IPAQ®



C202
PC-Programmable 2-wire Transmitter for Pt100 Input

IPAQ C202 is a digital, easy-to-use temperature transmitter developed specifically for measurements with Pt100 sensors. Its robust design and high quality gives excellent performance and accuracy also under harsh conditions. The IPAQ C202 is also available with ATEX and IECEx certificates making it suitable for a wide range of applications.

With the new runtime counter function you can easily supervise the elapsed operational time between calibrations.

Measurements with Pt100 sensors in 3-wire connection
IPAQ C202 accepts inputs from Pt100 sensors in 3-wire connection: Pt100 acc. to IEC 60751 (α=0.00385)

Runtime counter
With the runtime counter function you can for example easily supervise the elapsed operational time.

Temperature linear output
Fully temperature linear 4-20 mA output.

High accuracy
With an accuracy of ±0.1 °C / ±0.2 °F or ±0.1 % of span (the largest apply) C202 offers an outstanding performance in its class.

Sensor matching for maximum accuracy
A matching to a calibrated temperature sensor can easily be performed by entering the sensor errors in the low and high ends of the measuring range.

Designed for harsh conditions
Rugged design tested for 10 g vibrations.

Mounting, wiring and testing
C202 is designed to fit inside connection heads type DIN B or larger.
The large centre hole, dia. 7 mm / 0.28 inch, the robust terminals with test connections and the low height greatly simplify the mounting, wiring and testing procedure.

Configuration without external power
Edit or read the configuration off-line, i.e. without power supply, by just connecting the USB-interface to a PC.

ConSoft, easy-to-use Windows configuration software
The simple and user friendly software, ConSoft, is used for transmitter configuration in seconds. In one window all parameters are set, such as measuring range, sensor failure action, error corrections etc.

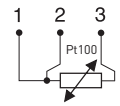
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Specifications

Input RTD		
Pt100 (IEC 60751, α=0.00385)	3-wire connection	-200... +850°C / -328...+1562°F
Sensor current		≤ 0.5 mA
Maximum sensor wire resistance		20 Ω/wire
Monitoring		
Sensor break and sensor short circuit monitoring		Upscale (≥21.0 mA) or downscale (≤3.6 mA) action
Adjustments		
Zero adjustment		Any value within range limits
Minimum span		20 °C / 36 °F
Sensor error compensation		±10% of span for span <100°C/180°F, otherwise ±10°C/±18°F
Output		
Output signal		4...20 mA, temperature linear
NAMUR compliance		Current limitations and failure currents acc. to NAMUR NE 43
Adjustable filtering level		0.13 to 54 s, (default 0.9 s)
Permissible load, see load diagram	Standard version	818 Ω @ 24 VDC
	Ex version	727 Ω @ 24 VDC
General data		
Isolation		Not galvanically isolated
Power supply, polarity protected	Standard version	6...32 VDC
	Ex version	8...30 VDC
Environment conditions		
Ambient temperature	Storage and operation	-40...+85°C / -40...+185°F
Humidity		0...98% RH (non-condensing)
Vibrations		Acc. to IEC 60068-2-6, test Fc, 10...2000 Hz, 10 g
Shock		Acc. to IEC 60068-2-27, test Ea
Rough Handling		Acc. to IEC 60068-2-31:2008, test Ec
EMC	Standards	Directive: 2014/30/EU Harmonized standards: EN 61326-1, EN 61326-2-3
	Immunity performance	ESD, Radiated EM-field, Magnetic Fields: Criteria A
		Burst, conducted RF: Criteria A
		Surge: standard deviation 1% of span
Accuracy and stability		
Basic accuracy		Max of ±0,1K or ±0,1% of span
Temperature influence	Deviation from 20 °C / 68 °F	Max. of ±0.25 °C/25 °C or ±0.25% of span/25 °C
		Max. of ±0.5 °F/50 °F or ±0.28% of span/50 °F
Sensor wire influence		±0.005°C/Ω / ±0.009°F/Ω, with equal wire resistance
Supply voltage influence		Negligible
Long-term stability		±0.1 % of span per year
Housing		
Material, Flammability (UL)		PC/ABS + PA, V0
Mounting		DIN B-head or larger, DIN rail (with mounting kit)
Connection		Single/stranded wires, Max. 1.5 mm^2, AWG 16
Weight		32 g / 0.07 lb
Protection, housing / terminals		IP 65 / IP 00
Terminal		Single/stranded wires, Max. 1.5 mm^2, Max 0.5 Nm torque
Ex Approvals (IPAQ C202X)		
ATEX		II 1 G Ex ia IIC T6...T4 Ga
IECEx		Ex ia IIC T6...T4 Ga

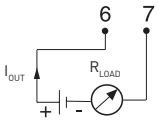
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Input connections



Pt100
3-wire connection

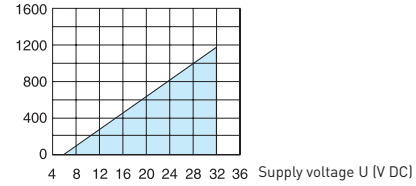
Output connections



Output load diagram

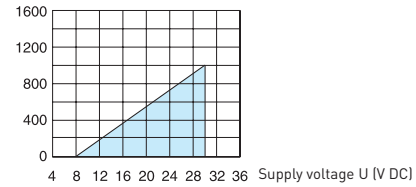
Standard version

$R_{LOAD}(\Omega) = (U-6)/0.022$



Ex version

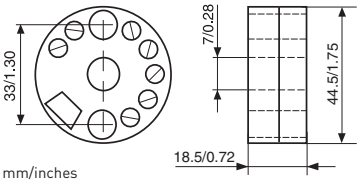
$R_{LOAD}(\Omega) = (U-8)/0.022$



Ordering information

IPAQ C202	70C2020010
IPAQ C202X (Ex-approved version)	70C202X010
PC configuration kit (USB-conn.)	70CFGUS001
Head mounting kit	70ADA00017
Rail mounting kit	70ADA00015

Dimensions



mm/inches

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All information subject to change without notice.

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