

FEATURES

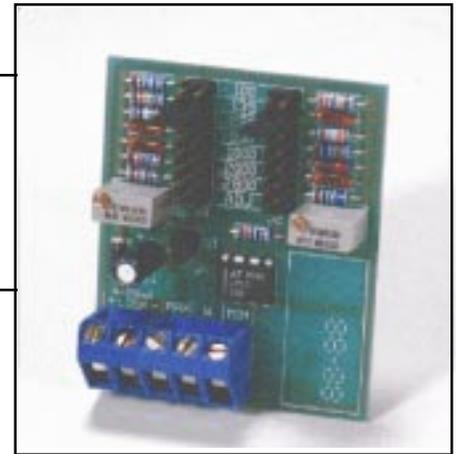
- Solid State Reliability
- Two Wire Loop Powered 4-20 mA output
- Seven (7) Selectable Resistance Input Ranges
- One (1) Adjustable Resistance Input Range

APPLICATIONS

- HVAC System Valve and Damper Position Feedback
- Remote Override for ACT Interfaces
- Photocell Transmitter

PRODUCT DESCRIPTION

The RTI is a two wire, current loop powered, resistance to current interface. The RTI is reverse polarity protected and offers linear tracking of a resistance input against the standard output signal of 4 to 20 milliamps (current source). Its small size and self powered feature lends its use to remote mounting for feedback of valve and damper position signals.



ORDERING INFORMATION

Specify: **RTI** (standard fixed ranges) _____ with **ENC1** Enclosure?

Or, if using the adjustable feature, then order one of the following for maximum accuracy in adjustment:

- RTI-1** for 0-100 to 500 ohm range
- RTI-2** for 0-500 to 2200 ohm range
- RTI-3** for 0-2200 to 5000 ohm range

SPECIFICATIONS

Electrical Requirements

Power Supply

Supply voltage	24 VDC +/- 10%
Input Resistance Ranges	RTI - Seven fixed ranges: 0-100, 0-135, 0-220, 0-500, 0-1000, 0-2000, and 0-2800 ohms RTI-1 Adjustable range: 0-100 to 500 ohms RTI-2 Adjustable range: 0-500 to 2200 ohms RTI-3 Adjustable range: 0-2200 to 5000 ohms
Current Draw	Minimum 4 mA (wiper to MIN), maximum 20 mA (wiper to MAX)
Output Signal	4 to 20 mA
Accuracy	+/- 1% of the adjustable 16 mA span, +/- 2% of the fixed 16 mA span

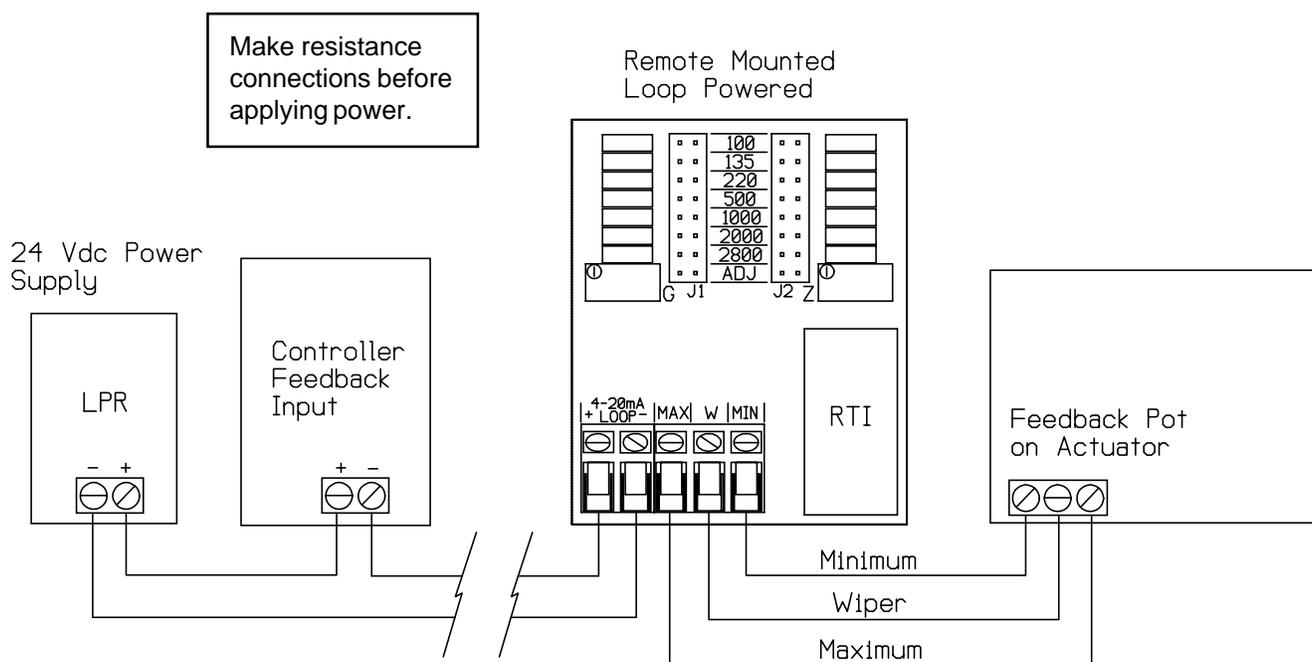
Mechanical Requirements

Connections	Terminal type: 45° Captive screw, moving clamp design in nickel plated copper alloy, maximum of one (1) 14 AWG wire.
Mounting	2.375 " length of 2.25" snap track (ENC1 optional)
Weight	2 oz.
Dimensions	2.25" W x 1.8" L x 1.0" H.

Environmental Requirements

Operating Temperature	32 to 120 deg. F
Storage Temperature	-20 to 150 deg. F
Operating Humidity	10 to 95% non-condensing

Specifications may change without notice to improve product design or function.



INSTALLATION

READ THESE INSTRUCTIONS BEFORE YOU BEGIN INSTALLATION

Ground yourself to discharge static electricity before touching any electronic equipment, as some components are static sensitive. The interface can be mounted in any position. If circuit board slides out of snap track, a nonconductive "stop" may be required. Use only fingers to remove board from snap track. Slide out of snap track or push out against side of snap track and lift that side of the circuit board to remove. Do not flex board. Use no tools.

POWER CONNECTIONS

Be sure to follow all local and electrical codes. Refer to wiring diagram for connection information.

NOTE: Make all resistance connections before powering, to prevent damage to RTI.

CALIBRATION AND CHECKOUT

If the resistance input range is one of the fixed ranges specified on the RTI, each of the jumpers J1 and J2 should be placed next to the resistance range value desired. If a resistance input range other than one of the fixed ranges (between 100 and 5000 ohms) is to be adjusted, follow the procedure noted below:

1. Both jumpers should be placed on the adjustable range or "ADJ" position.
2. Turn the G pot full counterclockwise and the Z pot full clockwise.
3. Connect limits of the resistance input to the MIN and MAX terminals of the RTI.
4. Connect a temporary jumper between the wiper and the MIN terminal.
5. With a current meter in series to the 20 mA plus and minus loop terminals, apply power to the RTI.
6. Adjust the G pot until the meter reads 4 milliamps.
7. Remove power and move the jumper from the MIN terminal to the MAX terminal (still connected to the wiper).
8. Apply power again and adjust the Z pot until the current meter reads 20 milliamps.
9. Remove power and move the wiper jumper back to the MIN terminal
10. Apply power again.
11. Repeat steps 6 through 10 until calibrated.
12. After calibration procedures are complete, remove the temporary jumper, connect the proper wiper wire, and check the connections on the others.