



\$170
Basic Unit

DIN Rail 2-Wire Temperature Transmitters

DRA-TCI-2 Thermocouple Input Model

DRA-RTI-2 RTD Input Model

- ✓ Isolated
- ✓ Linearized
- ✓ Field Rangeable



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: $\pm 0.1\%$ of span/ $^{\circ}C$

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 $^{\circ}C$ (-4 to 158 $^{\circ}F$), 5 to 95% RH

Storage Temperature Range: -30 to 85 $^{\circ}C$ (-22 to 185 $^{\circ}F$)

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: $\pm 0.9^{\circ}C$

typical for 0 to 60 $^{\circ}C$ ambient change ($\pm 3^{\circ}C$ for types R and S)

Accuracy (Including Linearity):

$\pm 0.08\%$ of span for type K, $\pm 0.1\%$ to $\pm 0.2\%$ 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):

$\pm 0.1\%$ of span

Minimum Span: 79 $^{\circ}F$ (26 $^{\circ}C$)

Input Span Range:

79 to 1490 $^{\circ}F$ (26 to 810 $^{\circ}C$) adjusted by three DIP switches and span potentiometer

Input Zero Range:

-80 to 450 $^{\circ}F$ (-62 to 232 $^{\circ}C$) adjusted by three DIP switches and zero potentiometer

Lead Compensation Error:

$< 0.1^{\circ}C/20$ Ohms lead resistance

Sensor Excitation: 1 mA



Thermocouple Input Types and Ranges

Type	Input Range Low, $^{\circ}F$ ($^{\circ}C$)	Input Range High, $^{\circ}F$ ($^{\circ}C$)	Min Span $^{\circ}F$ ($^{\circ}C$)
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 (Specify Model Number)

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.