PA 450

2 Channel Process Display

Subtraction

The process display PA 450 has been designed for the subtraction of two independent analog 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.

About the user-friendly menu system the device simply can be configured. It has functions, such as access protection, configuration of advertisement and contacts, min. / max. value memory. The set parameters are being stored in an EEPROM and are being kept also in case of power breakdown.

Optionally the PA 450 can reamed with one or two contacts and square root analogue signal.

Typical applications

- Differential Pressure Measurement
- Filter Monitoring

Function

- different display modes to show difference or 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
General specifications

Supply 24 V DC ± 10 %
Housing material plastic ABS, grey
Ingress protection IP 66
Cable gland 2 x M16x1.5 and 2x M12x1 Polyamide, seals NBR, IP 68
Atmospheric pressure pressure compensation element with PTFE filter
Connecting terminals Screw-typ terminal for stranded and solid wires up to 1.5 mm²
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
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 10⁶
Delay time 0 ... 100 sec
Analogue output (on request)
standard 3-wire current signal 0 ... 20 mA / 4 ... 20 mA, adjustable permissible load: R_{max} = 500 Ω response time: < 30 msec (turn-down of span 1:6)
option 3-wire voltage signal 0 ... 10 V, adjustable (turn-down of span 1:6) permissible load: R_{max} = 10 kΩ response time: < 30 msec
Dimensions

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## Bestellschlüssel PA 450

**ordering code** PA 450

### Standardversion

<table>
<thead>
<tr>
<th>Schaltausgang</th>
<th>Contact</th>
<th>8</th>
<th>5</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>kein Schaltausgang</td>
<td>without contact</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 PNP-Ausgang</td>
<td>1 PNP-contact</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 PNP-Ausgänge</td>
<td>2 PNP-contacts</td>
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### Analogausgang

<table>
<thead>
<tr>
<th>Analogausgang</th>
<th>Analogue output</th>
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<tbody>
<tr>
<td>4…20 mA / 3-Leiter</td>
<td>4…20 mA / 3-wire</td>
</tr>
<tr>
<td>0…10 V / 3-Leiter</td>
<td>0…10 V / 3-wire</td>
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<tr>
<td>andere</td>
<td>customer</td>
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### Beschriftung der Anzeigen

<table>
<thead>
<tr>
<th>Neutral</th>
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<tbody>
<tr>
<td>andere</td>
<td>customer</td>
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</tbody>
</table>

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**Preise EXW Thierstein, ausschl. Verpackung**


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