



PA 450

2 Channel Process Display

Subtraction

Function

- ▶ different display modes to show the difference or the individual value of the respective analogue input
- ▶ simulation of contact and analogue output
- ▶ simple menu system for configuration of display, contacts, etc.

Product characteristics

- ▶ mathematical subtraction for standard transmitter with 4 ... 20 mA / 2-wire technology
- ▶ integrated transmitter power supply
- ▶ output signal 4 ... 20 mA and 0 ... 20 mA adjustable
- ▶ turn down of analogue signal 1:6
- ▶ 4-digit LED display
- ▶ robust plastic housing

Optional versions

- ▶ 3-wire-analogue output: 0 ... 10 V
- ▶ 1 or 2 contacts
- ▶ square root extraction

The process display PA 450 has been designed for the subtraction of two independent analogue signals. Due to the integrated transmitter power supply the wiring costs are considerably reduced.

The difference or the individual value of the respective transmitter is shown on the 4-digit LED display.

Via the user-friendly menu system, the device can be configured easily. It offers different functions, such as access protection, configuration of advertisement and contacts, min. / max. value memory. All settings are permanently stored in an EEPROM and therefore available again even after disconnecting from the supply voltage.

Optionally, the PA 450 could be equipped with one or two contacts and square root analogue signal.

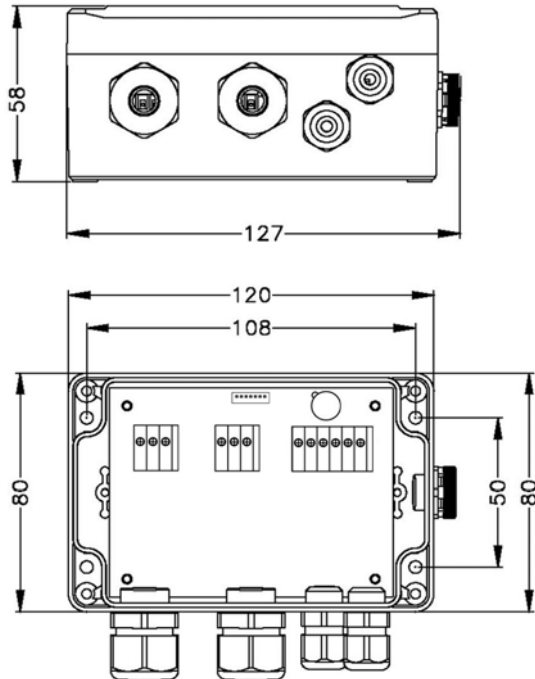
Typical applications



Differential pressure measurement
Filter monitoring

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| General specifications | | |
|--|---|---|
| Supply | 24 V _{DC} ± 10 % | |
| Housing material | plastic ABS, grey | |
| Ingress protection | IP 66 | |
| Cable gland | 2x M16x1.5 and 2x M12x1 polyamide, seals NBR, IP 68 | |
| Atmospheric pressure compensation | pressure compensation element with PTFE filter | |
| Connecting terminals | screw-type terminal for stranded and solid wires up to 1.5 mm ² | |
| Permissible temperatures | environment / storage: -20 ... 60 °C | |
| Installation position | any | |
| Weight | approx. 300 g | |
| Display | 4-digit, 7-segment-LED display, visible range 37.2 x 11 mm; digit height 10 mm, range of indication -1999 ... +9999; accuracy 0.2 % ± 1 digit; digital damping 0.3 ... 30 sec (programmable); measured value update 0.0 ... 10 sec (programmable) | |
| Data memory | non-volatile EEPROM | |
| Sensor supply | V _S - 4 V @ 20 mA | |
| Sensor current limit | approx. 32 mA | |
| Weight | approx. 220 g | |
| CE-conformity | EMC Directive: 2014/30/EU | |
| Contact (optional) | | |
| Number, type | standard: without option: 1 PNP-contact 2 PNP-contacts | |
| Max. switching current | contact rating max. 125 mA, short-circuit resistant | |
| Repeatability | ≤ ± 0.1 % FSO | |
| Switching frequency | max. 10 Hz | |
| Switching cycles | > 100 x 10 ⁶ | |
| Delay time | 0 ... 100 sec | |
| Analogue output (on request) | | |
| standard | 4 ... 20 mA / 0 ... 20 mA, adjustable | |
| 3-wire current signal | permissible load: R _{max} = 500 Ω | (turn-down of span 1:6 ¹) response time: < 30 msec |
| option | 0 ... 10 V, adjustable | |
| 3-wire voltage signal | permissible load: R _{min} = 10 kΩ | (turn-down of span 1:6 ¹) response time: < 30 msec |
| ¹ with turn-down of span the analogue signal is adjusted automatically to the new measuring range | | |
| Dimensions | | |
|  | | |

Ordering code PA 450

PA 450

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|------------------|----------------------|---|---|---|---|--|--|---------|
| Standard version | | 8 | 5 | 4 | | | | |
| Contact | | | | | | | | |
| | without contact | | | | 0 | | | |
| | 1 PNP-contact | | | | 1 | | | |
| | 2 PNP-contacts | | | | 2 | | | |
| Analogue output | | | | | | | | |
| | 4 ... 20 mA / 3-wire | | | | 7 | | | |
| | 0 ... 10 V / 3-wire | | | | 3 | | | |
| | customer | | | | 9 | | | consult |
| Label on display | | | | | | | | |
| | neutral | | | | N | | | |
| | customer | | | | 9 | | | consult |

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