MANUAL #27

INSTRUCTION MANUAL

1/8 DIN Solid State Temperature Indicator Model ETR-9004

All temperature indicators in this series are made to fit into panel cut-outs which measure 1 13/16" x 3⅝" (46mm x 92mm). A minimum of 3½" (89mm) in depth is required for electrical clearances of rear terminal connections. The following specifications are common to all models:

INPUT

Thermocouple (T/C)	Type K, J. Specified on Control Label.
RTD	PT 100 ohm, 2 or 3-wire (α = .00385) DIN (α = .00392) JIS
Cold Junction Compensation	Automatic
Input Break	Built-in, upscale on open sensor.
Input Impedance	1M ohm.
Common Mode Rejection (CMR)	CMRR 120dB, Min.
Normal Mode Rejection (NMR)	NMRR 60dB, Min. (60Hz)

POWER

Rating	120/240VAC field selectable, 50/60Hz. 12-24VDC models available on special order.
Accuracy	0.2% of SPAN.
Consumption	Less than 3VA.

ENVIRONMENTAL & PHYSICAL

Operating Temperature	10° to 125°F (-12 to 52°C).
Humidity	5 to 90% RH (non-condensing).
Insulation	20M ohm Min., (5000VDC).
Breakdown	2000VAC, 50/60Hz, 1 minute.
Vibration	10 - 55Hz, Amplitude 1.0mm.
Shock	660 ft./S^2 (20g.)
Weight	11 oz. (312 grams)

DIMENSIONS

	H – 1⅞" (48mm)
	W – 3¾" (96mm)
	D – 3¼" (83mm)
	Depth behind panel – 3" (76mm)
DIN Case	Plastic, with screw terminals on rear, adjustable brackets for panel mounting.

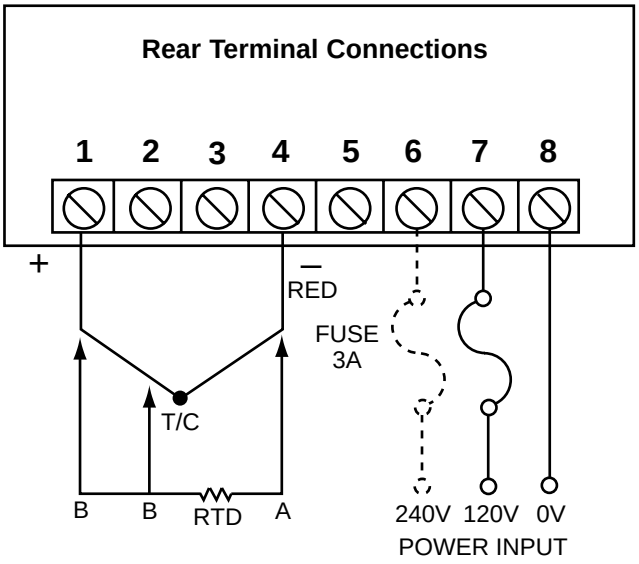
MOUNTING

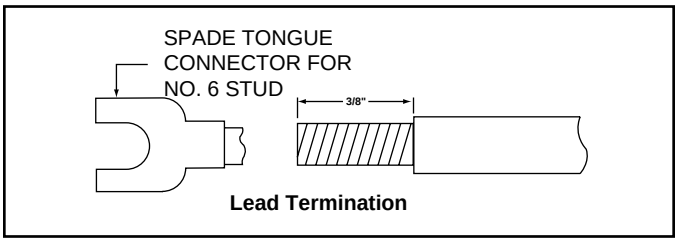
When mounting the instrument, it is important the instrument remains within the ambient temperature range of 10 to 125°F. Mounting it in any position is permissible. After inserting the instrument into the panel, secure it with the mounting bracket provided with each unit.

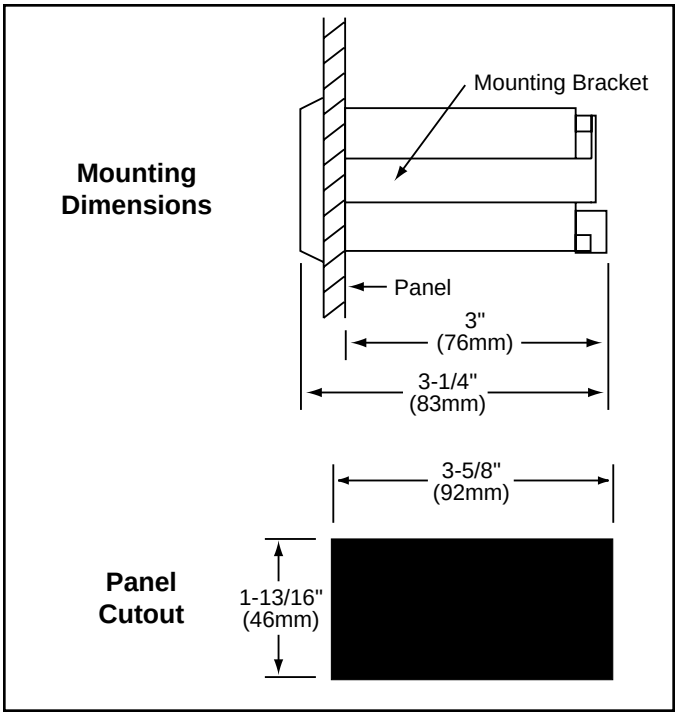
- Both solderless terminals or "stripped" leads can be used for power leads. Only "stripped" leads should be used for thermocouple connections to prevent compensation and resistance errors.
- Take care not to over-tighten the terminal screws.
- Unused control terminals should not be used as jumper points as they may be internally connected, causing damage to the unit. This indicator is not to be used in hazardous locations as defined in Article 500 of the National Electric Code.

WIRING

All wiring should conform to local and national codes.







Temperature Ranges of Ogden Indicators:

ETR-9004-01	0-1200°F	Type “J” Thermocouple
ETR-9004-02	0-600°C	Type “J” Thermocouple
ETR-9004-03	0-2500°F	Type “K” Thermocouple
ETR-9004-04	0-1200°C	Type “K” Thermocouple
ETR-9004-05	0-700°F	PT-100 RTD DIN
ETR-9004-06	0-450°C	PT-100 RTD DIN

CALIBRATION INSTRUCTIONS

WARNING–HIGH VOLTAGE PRESENT!

The indicator should be allowed to warm-up for 1/2 hour before accurately checking calibration.

Remove the front faceplate by twisting a flat screwdriver in the slot under the front-center area of the faceplate.

Calibration is accomplished by using the two potentiometers located on the right-hand side of the bottom PC board. The potentiometer to the right is the zero adjustment. The potentiometer to the left is the span adjustment. The two potentiometers have a slight effect on each other, so calibrate low-scale and high-scale at least three times.

TROUBLE SHOOTING

Experience has proven that many control problems are not caused by a defective instrument. See list below for some of the common causes of failures:

- Line wires are improperly connected.
- No voltage between line terminals.
- Incorrect voltage between line terminals.
- Connection to terminals are open, missing or loose.
- Thermocouple or RTD is open at tip.
- Thermocouple or RTD lead is broken.
- Shorted thermocouple or RTD leads.
- Short across terminals.
- Burned out line fuses.
- Defective line switches.
- Defective circuit breakers.

If these points have been checked and the indicator still does not function, it is suggested that the instrument be returned to the factory for inspection.

Do not attempt to make repairs. It usually creates costly damage. Also, it is advisable to use adequate packing materials to prevent damage in shipment.

Return To:

OGDEN MANUFACTURING CO.

ATTN: Repair Department

719 W. Algonquin Road

Arlington Heights, IL 60005

Telephone: (847) 593-8050 • FAX: (847) 593-8062