

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

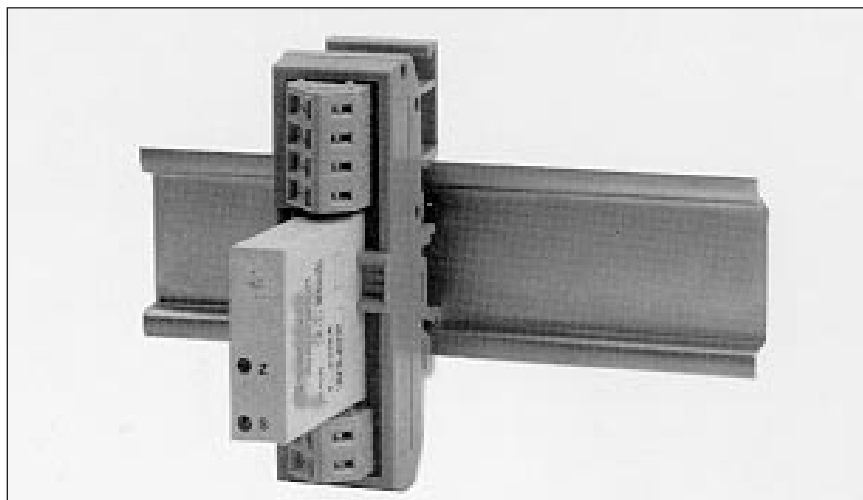
**Sensor current:** 2 mA

**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 <sup>1)</sup>

**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<sub>p-p</sub>, 50-400 Hz, 24 V terminal voltage, 50 % input signal): No effect on output signal's DC level, alternating current component < 0.05 %<sub>p-p</sub>

**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 %

<sup>1)</sup> Errors given in per cent of span.

### Construction

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

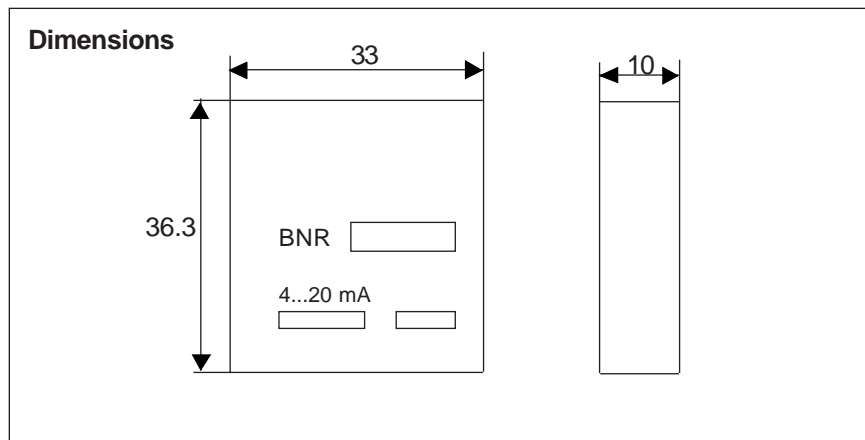
### Installation

- On AFTB1 or AFTB16 terminal board

### Terminal board types

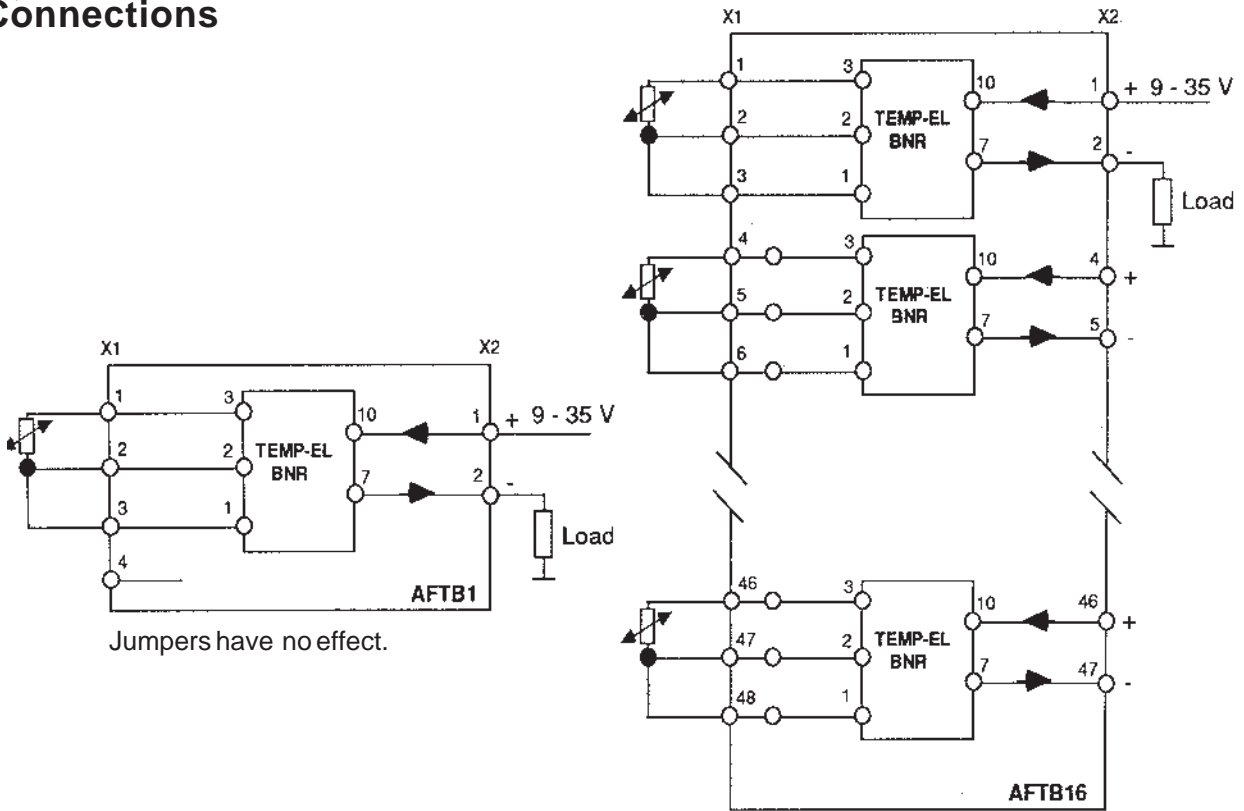
AFTB1: Terminal board for a single temperature transmitter; plug-in connections. The terminal board can be mounted on 15, 32 and 35 DIN46277 rails.

AFTB16: Terminal board for 1...16 temperature transmitters; 0.5...2.5 mm<sup>2</sup> 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

