

TEMP-EL CNR is a Pt100 temperature transmitter mounted in DIN43729 B-type sensor head (junction box).

TECHNICAL SPECIFICATIONS

Measuring ranges

Product Number	Range
•M899375	-50...+50°C
•M899376	0...50°C
•M899377	0...100°C
•M899378	0...150°C
•M899379	0...200°C
M899380	0...250°C
•M899381	0...300°C
M899382	0...350°C
•M899383	0...400°C
M899384	0...450°C
M899385	0...500°C
M899386	0...550°C
•M899387	0...600°C
M899388	0...650°C
M899389	0...700°C
M899390	0...750°C
M899391	0...800°C

• Storage options

Functional specifications

Output signal (linear relative to temperature): 4 - 20 mA

Output with break in Pt100 element (current limit): approx. 26 mA

Output with sensor circuit shorted at transducer terminals: < 3 mA

Permissible terminal voltage: 9 - 35 V DC

Sensor current: 2 mA

Permissible ambient temperature: -25 to +70°C

Sensor wiring: 3-wire system

Range adjusting limits (trimmers):
- Zero ±5 %
- Span ±5 %

Overvoltage capacity: The transducer withstands a 1 MHz burst in accordance with IEC 255, 4 App. E across the signal conductors; (amplitude 500 V, repetition frequency 400 Hz, test duration 2 s).

Performance specifications ¹⁾

Measurement error relative to Pt100 sensor's table values (DIN 43760, terminal voltage 24 V, ambient temperature 23°C, 3-wire system, wire resistance < 0.2 Ω)
- on -50...+50°C to 0...650°C ranges: < 0.15 %
- on 0...700°C to 0...800°C ranges: < 0.25 %

Ambient temperature effect
- on Zero: < 0.01 %/°C
- on Span: < 0.01 %/°C

Effect of sensor circuit wire resistance on output (equal change in all 3 wires): 0.15 %/Ω

Terminal voltage effect: < 0.002 %/V

Supply voltage ripple effect (3 V_{p-p}, 50-400 Hz, 24 V terminal voltage, 50 % input signal): No effect on output signal's DC level, alternating current component < 0.05 %_{p-p}

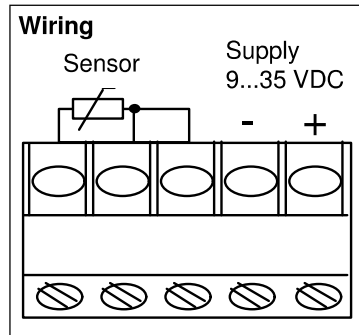
Warm up drift (0-50°C range, 24 V DC terminal voltage, 100 % input signal): < 0.1 %

Long-term stability (23°C ambient temperature, 24 V terminal voltage, 50 % input signal): Change during 30 days < 0.1 %

Radiofrequency interference at 175 MHz and 444 MHz (0-50°C range, 24 V terminal voltage, 50 % input signal, 2 W antenna power, 0.5 m distance): < 3 %

Explosion protection: EEx ib IIC T6, PTB Nr.Ex-90.C.2160X

¹⁾ Errors given in per cent of span

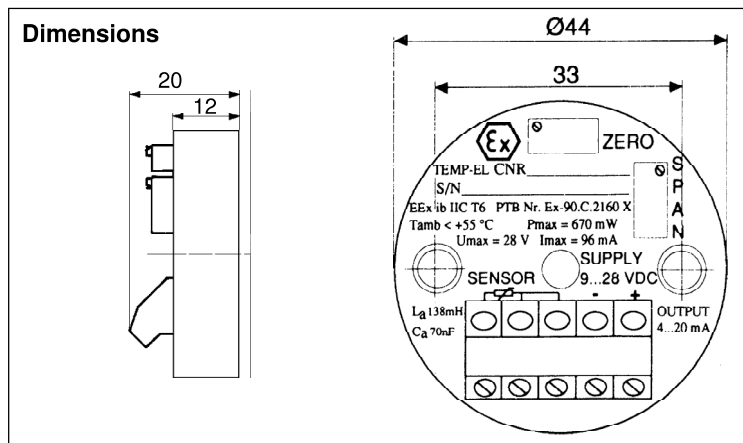


Construction

- Electronics cast in plastics
- Dimensions: diameter 44 mm, height 20 mm

Installation

- Fits a DIN 43729 B-type junction box (sensor head)
- Screw terminals provided with wire screen: max. cross-section 2.5 mm²



We reserve the right to make technical changes without prior notice. Performance is indicated in accordance with IEC546 and IEC770 recommendations.