

Potentiometric Input 2-Wire Transmitter

Filed Mounted, Precision, Universal

Model UTI/4, UTN/4

Model UTI/4 is a precision loop-powered 2-wire transmitter with galvanic isolation between its input and the current loop output signal. The UTI/4 provides the necessary circuitry for excitation, amplification and processing of signals from Potentiometers and slide wires. Specially designed circuitry provides excellent protection from external EMI/RFI sources.

The UTN/4 is a non-isolated, lower cost version of the UTI/4, for those applications which require its precision and the RFI immunity but do not require Input/Output isolation.

The UTI/4 and UTN/4 can be easily ranged without requiring special tools or modifications. The transmitter is a member of Mescon's family of advanced Universal Input Transmitters which can be readily re-configured to accept other popular inputs such as Thermocouples, mV/mA/Volts and Pt-100 RTD sensors.



FEATURES:

- **2-wire transmitter system**
- **Eliminates ground loop errors**
- **Excellent EMI/RFI protection**
- **User selectable range**
- **User range-able**
- **Over 1000 Volts isolation (UTI)**
- **Wide ranging ZERO and SPAN**

OPTIONS:

- **NEMA 4X or NEMA 7 enclosure**
- **DIN rail mounting**



MESCON
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SPECIFICATIONS:

Input	3-wire Potentiometer / Slide wire
Output	4-20mA, 2-wire, limiting @, <28mA
Resistance	100 Ω min 20K Ω max (end-to-end)
Minimum Span	10% of end-to-end resistance
Sensor Excitation	Nominal, 100 mV
Linearity	(BSLF) Better than $\pm 0.05\%$ referred to the potentiometer wiper position
Calibration Accuracy	$\pm 0.1\%$ of span for linear input
I/O Isolation	> 1000 VDC or peak AC
C.M.R.R.	>120 db, DC to 60 Hz
EMI/RFI Protection	Tested per SAMA PMC 33.1 from 20 to 1000 MHz and field strength to 30 V/m, meets CE specifications
Output Ripple	< 0.01% of span (to 5KHz)
Adjustments	> $\pm 25\%$ for both Zero and Span
Power Supply Range	10-50 VDC, reverse polarity protected
Supply Voltage Effect	Negligible
Operating Temperature	- 20°C to 70°C, (0°F to 160°F)
Temperature Stability	$\pm 0.02\%$ of span/°F (0-100% range)
Humidity	0-95% RH, non-condensing
Maximum Load	$R_{max} = (V_{supply} - 10V)/20mA$

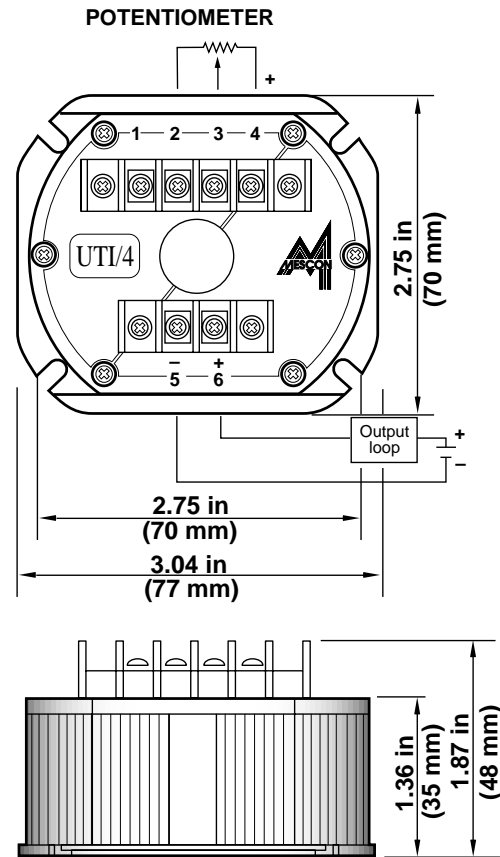
All specifications are subject to change without notice.

ORDERING INFORMATION

UTI/4 - 5 - (XX-XXX) - X



Please request our ordering and calibration diskette describing the rest of Mescon's products.



Wiring Instructions:

1. Connect the input signal according to the interconnection diagram.
2. Connect the output signal to a digital indicator.
3. Connect the power supply according to the drawing, observe for proper polarity.

Calibration and Adjustments:

It is assumed that the unit undergoing calibration has been properly ranged at the factory or workplace.

1. Connect a precision digital potentiometer (a multi-turn potentiometer with digital display) of proper value to terminals 2, 3, & 4.
2. Complete the output loop using a power supply and a precision digital current indicator.
3. Set the wiper to the desired minimum signal and adjust the ZERO pot until the current indicator reads 4.00mA.
4. Set the wiper to the desired maximum signal and adjust the SPAN pot until the current indicator reads 20.00mA.
5. Repeat steps 3 & 4 until no further adjustment is needed.

Note: If the unit can not be calibrated to the desired range, it should be returned to the workshop for proper ranging.

Distributed By:



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