

MODELS TMPT AND TMPTR - THERMOCOUPLE OR RTD CONNECTOR WITH BUILT IN 4-20 mA TEMPERATURE TRANSMITTER

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- HIGH ACCURACY, REPEATABILITY AND STABILITY
- CONNECTOR DESIGN CONVERTS INPUT SIGNAL TO A STANDARD 2-WIRE, 4-20 mA OUTPUT
- PROVIDES "OPEN SENSOR WIRE" SIGNAL INDICATION
- ENCAPSULATED HOUSING
- COMPENSATES FOR LONG LEAD WIRES
- FACTORY CALIBRATED, NO ADJUSTMENTS REQUIRED
- MODELS FOR J, K, T (UNGROUNDING) THERMOCOUPLES AND 100 OHM, 0.00385 3-WIRE RTD'S

GENERAL DESCRIPTION

The model TMPT's internal circuitry conditions the non-linear millivolt output of a thermocouple, across a specified temperature range, and retransmits it as a standard 2-wire 4-20 mA analog output. The TMPTR also provides a 2-wire 4-20 mA output by conditioning the resistive change of a 100Ω, 0.00385 RTD sensor and transmitting it as a 4-20 mA output.

SPECIFICATIONS

TMPT SPECIFICATIONS

1. **SUPPLY VOLTAGE:** 9 to 24 VDC @ 30 mA
2. **OUTPUT:** 4 to 20 mA
3. **TEMPERATURE RANGE:** See Ordering Information
4. **ACCURACY:** ± 0.5% of full scale millivolt input @ 23° C plus the non-linearity of the thermocouple type (note that the TMPT does not compensate for thermocouple non-linearity)
5. **TEMPERATURE COEFFICIENT:** ± 0.002 mA/°C
6. **MAX LOOP LOAD:** (Ω) = (V supply - 9 V)/0.02 A
7. **TRANSMITTER OPERATING TEMPERATURE:** -40° to 85°C
8. **AGENCY APPROVAL:** CE
9. **RESPONSE TIME:** 120 msec (0 to 63% FS)
10. **THERMOCOUPLE JUNCTION:** Ungrounded
11. **CABLE CONNECTIONS:** 10 foot 2-wire shielded cable

WIRE COLOR CODE	FUNCTION
RED	+VDC
BLACK	OUTPUT
WHITE	SHIELD

* Max cable run is determined by max loop load and wire resistance (≈1000ft).

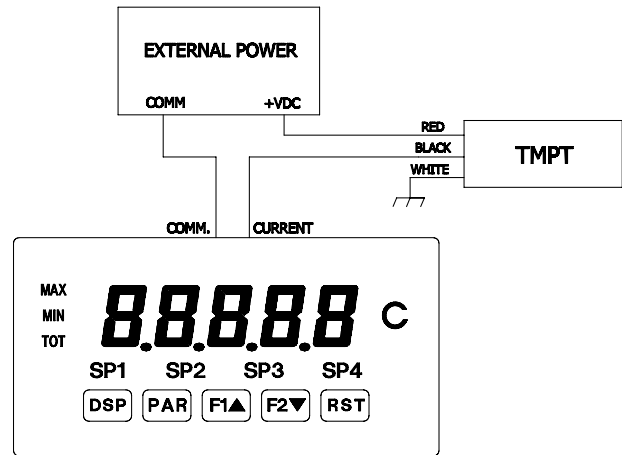
TMPTR SPECIFICATIONS

1. **SUPPLY VOLTAGE:** 9 to 24 VDC @ 30 mA
2. **OUTPUT:** 4 to 20 mA
3. **TEMPERATURE RANGE:** 2 - 569° C (36 - 1056° F)
4. **INPUT:** 3 wire, PT100 (α = 0.00385)
5. **OPEN SENSOR WIRE INDICATION:**
 - Leg 1: Open = 27 mA
 - Leg 2: Open = 2.2 mA
 - Leg 3: Open = 2.2 mA
6. **INPUT CONNECTION:** 3 prong miniature connector
7. **CABLE CONNECTIONS:** 10 foot 2-wire shielded cable

WIRE COLOR CODE	FUNCTION
RED	+VDC
BLACK	OUTPUT
WHITE	SHIELD

* Max cable run is determined by max loop load and wire resistance (≈1000ft).

WIRING CONNECTION



ORDERING INFORMATION

MODEL NO.	DESCRIPTION	TC ANSI TYPE	TEMPERATURE RANGE	PART NUMBER
TMPT	TC TRANSMITTER WITH FEMALE CONNECTOR	K	-18 to 1093 °C (0 to 2000 °F)	TMPTRN01
		K	-18 to 538 °C (0 to 1000 °F)	TMPTRN02
		T	-18 to 121 °C (0 to 250 °F)	TMPTRN03
		T	-18 to 399 °C (0 to 750 °F)	TMPTRN04
		J	-18 to 121 °C (0 to 250 °F)	TMPTRN05
		J	-18 to 538 °C (0 to 1000 °F)	TMPTRN06
TMPTTR	RTD TRANSMITTER WITH FEMALE CONNECTOR	-	2 to 569 °C (36 to 1056 °F)	TMPTRN07

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