

Q2 / Q2-X



Universal Programmable 2-wire Transmitters



Q2 / Q2-X are universal, isolated 2-wire transmitters for temperature and other measurement applications. They combine competitive pricing, functionality and simple configuration. Useful error correction functions improve the accuracy.

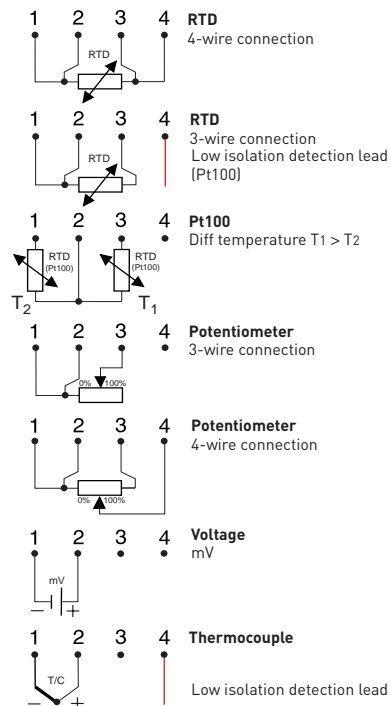
- Fully universal, linearized and high-isolation
- Accepts RTD, T/C, mV and Ω
- Sensor error and system (sensor/transmitter) error correction for highest total accuracy
- Full access to all features while in operation
- NAMUR compliant
- Consistent sensor break function
- Simplified loop check-up with calibration output
- Low sensor isolation detection

Specifications:

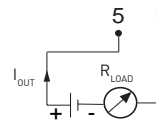
Input RTD	3-, 4-wire connection
Pt100 ($\alpha=0.00385$)	-200 to +1000 °C / -328 to +1832 °F
Pt1000 ($\alpha=0.00385$)	-200 to +200 °C / -328 to +392 °F
PtX $10 \leq X \leq 1000$ ($\alpha=0.00385$)	Upper range depending on X-value
Pt100 ($\alpha=0.003902$)	-200 to +1000 °C / -328 to +1832 °F
Pt100 ($\alpha=0.003916$)	-200 to +1000 °C / -328 to +1832 °F
Ni100 ¹⁾ , Ni120 ²⁾	-60 to +250 °C / -76 to +482 °F
Ni1000 ¹⁾	-100 to +150 °C / -148 to +302 °F
Cu10 ³⁾	-200 to +260 °C / -328 to +500 °F
Input Potentiometer / resistance	3-, 4-wire connection, 0 to 2000 Ω
Input Thermocouples	Types B, C, E, J, K, L, N, R, S, T, U
Input mV	-10 to +500 mV
Sensor failure / Low isolation	User definable output
Adjustments - Zero	Any value within range limits
Adjustments - Minimum spans	
Pt100, Pt1000, Ni100, Ni1000	10 °C / 18 °F
Potentiometer	10 Ω
T/C, mV	2 mV
Output	4-20 / 20-4 mA, temperature linear
Operating temperature	-40 to +85 °C / -40 to +185 °F
Galvanic isolation	1500 VAC, 1 min
Power supply	Q2: 6.5 to 36 VDC Q2-X: 8 to 30 VDC
Intrinsic safety	
Q2-X ATEX:	II 1 G EEx ia IIC T4-T6
Q2-X FM:	IS Class I, DIV 1, GP A-D
Q2-X CSA:	Class I, Groups A-D
Typical accuracy	± 0.1 % of span
Connection head	DIN B or larger

¹⁾DIN 43760 ²⁾Edison No. 7 ³⁾Edison No. 15

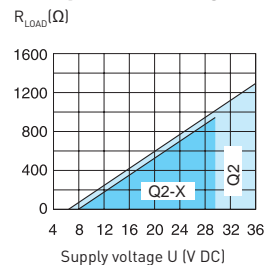
Input connections



Output connections



Output load diagram



$$R_{LOAD} = (U - 6.5) / 0.022 \text{ (Q2)}$$

$$R_{LOAD} = (U - 8) / 0.022 \text{ (Q2-X)}$$

Dimensions

