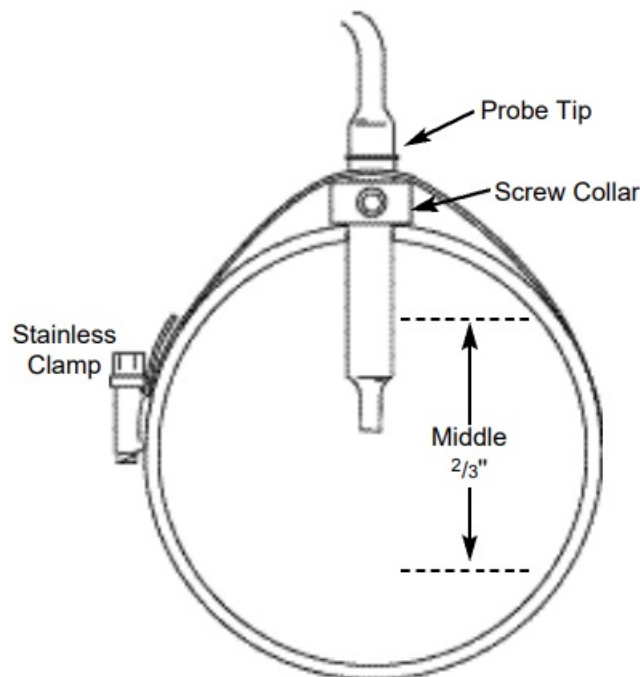


Probe Installation

- Begin by installing the Thermocouple in the exhaust, then work back to the gauge. For turbo engines, install the probe 1-2 inches from the turbo exhaust outlet. For non-turbo engines, install the probe 1-2 inches from the cylinder head. Installing the probe in the proper location will insure optimal temperature readings. The probe can be mounted three different ways, so please use the method best suited for your needs.
 - Pre-existing 1/8" NPT Threaded Hole:** Simply screw the threaded fitting into the hole, insert the probe and tighten the nut already on the probe from the factory. Make sure the probe is oriented so the wires do not come in contact with, or become too close to, the manifold or other hot engine parts.
 - Weld Fitting:** Drill a 9/16" hole and weld in the supplied bushing being careful not to distort the bushing. The bushing must be welded and not braised into the manifold or exhaust header. Screw the threaded fitting into the hole, insert the probe and tighten the nut already on the probe. Make sure the probe is oriented so the wires do not come into contact with, or become too close to, the manifold or other hot engine parts.
 - Stainless Clamp Method:** This method is for the applications that require frequent removal of the manifold or the header for service, or just faster and easier installation. Drill a 1/4" diameter hole about 6" down from the junction of the the exhaust pipe to manifold junction. Remove the 1/8" NPT bushing from the probe and replace it with the stainless clamp and set screw collar provided. Undo the clamp and slide the probe into the 1/4" hole in the clamp. Slide the set screw collar onto the probe. Before tightening the collar in position make sure that when inserted, the probe will have it's tip in the middle two-thirds of the exhaust stream. (It is not nessecary to go beyond the half way point.) Hold the clamp open when inserting the probe into the 1/4" hole. Re-join the clamp ends and tighten in position so the wires will not get close to the hot manifold/exhaust pipe. See the Illustration below for details.
- With your probe installed, the extension wire can now be connected to the probe and routed to the gauge. Pull the large shrink tube back from the screw connections on the probe. Attach the staggered end of the extension wire with the small (No. 6) ring terminals to the probe using the #6 screw and self locking nuts. Attach them Red to Red and Yellow to Yellow. Slide the shrink tube over the staggered connections to protect them. Do not shrink this tube until after the installation is complete, and correct operation is verified. If a heat source is not available the open ends may be closed with tie wires.
- The extension wire is an integral part of the pyrometer calibration. It may not be shortened or lengthened without effecting the gauge calibration. You'll need to determine a suitable location to coil the excess and tie it loosely with a wire tie. (Loosely tying the excess coil prevents embrittlement caused by vibration.) Pass the extension wire through the fire wall using an existing hole or drill a 1 1/3 2" (.343") diameter hole and use the

rubber grommet provided to protect the wire from damage. Route the wire to the gauge and connect the No. 8 terminals to the studs on back marked Yellow+ and Red-. Fasten using split lockwasher and brass nuts provided.

Stainless Clamp Method



LIMITED WARRANTY

SERVICE

For service send your product to Auto Meter in a well packed shipping carton. Please include a note explaining what the problem is along with your phone number. Please specify when you need the product back. If you need it back immediately mark the outside of the box "RUSH REPAIR," and Auto Meter will service product within two days after receiving it. (\$10.00 charge will be added to the cost of "RUSH REPAIR.") If you are sending product back for Warranty adjustment, you must include a copy (or original) of your sales receipt from the place of purchase.

12 MONTH LIMITED WARRANTY

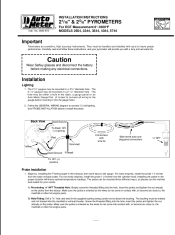
Auto Meter Products, Inc. warrants to the consumer that all Auto Meter High Performance products will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12 month warranty period will be repaired or replaced at Auto Meter's option to the consumer, when it is determined by Auto Meter Products, Inc. that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of parts in the Auto Meter instruments. In no event shall this warranty exceed the original purchase price of the Auto Meter instruments nor shall Auto Meter Products, Inc. be responsible for special, incidental or consequential damages or costs incurred due to the failure of this product.

Warranty claims to Auto Meter 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. Auto Meter Products, Inc. disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by Auto Meter.

CONTACT

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Documents / Resources

	<p>Auto Meter 21-16 Pyro Meters [pdf] Instruction Manual 21-16 Pyro Meters, 21-16, Pyro Meters</p>
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[Manuals+.](#)