

PA 430

Plug-on Display for Current Loop with Contacts



Functional range

- ▶ free scalable display
- ▶ switch mode, hysteresis, parameterizable deceleration of the contacts
- ▶ display 330° rotatable
- ▶ connector 300° rotatable
- ▶ no external power supply necessary

Product characteristics

- ▶ plug-on display for pressure transmitter with output signal: 4 ... 20 mA / 2-wire or 0 ... 10 V / 3-wire
- ▶ 4-digit LED display

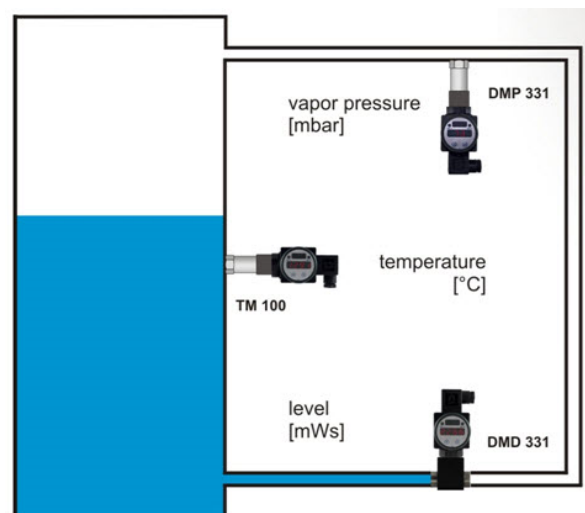
Optional versions

- ▶ IS-version
- ▶ 1 or 2 programmable contacts

Typical application



in situ display of pressure, temperature and level



Analogue signal	
2-wire-system	2-wire: 4 ... 20 mA
Option IS-version	2-wire: 4 ... 20 mA
3-wire-system	0 ... 10 V
Supply	
2-wire-system	supplied by current loop; voltage drop ≤ 6 V; $V_S = (V_{T \min} \dots V_{T \max}) + 6 V_{DC}$ with V_T = supply of the used transmitter IS-version: max. 28 V_{DC} (for combination of transmitter and PA 430)
3-wire-system	display is supplied parallel with transmitter $V_{S \min} = 8 V_{DC} \dots V_{T \min}$; $V_{S \max} = V_{T \max} \dots 36 V_{DC}$ with V_T = supply of the used transmitter
Contact (optionally) ¹	
Number, type	max. 2 independent PNP open collector contacts
Switching performance	$V_{switch} = V_S - 2$ V; contact rating max. 125 mA, short-circuit resistant
Max. switching current ²	70 mA
Repeatability	$\leq \pm 0.1$ % FSO
Switching frequency	max. 10 Hz
Switching cycles	$> 100 \times 10^6$
Delay time	0 ... 100 sec
¹ max. 1 contact for: 4 ... 20 mA / 2-wire with plug ISO 4400; 0 ... 10 V / 3-wire with M12x1; no contact possible with 0 ... 10 V / 3-wire with plug ISO 4400	
² the real switching current in the application depends on the power supply unit	
Miscellaneous	
Electrical protection	reverse polarity protection (no damage, but also no function); electromagnetic compatibility (emission and immunity according to EN 61326); short-circuit protection; ingress protection IP 65
Display	4-digit, 7-segment red LED display, digit height 7 mm; range of indication -1999 ... +9999; accuracy 0.1 % $\pm$ 1 digit; digital damping 0.3 ... 30 sec (programmable); measured value update 0.0 ... 10 sec (programmable)
Permissible temperatures	electronics / environment: -25 ... 85 °C storage: -40 ... 85 °C
Material of display housing	PA 6.6, polycarbonate
Mechanical stability	vibration: 5 g RMS / 20 ... 2000 Hz shock: 100 g / 11 msec
Weight	approx. 150 g
CE-conformity	EMC Directive: 2014/30/EU
Explosion protection (optionally for 4 ... 20 mA / 2-wire)	
Approval AX14-PA 430	IBExU 06 ATEX 1050 X / IECEx IBE 21.0039 X zone 1: II 2G Ex ia IIC T4 Gb
Safety techn. maximum values	$U_i = 28$ V, $I_i = 93$ mA, $P_i = 660$ mW, $C \approx 0$ nF, $L_i \approx 0$ μ H; plus cable inductivities 1 μ H/m and cable capacities 100 pF/m
Permissible temperature for environment	-25 ... 70 °C
Wiring diagrams	
2-wire-system (current) 3-wire-system (voltage)	
Pin configuration	
Electrical connection	ISO 4400 M12x1 metal (5-pin)
Supply +	1
Supply -	2
Signal + (for 3-wire)	3 ¹
Contact 1	3 ¹
Contact 2	5
Shield	ground pin 3 ¹
	4
Dimensions (in mm)	

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Ordering code PA 430

PA 430

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Standard version									
	8	5	0						
Analogue output									
4 ... 20 mA / 2-wire				1					
0 ... 10 V / 3-wire				3					
intrinsic safety for zone 1 / 4 ... 20 mA / 2-wire				E					
customer				9					consult
Contact ¹									
without contact				0					
1 contact				1					
2 contacts				2					
Electrical connection									
ISO 4400					1	0	0		
M12x1 (5-pin) / metal version					N	1	0		
Unit ²									
without					0				
bar					1				
mbar					2				
mH ₂ O					3				
%					P				
mA					A				
customer					9				consult
Label on display									
standard					1				
neutral					N				
customer					9				consult
Special version									
standard						0	0	0	
customer						9	9	9	consult

¹ max. 1 contact for: 4 ... 20 mA / 2-wire with plug ISO 4400; no contact possible with 0 ... 10 V / 3-wire with plug ISO 4400
² the unit signs are loose-settled