

\$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:** $R_{max} \text{ (ohms)} = (V_{supply} - 10) / 0.02$
- Temperature Stability:** $< \pm 0.1\%$ of span/ $^{\circ}\text{C}$
- 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 $^{\circ}\text{C}$ (-4 to 158 $^{\circ}\text{F}$), 5 to 95% RH
- Storage Temperature Range:** -30 to 85 $^{\circ}\text{C}$ (-22 to 185 $^{\circ}\text{F}$)
- 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:** $\pm 0.9^{\circ}\text{C}$ typical for 0 to 60 $^{\circ}\text{C}$ ambient change ($\pm 3^{\circ}\text{C}$ 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 $^{\circ}\text{F}$ (26 $^{\circ}\text{C}$)
- Input Span Range:** 79 to 1490 $^{\circ}\text{F}$ (26 to 810 $^{\circ}\text{C}$) adjusted by three DIP switches and span potentiometer
- Input Zero Range:** -80 to 450 $^{\circ}\text{F}$ (-62 to 232 $^{\circ}\text{C}$) adjusted by three DIP switches and zero potentiometer

- Lead Compensation Error:** $< 0.1^{\circ}\text{C}/20$ Ohms lead resistance
- Sensor Excitation:** 1 mA



Thermocouple Input Types and Ranges

Type	Input Range Low, $^{\circ}\text{F}$ ($^{\circ}\text{C}$)	Input Range High, $^{\circ}\text{F}$ ($^{\circ}\text{C}$)	Min Span $^{\circ}\text{F}$ ($^{\circ}\text{C}$)
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-1000	150	Power supply, 95-240 Vac input, 24 Vdc @ 1A 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-1000 power supply, $\$210 + 150 = \360 .