



PA 450

2 Channel Process Display

Subtraction

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

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 be reamed with one or two contacts and square root analogue signal.

Typical applications



Differential Pressure Measurement
Filter Monitoring



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-tyt 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
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	0 ... 20 mA / 4 ... 20 mA, adjustable (turn-down of span 1:6 ¹)
3-wire current signal	permissible load: R _{max} = 500 Ω response time: < 30 msec
option	0 ... 10 V, adjustable (turn-down of span 1:6 ¹)
3-wire voltage signal	permissible load: R _{min} = 10 kΩ response time: < 30 msec
¹ with turn-down of span the analogue signal is adjusted automatically to the new measuring range	
Dimensions	



**Bestellschlüssel PA 450
ordering code PA 450**

PA 450



Standardversion	Standard version									
		8	5	4						
Schaltausgang	Contact									
kein Schaltausgang	without contact							0		
1 PNP-Ausgang	1 PNP-contact							1		
2 PNP-Ausgänge	2 PNP-contacts							2		
Analogausgang	Analogue output									
4 ... 20 mA / 3-Leiter	4 ... 20 mA / 3-wire							7		
0 ... 10 V / 3-Leiter	0 ... 10 V / 3-wire							3		
andere	customer							9		
								auf Anfrage	consult	
Beschriftung der Anzeigen	Label on display									
Neutral	neutral							N		
andere	customer							9	auf Anfrage	consult
Preise EXW Thierstein, ausschl. Verpackung										

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This document contains product specification; properties are not guaranteed. Detailed information about options are defined in the datasheet. Subject to change without notice.