

TEMP-EL BNR is a Pt100 temperature transmitter mounted on AFTB1 and AFTB16 terminal boards.

TECHNICAL SPECIFICATIONS

MEASURING RANGES:

Product Number	Range
• M899475	-50...+50°C
• M899476	0...50°C
• M899477	0...100°C
• M899478	0...150°C
• M899479	0...200°C
• M899480	0...250°C
• M899481	0...300°C
• M899482	0...350°C
• M899483	0...400°C
• M899484	0...450°C
• M899485	0...500°C
• M899486	0...550°C
• M899487	0...600°C
• M899488	0...650°C
• M899489	0...700°C
• M899490	0...750°C
• M899491	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

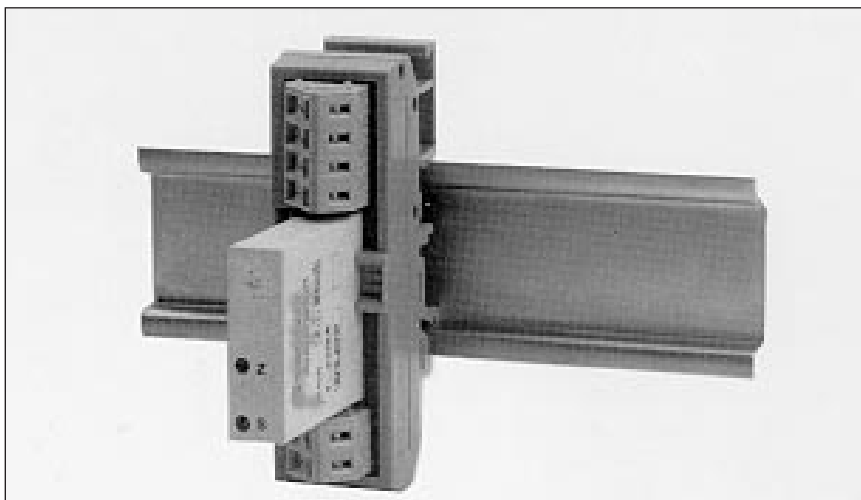
Sensor current: 2 mA

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

Terminal voltage effect: < 0.06 %

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 (20 V/m) at 175 MHz and 443 MHz (0-50 °C range, 24 V terminal voltage, 50 % input signal): < 3 %

¹⁾ Errors given in per cent of span.

Construction

- Electronics cast in plastics
- Dimensions: 36.4 x 33 x 10

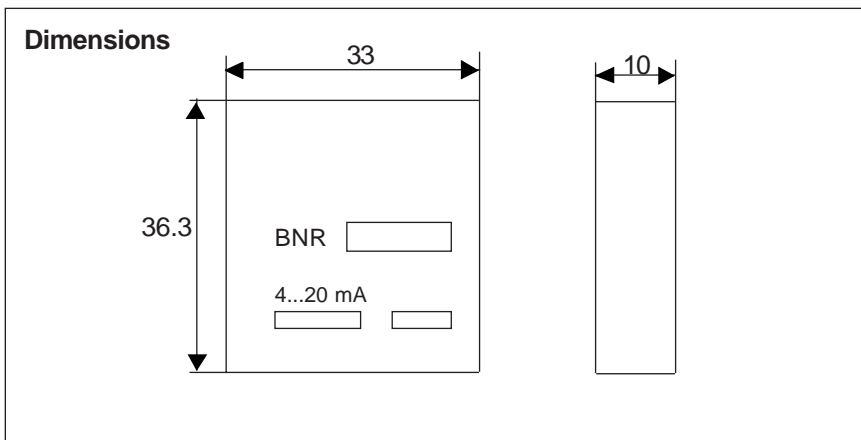
Installation

- On AFTB1 or AFTB16 terminal board

Terminal board types

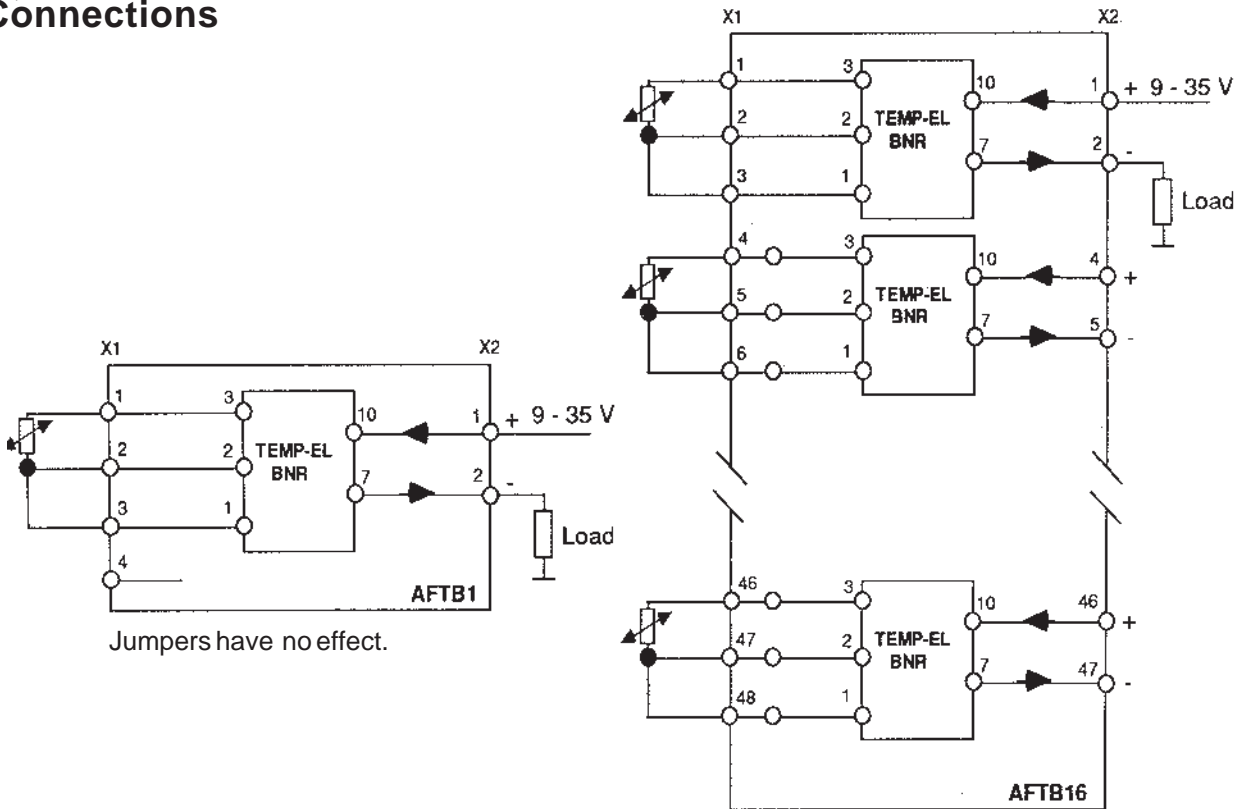
AFTB1: Terminal board for a single temperature transmitter; plug-in connections. The terminal board can be mounted on 15, 32 and 35 DIN46277 rails.

AFTB16: Terminal board for 1...16 temperature transmitters; 0.5...2.5 mm² screw terminals.



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

Connections



Dimensions

