

Overview

- For voltage ± 10 V or current ± 20 mA
- For thermocouples J,K,T,N,Pt100
- For weight, pressure, torsion, strain
- For potentiometer
- Programmable characteristic curve with 11 control points
- Three control inputs, programmable
- Display stabilization filter
- LED display, 5-digits, 3 colors, programmable
- Tare, Min, Max functions
- With 2 relays and analog output 0...10V
- DIN housing 96 x 48 mm



Technical data

Technical data - electrical ratings

| | |
|-------------------------|--|
| Voltage supply | 85...265 VAC 100...300 VDC |
| Nominal frequency | 50 / 60 Hz |
| Power consumption | 8 W |
| Sensor supply | 5 V ± 0.5 V / max. 60 mA 10 V ± 0.5 V / max. 60 mA 24 VDC ± 5 V / 60 mA |
| Display | LED, 7-segment display (with 100 unit stickers for front) |
| Display color | 3 colors - red, green, amber |
| Number of digits | 5-digits + activity indicator |
| Digit height | 14 mm |
| Display range | -19999...19999 ("OuE" to signal overflow) |
| Function | Digital display of 1 analog measured value With Min/Max memory and tare function |
| A/D transformer | Principle $\Sigma\Delta$ Resolution 16 bit Measuring rate 20/s Measuring accuracy $\pm(0.1\% + 3\text{-digit})$ Temp. coeffic. 100 ppm/ $^{\circ}\text{C}$ |
| Analog input | Current, voltage, potentiometer, temperature, strain gauge |
| Programmable parameters | Analog input Measuring range Display intensity Display color Display range can be linearised Decimal point Relay outputs with time delay or hysteresis |
| Limits | 2 |
| Control inputs | 3 programmable Optocoupler inputs logic NPN |

Technical data - electrical ratings

| | |
|-------------------------|---|
| Inputs | Current ± 20 mA Voltage ± 10 V Potentiometer max. ± 10 V Strain gauges $\pm 15\text{mV}$, $\pm 30\text{mV}$, $\pm 150\text{mV}$ Temperature sensor Pt100 Thermocouple J, K, T, N |
| Control functions | 15 programmable functionalities |
| Data memory | >10 years in EEPROM |
| Analog output | 0 ... 10 V |
| Outputs relay | 2 change-over contact, floating |
| Standard DIN EN 61010-1 | ISO 16750-2 (Electrical loads) |
| Emitted interference | EN 61000-6-3 |
| Interference immunity | EN 61000-6-2 |
| Approval | CE |

Technical data - mechanical design

| | |
|-----------------------|--|
| Operating temperature | -10...+60 $^{\circ}\text{C}$ |
| Storage temperature | -25 ... +80 $^{\circ}\text{C}$ |
| 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 | 83 mm |
| Mounting type | Front panel installation by clip frame |
| Weight approx. | 160 g |
| Material | Housing: Polycarbonate, UL 94V-0 |

Inputs and outputs

Analog input

| Input | Range | Resolution | Specification |
|------------------------|--|----------------|---------------------------|
| Current | ±20 mA | 10 µA | Input resistance 12 Ω |
| Voltage | ±10 V | 0.5 mV | Input resistance 1 MΩ |
| Potentiometer voltage* | Max. ±10 V | | Input resistance 1 MΩ |
| Strain gaug | ±15 mV, ±30 mV, ±150 mV | 1 µV | Input resistance 100 MΩ |
| Temperature Pt100 | Offset programmable -9.9...99 °C Measuring current <1 mA | 1 or 0.1 °C/°F | Line resistance max. 40 Ω |
| Thermocouple J,K,T | Cold junction compensation -10...+60 °C Offset programmable -9.9...99 °C | 1 or 0.1 °C/°F | |

*Minimum potentiometer value: 200 Ω

Temperature range thermo sensor

| Temperature | Thermocouple J | Thermocouple K | Thermocouple T | Pt100 |
|--------------------|----------------|----------------|----------------|-----------------|
| Degrees Celsius | -50...+850 °C | -50...+1250 °C | -200...+400 °C | -100...+800 °C |
| Degrees Fahrenheit | -58...+1562 °F | -58...+2282 °F | -328...+752 °F | -148...+1472 °F |

Relay outputs

| Relay | Switching voltage max. | Switching current max. | Switching performance max. |
|------------------|------------------------|------------------------|----------------------------|
| 2x changeover | 250 VAC / 110 VDC | 1 A | 150 VA / 30 W |
| 4x normally open | 250 VAC / 50 VDC | 0.2 A | 30 VA / 6 W |

Analog output

| Output | Range | Resolution | Load resistance |
|---------|-----------|------------|-----------------|
| Current | 4...20 mA | 13 bit | Max. 500 Ω |
| Voltage | 0...10 V | 13 bit | Min. 10 kΩ |

Scaling configurable relating to value display, accuracy ±0.1 %, transformation 20/s

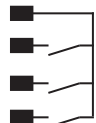
Terminal assignment

Voltage supply

| Terminal | Assignment |
|----------|------------------|
| 1 | Supply voltage - |
| 2 | Supply voltage + |

Control inputs

| Pin | Assignment |
|-----|------------|
| 1 | Common |
| 2 | IN 1 |
| 3 | IN 2 |
| 4 | IN 3 |



Terminal assignment

Analog inputs

| Pin | Assignment |
|-----|---------------------|
| 1 | Sensor supply - |
| 2 | Sensor supply +24 V |
| 3 | n.c. |
| 4 | n.c. |
| 5 | Current input + |
| 6 | Voltage input + |
| 7 | n.c. |
| 8 | Current / voltage - |

Terminal assignment

Analog inputs / strain gauge

| Pin | Assignment |
|-----|----------------------------|
| 1 | Sensor supply - |
| 2 | n.c. |
| 3 | Sensor supply +5 V / +10 V |
| 4 | n.c. |
| 5 | n.c. |
| 6 | n.c. |
| 7 | Input mV + |
| 8 | Input mV - |

Analog inputs / Pt100 / thermocouple J,K,T

| Pin | Assignment Pt100 | Thermocouple |
|-----|------------------|----------------|
| 1 | n.c. | n.c. |
| 2 | n.c. | n.c. |
| 3 | n.c. | n.c. |
| 4 | Pt100 | n.c. |
| 5 | n.c. | n.c. |
| 6 | n.c. | n.c. |
| 7 | Pt100 | Thermocouple + |
| 8 | Pt100 Common | Thermocouple - |

Analog inputs / potentiometer

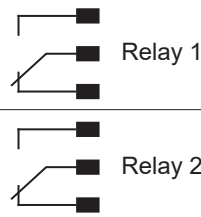
| Pin | Assignment |
|-----|-------------------|
| 1 | Sensor supply - |
| 2 | n.c. |
| 3 | Potentiometer + |
| 4 | n.c. |
| 5 | n.c. |
| 6 | Potentiometer out |
| 7 | n.c. |
| 8 | Potentiometer - |

Analog output

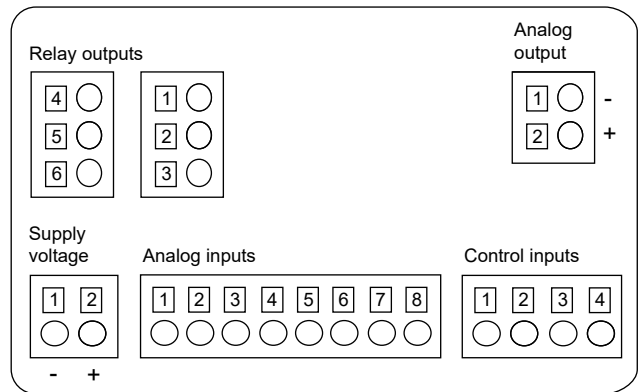
| Terminal | Assignment |
|----------|--------------------------|
| 1 | (-) 4...20 mA / 0...10 V |
| 2 | (+) 4...20 mA / 0...10 V |

Limit outputs / two relays

| Terminal | Assignment |
|----------|-----------------|
| 1 | Normally open |
| 2 | Changeover |
| 3 | Normally closed |
| 4 | Normally open |
| 5 | Changeover |
| 6 | Normally closed |



Connection diagram

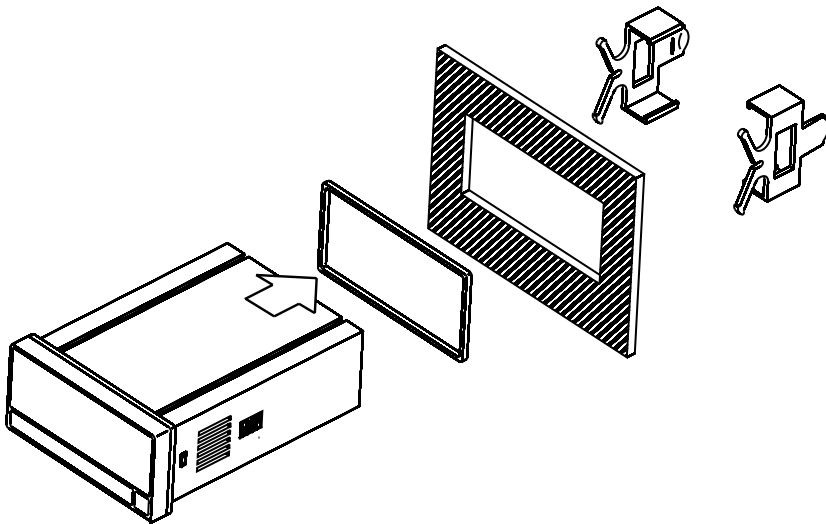
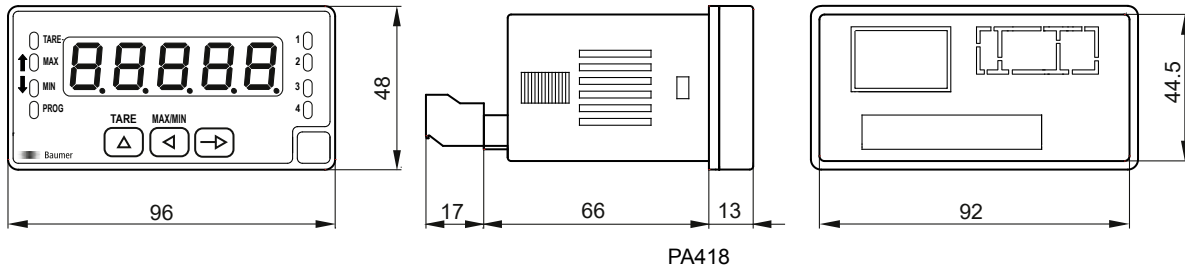


PA418.0B4AX01

For standard signals, temperature, strain gauge, with 2 limits

Article number: 11041769

Dimensions



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