

DIN Rail 2-Wire Temperature Transmitters with Integral Display

DRA-TCI-2D Thermocouple Input Model
DRA-RTI-2D RTD Input Model



\$400
Basic Unit



- ✓ **Isolated**
- ✓ **Linearized**
- ✓ **Field Rangeable**
- ✓ **3½ Digit Back-Lit Loop Powered Display**

Model DRA-TCI-2D 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-2D 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. Models DRA-TCI-2D and DRA-RTI-2D include an integral 0.3" high 3½ digit back-lit LCD temperature display.

Specifications

COMMON SPECIFICATIONS

- Output:** 4 to 20 mA
- Supply Voltage:** 12-40 Vdc
- Loop Resistance:** R_{max} (ohms) = $(V_{supply} - 12) / 0.02$
- Temperature Stability:** $< \pm 0.1\%$ 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
- Display:** 3½ digit backlit LCD, 0.3" high
- Display Range:** -1999 to 1999

(negative readout range is limited to 20% of the total span)

Enclosure: polycarbonate
Mounting: 35 mm DIN rail
Dimensions: 2.87" H x 2.2" W x 4.49" D (73 x 55 x 114 mm)

Weight: 7 oz. (200 g)

MODEL DRA-TCI-2D

Input: See input types and ranges table

Burnout Protection: upscale

Cold Junction Error: $\pm 0.9^\circ\text{C}$ typical for 0 to 60°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

MODEL DRA-RTI-2D

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°F (26°C)

Thermocouple Input Types and Ranges

Type	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 (Specify Model Number)

Model No.	Price	Description
DRA-TCI-2D-*	\$435	DIN rail 2-wire thermocouple input temperature transmitter with integral display
DRA-RTI-2D	400	DIN rail 2-wire RTD input temperature transmitter with integral display
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-2D-J DIN rail 2-wire J thermocouple input temperature transmitter with integral display and DRN-PS-750 power supply, $\$435 + 130 = \565 .



Input Span Range: 79 to 1490°F (26 to 810°C) adjusted by three DIP switches and span pot

Input Zero Range: -80 to 450°F (-62 to 232°C) adjusted by three DIP switches and zero pot

Lead Compensation Error: $< 0.1^\circ\text{C}/20$ Ohms lead resistance

Sensor Excitation: 1 mA

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