ICS
SCHNEIDER
MESSTECHNIK

IPAQ®

R202
PC-Programmable
2-wire Transmitter
for Pt100 Input

CE 5 YEAR WARRANTY

IPAQ R202 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.

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 R202 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 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) R202 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.

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.

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	818 Ω @ 24 VDC

General data

Isolation	Not galvanically isolated
Power supply, polarity protected	6...32 VDC

Environment conditions

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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

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Material, Flammability (UL)		PC/ABS + PA, V0/HB
Mounting		Rail acc. to DIN 50022 / EN 60715, 35 mm / 1.38"
Connection	Plug-in terminals	Single/stranded wires, Max. 1.5 mm², AWG 16
Weight		50 g / 0.11 lb
Protection, housing / terminals		IP 20 / IP 00

Input connections

Pt100
3-wire connection

1 2 3

Pt100

Output connections

21 22

I_{OUT} R_{LOAD}

+ –
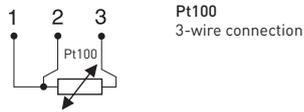
Output load diagram

Standard version

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

Supply voltage U (V DC)

Dimensions

17.5/0.69

81.3/3.20

35/1.38

89.6/3.53

mm/inches

PC communication port
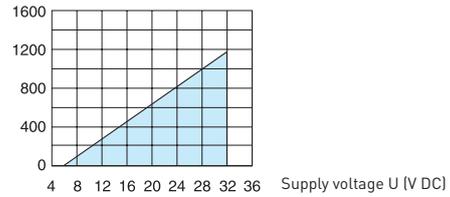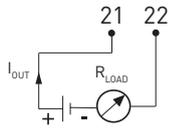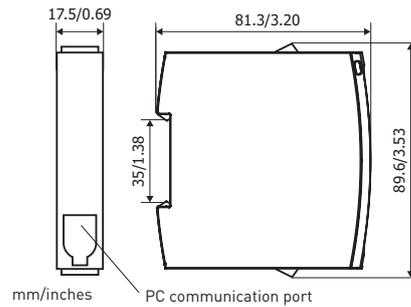
Ordering information

IPAQ R202	70R2020010
PC configuration kit (USB-conn.)	70CFGUS001