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 >> 1 MΩ

Pt100: Excitation: 0.8 mA, α = 0.00385, according to IEC 60751 (ITS-90).

For 2-wire sensors, tie terminals 3 and 4 together.

Pt1000: 3-wire type, Excitation: 0.8 mA, α = 0.00385, according to IEC 60751 (ITS-90).

For 2-wire sensors, tie terminals 3 and 4 together.

NTC $R_{25°C}$: 10 kΩ ±1 %, $B_{25/85}$ = 3435

Voltage: 0 to 50 mVdc. Impedance >> 1 MΩ

0 to 100 mVdc. Impedance >> 1 MΩ (*)

(*) Feature available for devices with firmware version starting at V2.0x.

Sensor Type	Maximum Measurement Range	Minimum Measurement Range
Voltage	0 to 50 mV	5 mV
Voltage	0 to 100 mV	10mV
Thermocouple K	-150 to 1370 °C	100 °C
Thermocouple J	-100 to 760 °C	100 °C
Thermocouple R	-50 to 1760 °C	400 °C
Thermocouple S	-50 to 1760 °C	400 °C
Thermocouple T	-160 to 400 °C	100 °C
Thermocouple N	-270 to 1300 °C	100 °C
Thermocouple E	-90 to 720 °C	100 °C
Thermocouple B	500 to 1820 °C	400 °C
Pt100	-200 to 650 °C	40 °C
Pt1000	-200 to 650 °C	40 °C
NTC	-30 to 120 °C	40 °C

Table 1 – Sensors accepted by the transmitter

Switch-on delay: < 2.5 s. The accuracy is only guaranteed after 15 minutes.

Reference terms: Ambient: 25 ° C; voltage: 24 Vdc, load: 250 Ω; settling time: 10 minutes.

Temperature effect: < ±0.16 % / 25 °C

Response time: Typical 1.6 s.

Maximum allowable voltage at input terminals: 3 V

RTD current: 800 μA

RTD cable resistance effect: 0.005 °C / Ω

Maximum allowable cable resistance for RTD: 25 Ω

Sensor Type	Typical Accuracy	Maximum Accuracy
Pt100 / Pt1000 (-150 to 400 °C)	0.10 %	0.12 %
Pt100 / Pt1000 (-200 to 650 °C)	0.13 %	0.19 %
K, J, T, E, N, R, S, B	0.1 % (*)	0.15 % (*)
mV	0.1 %	0.15 %
NTC	0.3 °C	0.7 °C

Table 2 – Calibration error, percentage of the full measurement range

(*) Add cold junction compensation: < ± 1 °C

Power supply influence: 0.006 % / V typical (percentage of the full measure range).

Output (4-20 mA): 4-20 mA or 20-4 mA current, 2-wired; and proportional to the configured range.

Output resolution (4-20 mA): 2 μA

Output (0-10 Vdc): 0-10 Vdc or 10-0 Vdc voltage, and proportional to the configured range.

Output resolution (0-10 Vdc): 0.0025 V (12 bits)

Power supply: 10 to 30 Vdc (output 4-20 mA) and
12 to 30 Vdc (output 0-10 Vdc).

Maximum load (RL): RL (max.) = (Vdc – 10) / 0.02 [Ω]
Where: Vdc = Power supply voltage (10-30 Vdc)

Operating temperature: -40 to 85 °C

Humidity: 0 to 90 % RH

Electromagnetic compatibility: EN 61326-1:2006

No electrical isolation between input and output.

Internal protection against polarity inversion.

Cold junction compensation for thermocouples.

Connection wire cross section: 0.14 a 1.5 mm²

Screw tightening: 0.8 Nm

Housing: ABS UL94-HB

Certification: CE, UKCA