

## Miniature Low-Cost Temperature Transmitters MTX



- ✓ Two-Wire Design
- ✓ 4-20 mA dc Output
- ✓  $\pm 0.1\%$  Accuracy
- ✓ Upscale Break Protection
- ✓ Non-Isolated
- ✓ Mountable in Any Standard Protection Head
- ✓ Accepts J, K, T, E Thermocouple or 100ohm Platinum RTD Inputs



Manuals



Manuals



Mechanical

The non-isolated, low-cost MTX Series transmitters convert thermocouple or RTD signals into a 4-20 mA dc signal output that is directly referenced to the mV input of a thermocouple or resistance of a 100 ohm platinum RTD.

For Thermocouple transmitters, the 4-20mA output is not linearized. T/C transmitters are available for type K, J, T, and E with color coding for each T/C type. The transmitters for RTD's are available with the 4-20mA output directly proportional to the input resistance or with the 4-20mA output linearized to temperature.

**Note:** RTD's are slightly non-linear with the resistance diverging from actual temperature by approximately 1% at the mid point of full scale. (For linearized RTD transmitters, specify "RTD-L". Non-linearized transmitters are the more popular choice).

The MTX transmitters mount directly in NEWPORT's standard [protection heads](#) for connection to your sensor.

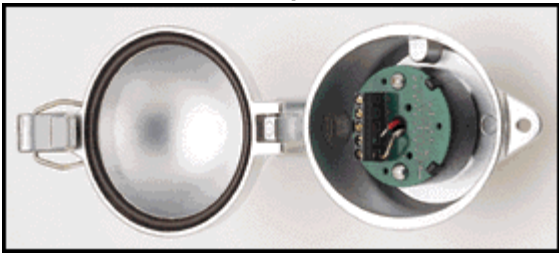
[Click here for Ultra-Miniature Transmitters](#)



SPECIFICATIONS

**Output Range:** 4-20 mA dc  
**Zero and Span Adjustment Range:** ±25% for °F and ±10% for °C  
**Accuracy:** ±0.1% of span (includes effects of linearity, hysteresis and repeatability) referenced to the mV input  
**Frequency Response:** 3dB @ 3 Hz  
**Operating Temperature Range:** -40 to 85°C (-40 to 185°F)  
**Storage Temperature Range:** -46 to 121°C (-50 to 250°F)  
**Supply Voltage:** 8-50 Vdc, 24V recommended  
**Max Loop Resistance:**  $\frac{Vs}{I} - 8$  0.020A  
**Dimensions:** 44.5 mm Dia. x 31.75 mm H (1.75" x 1.25")  
**Weight:** 15 g ( 0.53 oz.); 34 g (1.23 oz.) **Note:** Thermocouple Models output proportional to mV output of thermocouple. Not linearized to temperature.

Industrial Thermocouple Protection Head



Available from Newport

RANGE CODES

| Range        | J   | K   | T   | E   | RTD | RTD-L |
|--------------|-----|-----|-----|-----|-----|-------|
| -40 to 140°F | -   | -   | -   | -   | P01 | P01-L |
| 0 to 200°F   | J01 | K01 | T01 | E01 | P02 | P02-L |
| 0 to 300°F   | J02 | K02 | T02 | E02 | P03 | P03-L |
| 0 to 500°F   | J03 | K03 | T03 | E03 | P04 | P04-L |
| 0 to 750°F   | J04 | K04 | T04 | E04 | P05 | P05-L |
| 0 to 1000°F  | J05 | K05 | -   | E05 | P06 | P06-L |
| 0 to 100°C   | J06 | K06 | T06 | E06 | P07 | P07-L |
| 0 to 150°C   | J07 | K07 | T07 | E07 | P08 | P08-L |
| 0 to 250°C   | J08 | K08 | T08 | E08 | P09 | P0-L9 |
| 0 to 400°C   | J09 | K09 | T09 | E09 | P10 | P10-L |
| 0 to 500°C   | J10 | K10 | -   | E10 | -   | -     |
| FS           | FS  | FS  | FS  | FS  | FS  | FS    |

- Not an available range

**Product Selection** (Specify Model Number, see variations below in partnumber builder table)

| Part Number | Description | Qty. |
|-------------|-------------|------|
|-------------|-------------|------|

**Thermocouple Transmitters**

|         |                                                  |
|---------|--------------------------------------------------|
| MTX-K01 | Thermocouple K transmitter with 0 to 200°F range |
| MTX-J03 | Thermocouple J transmitter with 0 to 500°F       |