

Basic Unit

DIN Rail 2-Wire Temperature Transmitters DRA-TCI-2 Thermocouple Input Model

Isolated

Linearized





DRA-RTI-2 RTD Input Model

Models DRA-TCI-2 and DRA-RTI-2 are linearized temperature transmitters that produce a 4-20 mA process signal that is directly proportional to temperature. These transmitters have exceptionally high input to output common mode rejection (CMR), a high degree of filtering that eliminates false output signals and provides a low ripple current.

Model DRA-TCI-2 is available for thermocouple types J, K, T, E, R, S or B and provides exceptional temperature linearization by applying eight segment linearization circuitry.

Model DRA-RTD-2 accepts 2 or 3 wire Pt-100 RTDs, alpha = 0.00385. Both models are field rangeable using a set of six internal dip switches for coarse ranging and front accessible zero and span potentiometers for fine adjustment. Test terminals are provided to monitor the transmitter's 4-20 mA output without disturbing the actual process loop.

Specifications COMMON SPECIFICATIONS

Output: 4 to 20 mA Supply Voltage: 10-40 Vdc

Loop Resistance: R_{max} (ohms) =

(V_{supply} - 10) / 0.02

Temperature Stability: <±0.1% of

span/°C

Common Mode Rejection (CMR): 127 dB typical dc to 60 Hz Isolation: 1500 Vdc or peak ac Response Time: 160 msec

(0 to 98%)

Test Terminals: 40 to 200 mV

represents 4-20 mA

Ambient Temperature Range: -20 to 70°C (-4 to 158°F),

5 to 95% RH

Storage Temperature Range: -30 to 85°C (-22 to 185°F)

Field Ranging: done by three "zero" DIP switches, three "span" DIP switches and two fine tuning

potentiometers

Enclosure: polycarbonate,

IP40 protection

Terminal Housing:

polycarbonate, IP20 protection Mounting: 35 mm DIN rail **Dimensions:** 3.23" H x 0.9" W x 3.90" D (82 x 22.5 x 99 mm)

Weight: 4.6 oz. (130 g Model DRA-TCI-2 Input:

Thermocouple types J, K, T, E,R,S,B (see thermocouple input types and ranges table)

Burnout Protection: upscale Cold Junction Error: ±0.9°C typical for 0 to 60°C ambient change (±3°C for types R and S)

Accuracy (Including Linearity): ±0.08% of span for type K, ±0.1% to ±0.2% for other thermocouple types, typical

MODEL DRA-RTI-2

Input: 2 or 3-wire Pt-100 RTD, alpha = 0.00385

Accuracy (Including Linearity, Hysteresis and Repeatability): <±0.1% of span

Minimum Span: 79°F (26°C)

Input Span Range:

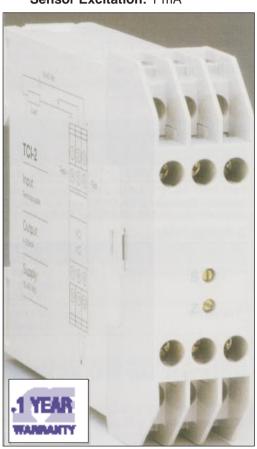
79 to 1490°F (26 to 810°C) adjusted by three DIP switches and span potentiometer

Input Zero Range:

-80 to 450°F (-62 to 232°C) adjusted by three DIP switches

and zero potentiometer

Lead Compensation Error: <0.1°C/20 Ohms lead resistance Sensor Excitation: 1 mA



Thermocouple Input Types and Ranges

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Туре	Input Range Low, °F (°C)	Input Range High, °F (°C)	Min Span °F (°C)
K	32 (0)	2462 (1350)	180 (100)
J	32 (0)	1400 (760)	180 (100)
T	32 (0)	752 (400)	180 (100)
E	32 (0)	1832 (1000)	180 (100)
R	32 (0)	3092 (1700)	1170 (650)
S	32 (0)	3092 (1700)	1170 (650)
B	32 (0)	3092 (1700)	1170 (650)

To Order (S)	Order (Specify Model Number)		
Model No.	Model No. Price Description		
DRA-TCI-2-(*)	\$210	DIN rail 2-wire thermocouple input temperature transmitter	
DRA-RTI-2	170	DIN rail 2-wire RTD input temperature transmitter	
DRN-PS-750	130	Power supply, 115/230 Vac, 24 Vdc @ 750 mA output	

Each unit supplied with complete owner's manual. *Specify thermocouple type J,K,T,E,R,S, or B.

Ordering Example: DRA-TCI-2-J DIN rail 2-wire J thermocouple input temperature transmitter with DRN-PS-750 power supply, \$210 +130 = \$340.