



Aircraft and Medical Instruments

UMA, Inc.
260 N. Main St.
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Phone 540-879-2040
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<http://www.umainstruments.com>

1 1/4 and 2 1/4 INCH ELECTRICAL TEMPERATURE INDICATOR
[T12 X1XX XXXX XXX], Meets TSO C43c & RCTA/DO-160D requirements *

Limitations:

- Instrument can be installed in any single or multi-engine, reciprocating or turbine fixed wing aircraft.
- To be installed in an internal section of the aircraft.
- Instrument maximum operating temperature range is from (-55)°C to 70°C.
- Maximum altitude 25,000 feet.
- Must be installed with fully shielded wiring that meets or exceeds MIL-W-16878D Type B/N, 24 AWG, or equivalent. (May be purchased from UMA, Inc. or assembled by the customer)

Installation Instructions:

- **All connections are to be made in accordance with AC 43.13.**
- **Additional wire and fuses may be necessary for installation of unit.**
- **Keep all wire and unshielded areas to a minimum.**

1. Mount indicator in desired location in aircraft's instrument panel.
2. Install temperature sensor in proper location. Connect the 9-pin connector (on the harness) to the instrument and connect the 8 foot length of 3 conductor wire to the sender (Refer to Installation Instructions of Sender for details).
3. Once harness is in place, connect black wire extending from harness to the common ground of the aircraft. Next, connect red (or white) wire from harness to the switch side of master switch. Use a one (1) amp fuse inline between the power source and the instrument, or use power from fuse/breaker panel. Use #24 AWG (or larger) for all connections and keep the unshielded portion of all connections to an absolute minimum (4" or less).

*The conditions and test required for TSO approval of this article are minimum performance standards. It is the responsibility of those desiring to install the article on or within a specific type or class of aircraft to demonstrate that the aircraft installation conditions are within the TSO standards. The article may be installed only if installation of the article is approved by the Administrator.



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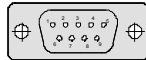
<http://www.umainstruments.com>

Specifications:

Description. Remote indicating electronic temperature instrument built to meet or exceed AS 8005 standards as per TSO C43c & RCTA/DO-160D.

Supply Voltage:	12-28 Volts DC (Nominal) 10-30 Volts DC (Max)
Current Draw:	100 mA (Maximum)
Accuracy:	± 3% (Class IIIb)
Weight:	4 oz

All wire leads to meet or exceed MIL-W-16878D Type B/N, 24 AWG, or equivalent



As viewed from solder side of connector

PIN DESIGNATION FOR 1 1/4" ELECTRONIC INSTRUMENTS

- Pin 1 Voltage Input (14 or 28 volt systems)
- Pin 2 Voltage Input (Internally connected to pin 1)
- Pin 3 Regulated Voltage output to Sender (Only when sender requires voltage)
- Pin 4 Negative Input (Used for Thermocouple and Ammeter negative input)
- Pin 5 Positive / Primary Input (Used in all gauges)
- Pin 6 EL Lighting Input (Internal lighting only)
- Pin 7 EL Lighting Input (Internal lighting only)
- Pin 8 Signal GND (Internally connected to pin 9)
- Pin 9 GND (Connect to aircraft ground)

Warranty

UMA, Inc. warrants all products to be free from defects in material and workmanship under normal use and operation. UMA does not warrant any product which has been damaged as the result of accident, abuse, negligence, improper operational voltage, lightning, fire, flood, or other acts of nature. Any indication that the unit has been opened can void warranty. Under no circumstances shall UMA be liable for any loss or damage, direct, consequential or incidental, arising from the use of or inability to use this product.

This warranty is limited to the repair or replacement, at the manufacturer's option, of any product or part thereof, which has been returned to UMA within the specified warranty period, and which after examination shall disclose to the customer service department's satisfaction that the product is defective. Transportation to the factory or authorized service center must be prepaid; the product after repair or replacement, will be returned at the expense of the dealer or end customer. This warranty does not apply to any product or integral part thereof, which has been altered or serviced by other than the manufacturer or authorized service center.

The warranty period is twelve (12) months to the user.

This warranty supersedes all other warranties either expressed or implied and shall be governed and executed under the laws of the Commonwealth of Virginia, USA