IPAQ R530

Smart HART-compatible 2-wire Transmitter

HART COMMUNICATION PROTOCOL   **IEC**   **IECEx**   **Ex**

FM APPROVED   **CE**   WARRANTY 5 YEAR   **N** NFC

IPAQ R530 is a modern, HART® temperature transmitter developed to meet the highest standards of accuracy and reliability. A universal transmitter compatible with RTD, thermocouples, voltage and potentiometer sensors. It is fully compatible with HART® 7 and offers extended diagnostic information, for example device error, sensor and wiring conditions.

IPAQ R530 supports communication via NFC® (Near-field communication) and Bluetooth® which makes it possible to configure and monitor the transmitter remotely.
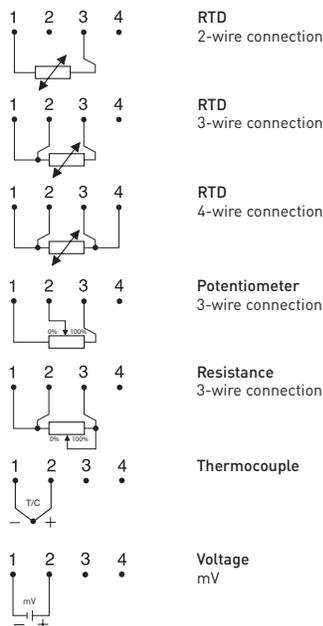
- High accuracy and long term stability
- Accepts RTD, T/C, mV and ohm
- Sensor error correction
- 50-point Customized Linearization and Callendar-Van Dusen
- Low temperature drift
- High security - Password protection and date of changes logged
- Configuration via USB, without external power
- Runtime counter - hour counter for elapsed operational time
- Communicates with HART Communicator or PC via HART modem
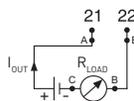- Integrated in Emerson AMS and Siemens PDM systems

Specifications:

Input RTD		2-, 3-, 4-wire connection
Pt100 (α =0.00385)[1]		-200 to +850 °C / -328 to +1562 °F
PtX 10 ≤ X ≤ 1000 (α =0.00385)[1]		-200 to +850 °C / -328 to +1562 °F
Pt100 (α =0.003916)[2]		-200 to +850 °C / -328 to +1562 °F
Ni100[3], Ni120[4]		-60 to +250 °C / -76 to +482 °F
Ni1000[3]		-50 to +180 °C / -58 to +356 °F
Cu10[5]		-50 to +200 °C / -58 to +392 °F
Input Resistance / potentiometer		0 to 10000 Ω / 100 to 10000 Ω
Input Thermocouples		Types B, C, D, E, J, K, N, R, S, T
Input mV		-10 to +1000 mV
Sensor failure		Upscale (≥21.0 mA) or downscale (≤3.6 mA) action
Adjustments - Zero		Any value within range limits
Adjustments - Minimum spans		
Pt100, Pt1000, Ni100, Ni1000		10 °C / 18 °F
Resistance / potentiometer		10 Ω / 10 %
T/C, mV		2 mV
Output		4-20 mA / 20-4 mA, temperature linear
Operating temperature		-40 to +85 °C / -40 to +185 °F
Galvanic isolation		1500 VAC, 1 min
Power supply	IPAQ R530	8.5...36.0 VDC
	IPAQ R530X	8.5...30.0 VDC
Intrinsic safety		
IPAQ R530X ATEX:		II 1G Ex ia IIC T6...T4 Ga
IPAQ R530X IECEx:		Ex ia IIC T6...T4 Ga
IPAQ R530X FM US:		IS CL I Div 1 GP A-D, T6...T4[6]
IPAQ R530X FM CA:		Cl I Zn 0 AEx/Ex ia IIC T6...T4 Ga[6]
Typical accuracy		±0.08°C or ±0.08% of span
Mounting		35 mm DIN rail acc. to EN 60715

[1] IEC 60751, [2] JIS C 1604, [3] DIN 43760, [4] Edison No. 7, [5] Edison No. 15, [6] T6...T4 are depending on effect
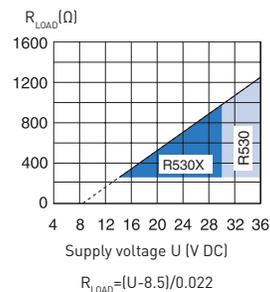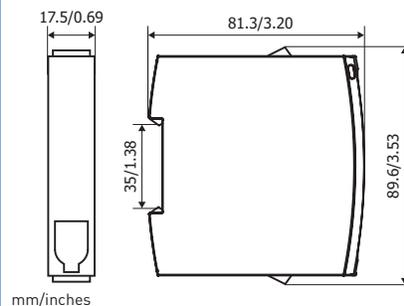
Input connections

RTD 2-wire connection

RTD 3-wire connection

RTD 4-wire connection

Potentiometer 3-wire connection

Resistance 3-wire connection

Thermocouple

Voltage mV

Output connections

Output load diagram

R_{LOAD}=(U-8.5)/0.022

Dimensions

17.5/0.69   81.3/3.20   35/1.38   89.6/3.53

mm/inches

Ordering information

IPAQ R530	70R5300010
IPAQ R530X (ATEX, IECEx)	70R530X010
IPAQ R530X (cFMus, ATEX, IECEx)	70R530F010
ICON-X, PC configuration kit	70CFGUSX01
ICON-BT, Bluetooth® configuration kit	70CFGBT001