

Product Features

- Programmable input : T/C or RTD
- 2-wire loop powered 4-20mA output
- 2, 3 or 4-wire RTD and thermocouples with linear output
- Configuration on a PC with the TxConfig-HART interface
- Cold junction compensation for thermocouples
- Galvanic isolation: 1.5 KV

Description

MP300 series are high performance temperature transmitters which convert RTDs, Thermocouples and voltage signals into a 4-20 mA current along with a superimposed HART protocol digital communication.

Complete configuration, calibration and parameters monitoring can be fully achieved through the two-wire current loop by means of a convenient PC software and USB interface called TxConfig-HART.

Sensor type input is fully programmable for most relevant RTDs, thermocouples, variable resistors, and voltage in mV.

High Isolation between input and output drastically improves stability and reliability with greater immunity to electromagnetic noises in extremely harsh industrial environments.

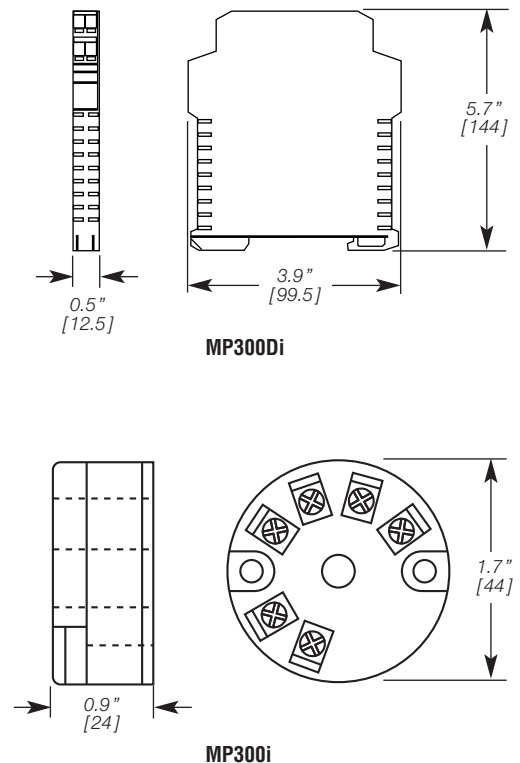


Table 1

Sensor Type	Range	Min. SPAN
Thermocouple K	-270 to 1372 °C (-454 to 2502 °F)	100 °C
Thermocouple J	-210 to 1200 °C (-346 to 2192 °F)	50 °C
Thermocouple R	-50 to 1768 °C (-58 to 3214 °F)	500 °C
Thermocouple S	-50 to 1768 °C (-58 to 3214 °F)	500 °C
Thermocouple T	-270 to 400 °C (-454 to 752 °F)	50 °C
Thermocouple N	-270 to 1300 °C (-454 to 2372 °F)	50 °C
Thermocouple E	-270 to 1000 °C (-454 to 1832 °F)	50 °C
Thermocouple B	0 to 1820 °C (32 to 3308 °F)	500 °C
Pt100	-200 to 850 °C (-328 to 1562 °F)	20 °C
Pt500	-200 to 250 °C (-328 to 482 °F)	40 °C
Pt1000	-200 to 250 °C (-328 to 482 °F)	40 °C
Cu50	-50 to 150 °C (-58 to 302 °F)	40 °C
Cu500	-50 to 150 °C (-58 to 302 °F)	40 °C
* Ni100	-60 to 180 °C (-76 to 356 °F)	50 °C
* Ni500	-60 to 180 °C (-76 to 356 °F)	20 °C
* Ni1000	-60 to 150 °C (-76 to 302 °F)	20 °C
Voltage	-10 to 75 mV	20 mV
	-100 to 100 mV	20 mV
	-100 to 500 mV	20 mV
	-100 to 2000 mV	20 mV
Resistance	0 to 400 Ohms	20 Ohms
	0 to 2000 Ohms	20 Ohms

* α = 5000 ppm/K or 6180 ppm/K

Dimensions



Specifications

Sensor input :	User defined. The supported sensors are listed in table 1, along with their maximum ranges.
Thermocouples :	Types J, K, R, S, T, N, E and B, according to IEC 60584. Impedance >> 1MΩ
Pt100 :	Excitation : 0.35 mA. = 0.00385, according to IEC 60751
Voltage :	0 a 50 mVdc. Impedance >> 1M
Total accuracy :	better than 0,3% of the maximum range for thermocouples and 0,2% for Pt100 and voltage
Output :	2-wire 4-20mA, loop powered
Resolution :	0,3 uA (12 bits).
Power supply :	12 to 35 Vdc, across the transmitter
Maximum load (RL) :	$RL (max.) = (V_{supply} - 7.5) / 0,0208 [\Omega]$
Operating Temperature :	-40 to 85°C
Humidity :	20 a 90% RH
Protection :	MP300Di : IP54 MP300i : IP40
Electromagnetic compatibility :	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-6
Dimensions :	MP300Di : 14 mm (H) x 99.5 mm (D) x 12.5 mm (W) MP300i : 24 mm (H) x 44 mm (Dia)

Cold Junction Compensation for Thermocouples.

Internal protection against polarity inversion in the loop voltage.

Cold junction compensation for thermocouples. Galvanic isolation.

Recommended wire gauge: 0.14 a 1.5 mm². Torque: 0.8 Nm.

Custom Builder

Model	Input	Range
MP300i	P, V, K, J, R, S, T, N, E, B, Ni100, Ni500, Ni1000, Cu50, Cu500, Pt100, Pt500, Pt1000	(___ / ___)
MP300Di	P, V, K, J, R, S, T, N, E, B, Ni100, Ni500, Ni1000, Cu50, Cu500, Pt100, Pt500, Pt1000	(___ / ___)

Ex.: **MP300 -j - (0/100°C)**
Thermocouple transmitter 0 -100 °C