

Overview

- For voltage ±10 V, ±200 V or current ±20 mA
- For thermocouples J,K,T,N,Pt100,Pt1000
- For resistance or potentiometer
- Display range can be linearised
- LED display, 4-digits, programmable
- Min, Max functions
- DIN housing 96 x 48 mm



Technical data

Technical data - electrical ratings

Voltage supply	20...265 VAC 12...265 VDC
Nominal frequency	50 / 60 Hz
Power consumption	3 W
Sensor supply	24 V ±3 V / max. 30 mA
Display	LED, 7-segment display (with 100 unit stickers for front)
Display color	1 color - red
Number of digits	4-digits
Digit height	14 mm
Display range	-9999...9999 ("OuE" as overflow display)
Display refresh	50 ms
Function	Digital display of 1 analog measured value With Min/Max memory
A/D transformer	Principle $\Sigma\Delta$ Resolution 16 bit Measuring rate 20/s Measuring accuracy ±(0.1 % +3-digit) Temp. coeff. 100 ppm/°C
Analog input	Current, voltage, potentiometer, temperature, resistance measurement
Programmable parameters	Measuring range Display range can be linearised Decimal point Relay outputs with time delay or hysteresis Analog input
Limits	Without
Inputs	Voltage ±10 V Voltage ±200 VDC Current ±20 mA Thermocouple J, K, T, N Temperature sensor Pt100 Temperature sensor Pt1000

Technical data - electrical ratings

Data memory	>10 years in EEPROM
Analog output	Without
Outputs relay	Without
Standard DIN EN 61010-1	ISO 16750-2 (Electrical loads)
Emitted interference	EN 61000-6-3
Interference immunity	EN 61000-6-2

Technical data - mechanical design

Ambient temperature	-10...+60 °C
Storage temperature	-25...+85 °C
Relative humidity	95 % non-condensing
Connection	Spring-loaded terminal connector, detachable
Core cross-section	1 mm ² (Grid 5.08) 2.5 mm ² (Grid 7.62)
Protection EN 60529	IP 65 (face)
Operation / keypad	Membrane with softkeys
Housing type	Built-in housing
Dimensions W x H x L	1/8 DIN 96 x 48 x 96 mm
Cutout dimensions	92 x 45 mm (+0.3)
Mounting depth	85 mm
Mounting type	Front panel installation by clip frame
Weight approx.	150 g
Material	Housing: Polycarbonate, UL 94V-0

Inputs and outputs

Analog input

Input	Range	Resolution	Accuracy	Specification
Current	±20 mA	2 µA	±0.1 % (+15 µA)	Input resistance <20 Ω
Voltage	±10 V	1 mV	±0.1 % (+6 mV)	Input resistance 1 MΩ
	±200 V	20 mV	±0.1 % (+0.1 V)	Input resistance 1 MΩ
Potentiometer	100 Ω...100 kΩ	0.01 %	±0.1 % (+0.05 %)	Measuring current max. <0.4 mA
Resistance measurement	999.9 Ω	0.1 Ω	±0.1 % (+0.7 Ω)	Measuring current max. 2.3 mA
	9999 Ω	1 Ω	±0.1 % (+6 Ω)	Measuring current max. 230 µA
	50.00 kΩ	10 Ω	±0.1 % (+35 Ω)	Measuring current max. 23 µA

Temperature range thermo sensors

Thermo sensors	Range	Resolution	Accuracy	Specification
Thermocouple J	-150.0...+1000.0 °C	0.1 °C	±(0.1 % +0.6 °C)	Cold junction compensation -10...+60 °C
	-150...+1100 °C	1 °C		
Thermocouple K	-150.0...+1000.0 °C	0.1 °C	±(0.1 % +0.6 °C)	
	-150...+1200 °C	1 °C		
Thermocouple T	-150.0...+400.0 °C	0.1 °C	±(0.2 % +0.8 °C)	
	-150...+400 °C	1 °C		
Thermocouple N	-150.0...+1000.0 °C	0.1 °C	±(0.1 % +0.6 °C)	
	-150...+1300 °C	1 °C		
Pt100 (3-wire)	-150.0...+800.0 °C	0.1 °C	±(0.15 % +0.5 °C)	Line resistance max. 40 Ω Measuring current 1 mA
	-150...+800 °C	1 °C		
Pt1000 (2-wire)	-150.0...+800.0 °C	0.1 °C	±(0.15 % +0.5 °C)	Measuring current 100 µA
	-150...+800 °C	1 °C		

Terminal assignment

Voltage supply

Pin	Assignment
1	Voltage supply -
2	Voltage supply +

Analog inputs / process

Pin	Assignment
1	Common 0 V
2	-
3	-
4	-
5	±20 mA
6	±24 sensor supply
7	±10 V, ±200 V

Analog inputs / Pt100 / Pt1000 / thermocouple

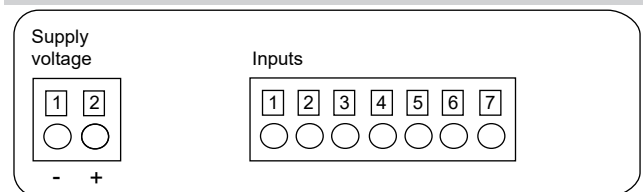
Pin	Assignment Pt100/Pt1000	Thermocouple
1	Pt100 Common / Pt1000	Thermocouple -
2	Pt100 / Pt1000	Thermocouple +
3	n.c.	n.c.
4	Pt100	n.c.
5	-	-
6	-	-
7	-	-

Terminal assignment

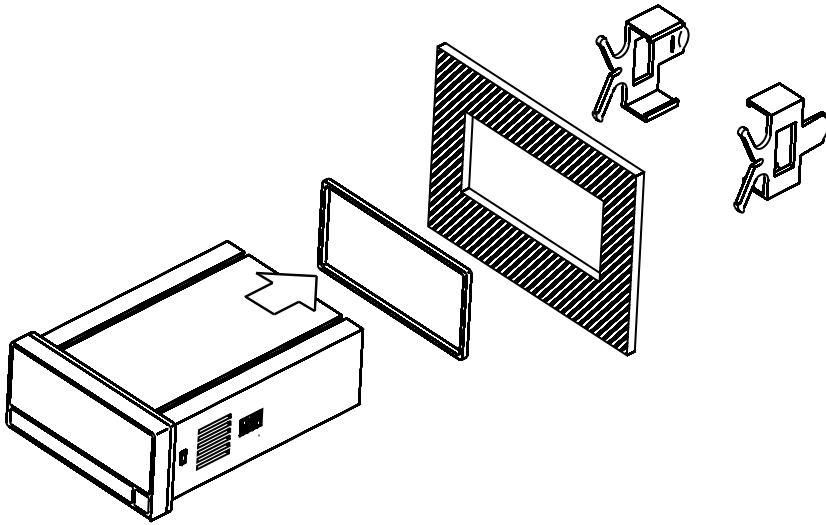
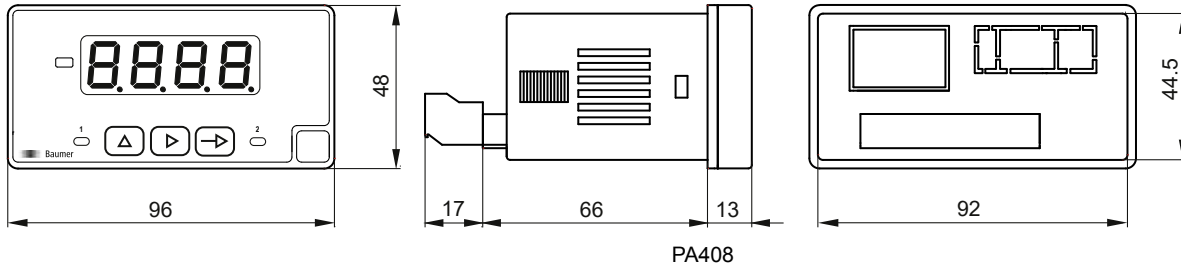
Analog inputs / potentiometer / resistor

Pin	Potentiometer assignment	Resistor
1	Potentiometer -	Common
2	Potentiometer out	999.9...9999 Ω
3	Potentiometer +	50.00 kΩ
4	-	-
5	-	-
6	-	-
7	-	-

Connection diagram



Dimensions



Clip frame mounting (Seal and Clamping frame included in the scope of delivery)