IPAQ®

C201
Analog
PC-Programmable
2-wire Transmitter
for Pt100 Input

CE

5 YEAR WARRANTY

C201 is an analog, non-isolated, easy-to-use 2-wire transmitter for Pt100 input.

Configuration is made in seconds with the user friendly software, ConSoft, without need for calibration.

C201 is designed for Pt100 input in 3-wire connection. Different Pt100 standards can be chosen.

Reduced height simplifies mounting in low connection heads.

Measurements with Pt100 sensors in 3-wire connection
C201 accepts inputs from three different standardized Pt100 sensors in 3-wire connection: Pt100 acc. to IEC 60751 (α=0.00385), JIS C 1604 (α=0.003916) and US standards (α=0.003902).

PC programmable without need for calibration
Input type and measuring range are set from PC. Full accuracy is provided without any need for calibration.

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) C201 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
C201 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 to a USB port of 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 sensor type, measuring range, sensor failure action, error corrections etc.

Specifications

Input RTD

Pt100 (IEC 60751, α=0.00385)	3-wire connection	-50 to +850 °C / -58 to +1562 °F
Pt100 (JIS C 1604, α=0.003916)	3-wire connection	-50 to +850 °C / -58 to +1562 °F
Pt100 (US, α=0.003902)	3-wire connection	-50 to +850 °C / -58 to +1562 °F
Sensor current		~ 0.5 mA
Maximum sensor wire resistance		20 Ω/wire

Monitoring

Sensor break monitoring	Selectable	Upscale (≥21.0 mA) or downscale (≤3.6 mA) action
Sensor short-circuit	Fixed	Downscale (≤3.6 mA) action

Adjustments

Zero adjustment	-50, -25, 0, +25, +50 °C / -58, -13, +32, +77, +122 °F
Minimum span	20 °C / 36 °F
Sensor error compensation	±1 % of span

Output

Analog	4-20 mA, temperature linear
Response time (90 %)	~50 ms
Permissible load, see load diagram	700 Ω @ 24 VDC

General data

Isolation In - Out	Non-isolated
Power supply, polarity protected	8,5 to 32 VDC

Environment conditions

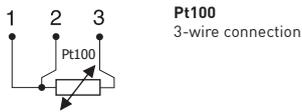|		
Ambient, temperature	Storage and operation	-40 to +85 °C / -40 to +185 °F
Humidity		0 to 100 %RH
Vibrations		Acc. to IEC 68-2-6, Test Fc, 84-2000 Hz, 10 g
Shock		Acc. to IEC-60068-2-31, test Ec
EMC	Standards	EN 61326, NAMUR NE 21
	Immunity performance	ESD, Radiated EM-field: Criteria A
		Surge: ~3 % of span
		Burst, Conducted RF: ~1 % of span

Accuracy and stability

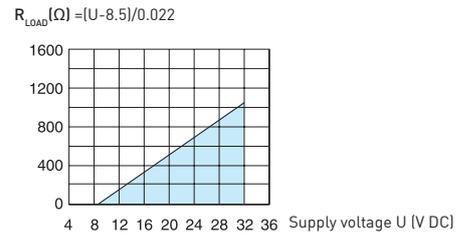|		
Basic accuracy[1]		Max. of ±0.1 °C/ ±0.2 °F or ±0.1 % of span
Temperature influence	Deviation from 20 °C / 68 °F	Max. of ±0.25 °C/25 °C or ±0.25% of span/25 °C
		Max. of ±0.5 °F/50 °F or ±0.28% of span/50 °F
Sensor wire influence		Negligible, with equal wire resistance
Supply voltage influence		Negligible
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 mm², AWG 16
Weight		32 g
Protection, housing / terminals		IP 65 / IP 00

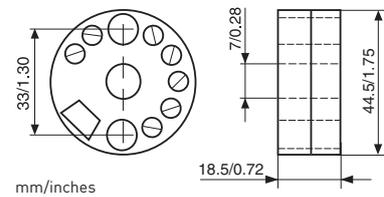[1] Includes calibration and linearity errors

Input connections

1 2 3   **Pt100**
           3-wire connection

Pt100

Output load diagram

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

Supply voltage U (V DC)

Output connections

6 7

I_{OUT} R_{LOAD}

+ -

Dimensions

33/1.30

7/0.28

44.5/1.75

18.5/0.72
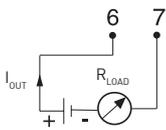
mm/inches

Ordering information

C201	70C2010010
PC configuration kit (USB-conn.)	70CFGUS001
Configuration	70CAL00001
Head mounting kit	70ADA00017
Rail mounting kit	70ADA00013