

Product Features

- Linearized Output To Temperature
- High Quality
- Cold Junction Compensation for Thermocouples
- Factory Calibrated
- Isolated Transmitter
- Protection against polarity inversion

Description

The MP200i series is a 2 wire temperature transmitter with galvanic isolation between input and output. Micro-processor based, it was designed for flexibility, accepting mV, Pt100 and a variety of thermocouples as the input sensor.

Why use isolated transmitters?

Isolated transmitters protect the electrical instruments by eliminating ground loop effects and reduce substantially the undesirable interferences and instabilities in sensor measurements.

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 (ITS-90). Impedance >> 1MΩ

Pt100 : Excitation : 180uA.
2 or 3-wire connection (for 2-wire sensors, tie terminals 2 and 3 together).
 $\alpha = 0.00385$, according to IEC 60751(ITS-90).

Voltage : 0 a 50mVdc. Impedance >> 1M

Sensor Type	Range	Min. SPAN
Thermocouple K	0 to 1370°C (32 to 2500°F)	100°C
Thermocouple J	0 to 760°C (32 to 1400°F)	100°C
Thermocouple R	0 to 1760°C (32 to 3200°F)	400°C
Thermocouple S	0 to 1760°C (32 to 3200°F)	400°C
Thermocouple T	0 to 400°C (32 to 752°F)	100°C
Thermocouple N	0 to 1300°C (32 to 2372°F)	100°C
Thermocouple E	0 to 720°C (32 to 1328°F)	100°C
Pt100	0 to 650°C (-32 to 1020°F)	40°C
Voltage	0 to 50mV	5mV

Table 1 – MP200i series input sensor

Total accuracy : better than 0,3% of the maximum range for thermocouples and 0,2% for Pt100 and voltage;

Response Time : < 500ms;

Output : 2-wire 4-20mA, linear with respect to the measured temperature.

Resolution: 0,001mA (14 bits).

Power supply : 12 to 35Vdc, across the transmitter;

Maximum load (RL) : $RL (max.) = (V_{supply} - 12) / 0,02 [\Omega]$

Operating Temperature : -40 to 85°C

Humidity : 0 a 90% RH

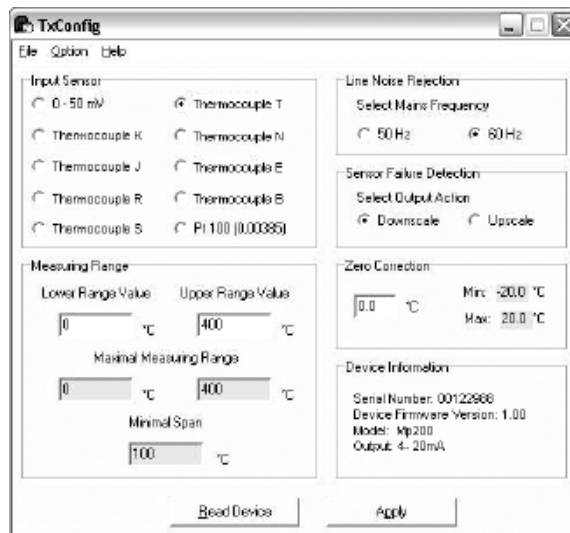
Electromagnetic compatibility : EN 50081-2, EN 50082-2

Isolation : 1000Vac for 1 min. between sensor input and the 4-20mA loop

Cold Junction Compensation for Thermocouples



Configuration from the PC*



* The TxConfig Interface and Software ordered separately

Ordering Information

Model	Input	Range
MP200i	Pt100 (P), Voltage (V), K,J,R,S,T,N,E,B	(/)
MP200Di	Pt100 (P), Voltage (V), K,J,R,S,T,N,E,B	(/)

Ex1 : **MP200i-P (0/200)**
Isolated RTD Transmitter, Pt100, 0 -200°C

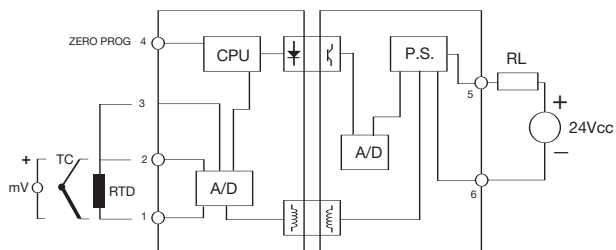
Ex2 : **MP200i-J (0/200)**
Isolated T/C transmitter, Type J, 0 -200°C

MP200i SERIES

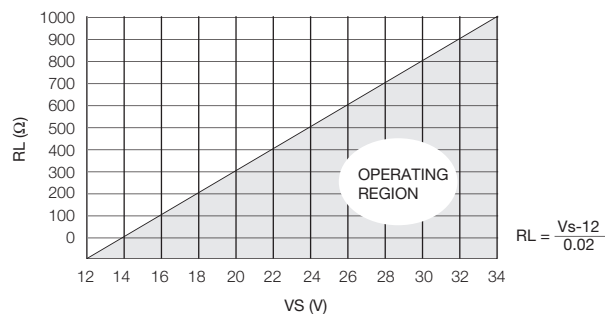
Isolated Programmable
Temperature Transmitter, w/4-20mA



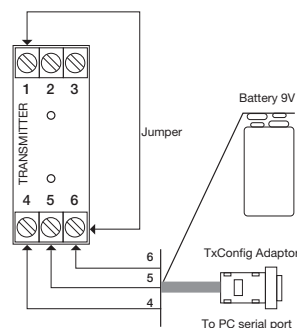
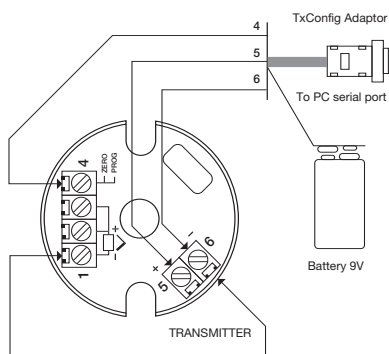
BLOCK DIAGRAM



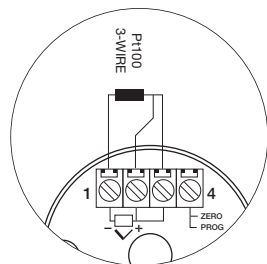
LOAD & POWER SUPPLY



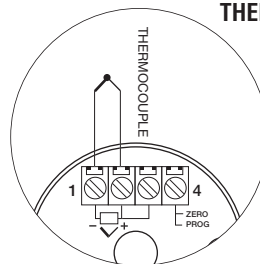
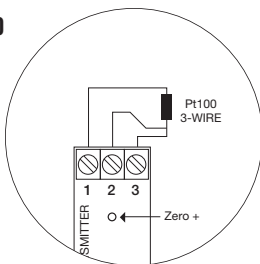
TxConfig CONNECTIONS



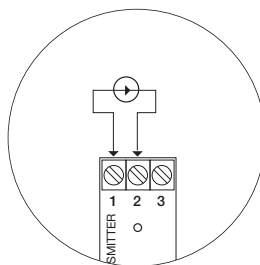
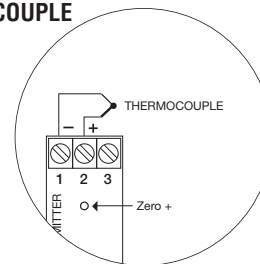
ELECTRICAL CONNECTIONS



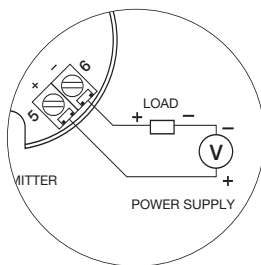
PT100



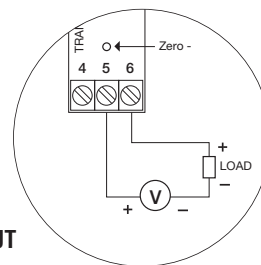
THERMOCOUPLE



4-20mA



OUTPUT



DIMENSIONS

