



PA 430

Plug-on Display self powered

- ▶ for 4 ... 20 mA / 2-wire or 0 ... 10 V / 3-wire transmitters
- ▶ standard: plug DIN 43650
optional: M12x1 5-pin or Binder 723
- ▶ up to 2 contacts possible
- ▶ display and housing rotatable

The plug-on display PA 430 is suitable for all transmitters with output signal 4 ... 20 mA / 2-wire or 0 ... 10 V / 3-wire. The plug-on display is installed between male and female plug and ready for work immediately.

Standard connector of the PA 430 is DIN 43650. Optionally versions with connectors M12x1 (5-pin) and Binder 723 series are available. Further versions are possible on request.

The display can be freely programmed via two push-buttons. Following parameters can be adjusted: scaling, decimal point, damping, and limit contact (optional). Those parameters are being stored in an EEPROM and, thus, are being kept also in case of power breakdown. Limit exceeding in both directions can be displayed as a message. The integrated smart electronics permanently monitors all functions of the display.

The unit label specified on the order is placed under the display foil and therefore is protected from wiping off. Alternatively another label with a different unit can be stuck on the display foil by the user.

- ▶ configuration of display, including
 - current value
 - decimal point
- ▶ contact adjustable, including
 - switch on / switch off points
 - hysteresis / window mode
 - switch on / switch off delay
- ▶ special functions / administration
 - access protection
 - min. / max. value memory

Functions



PA 430
Plug-on Display

Analogue signal	
2-wire-system	4 ... 20 mA
3-wire-system	0 ... 10 V

Supply	
2-wire-system	supplied by current loop; voltage drop $\leq 6\text{ V}$ $V_S = (V_{T\min} \dots V_{T\max}) + 6 V_{DC}$ with $V_T =$ supply of the used transmitter Ex-protection: 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 ^{1, 2}	
Number, type	0, 1, or 2 independent PNP outputs
Switching performance	standard: contact rating max. 125 mA, short-circuit resistant Ex-protection: max. switching current ³ : 70 mA; max. permissible inductivity: 4.7 mH
Repeatability	$\leq \pm 0.1\%$ FSO
Switching frequency	max. 10 Hz
Switching cycles	$> 100 \times 10^6$
Delay time	0 ... 100 sec

Electrical protection	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326
Option Ex-protection only with 4 ... 20 mA / 2-wire AX11-PA 430	zone (0) 1: II (1) 2 G EEx ia IIC T4 safety technical maximum values: $V_i = 28\text{ V}$, $\Sigma I_i = 93\text{ mA}$, $\Sigma P_i = 660\text{ mW}$

Display	
Type	4-digit, red LED display, digit height 7 mm, digit width 4.85 mm (angle 10 °)
Range	-1999 ... +9999
Accuracy	$0.1\% \pm 1$ digit
Digital damping	0.3 ... 30 sec (programmable)
Measured value update	0.0 ... 10 sec (programmable)

Mechanical stability	
Vibration	5 g RMS (20 ... 2000 Hz)
Shock	100 g / 11 msec

Permissible temperatures	
Electronics / environment	-25 ... 85 °C
Storage	-40 ... 85 °C

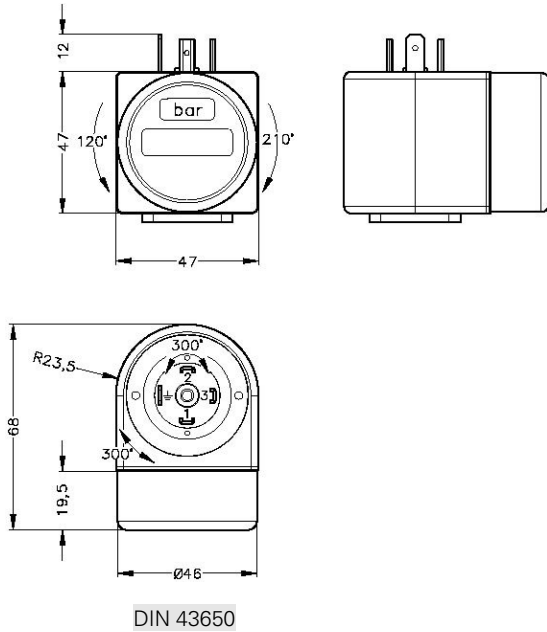
¹ max. 1 contact for: 4 ... 20 mA / 2-wire with plug DIN 43650; 0 ... 10 V / 3-wire with Binder 723 (5-pin) or M12x1 (5-pin); Ex-protection no contact possible with 0 ... 10 V / 3-wire with plug DIN 43650

² connector Binder Serie 723 - 7-pin is standard without contacts; contacts on request

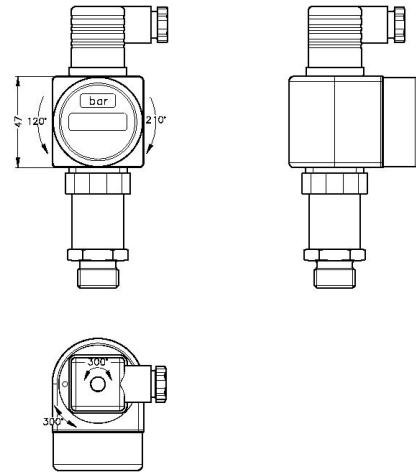
³ the real switching current in the application depends on the power supply unit

Dimensions

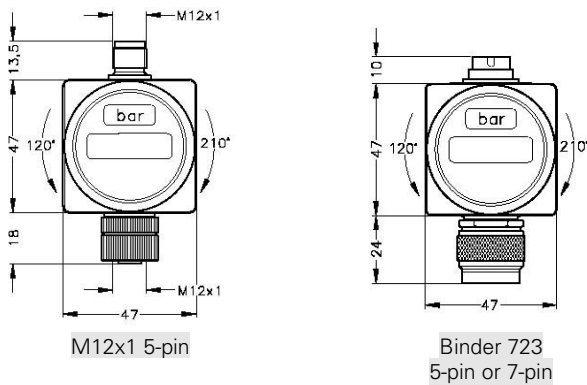
Standard



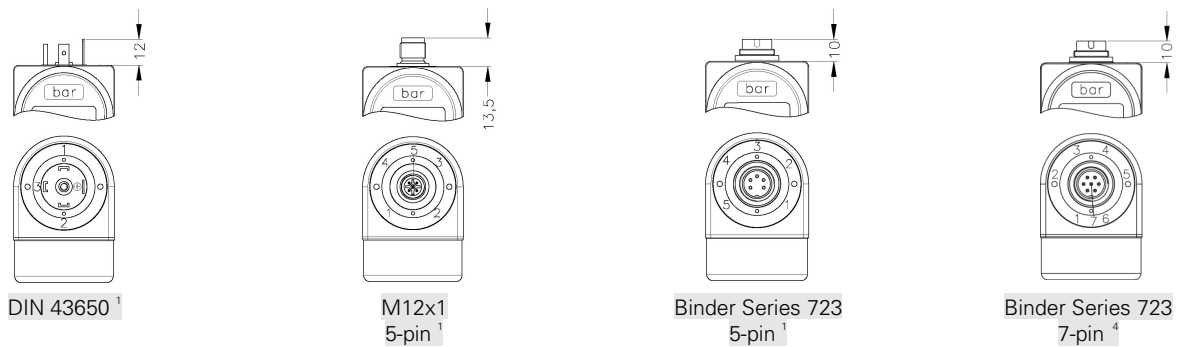
Example: use with a BD SENSORS pressure transmitter with connector DIN 43650



Options



Electrical connection



⁴ intended for usage with DMP 331i, DMP 333i and LMP 331i with el. connection Binder Series 723 (7-pin); Pins 4, 5, 6, 7 are wired through 1:1; standard without contacts; contacts on request; 3-wire version not possible

Materials

Display housing	PA 6.6, Polycarbonate
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Miscellaneous

Weight	approx. 100 g
Data memory	non-volatile EEPROM
Ingress protection	IP 65

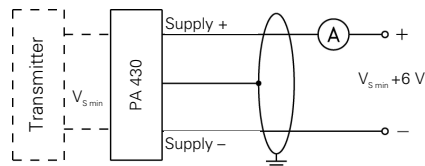
Pin configuration

Electrical connection		DIN 43650	M12x1 metal (5-pin)	Binder 723 (5-pin)	Binder 723 (7-pin) ⁵
2-wire-system	Supply +	1	1	3	3
	Supply -	2	2	4	1
	Contact 1	3	5	2	-
	Contact 2	-	3	1	-
	Ground	ground contact	4	5	2
3-wire-system	Supply+	1	1	3	-
	Supply -	2	2	4	-
	Signal +	3	3	1	-
	Contact 1	-	5	2	-
	Contact 2	-	-	-	-
	Ground	ground contact	4	5	-

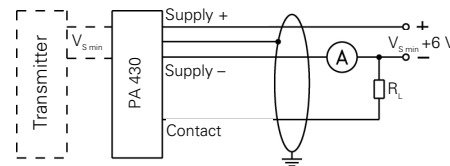
Wiring diagrams (when using together with a BD SENSORS pressure transmitter)

2-wire-system (current) (Ex-protection: max. supply for combination of transmitter and PA 430 is $28 V_{DC}$; max. 1 contact possible)

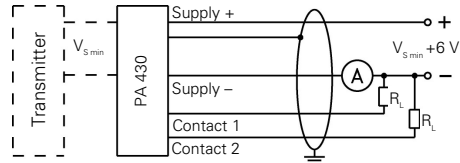
without contact



1 contact



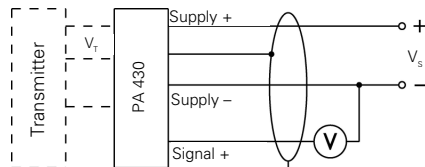
2 contacts



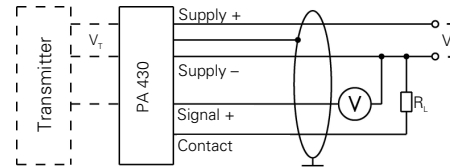
$V_{S,min}$: minimum supply of the connected 2-wire pressure transmitter

3-wire-system (voltage)

without contact



1 contact

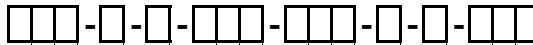


V_T : supply of the connected 3-wire pressure transmitter

⁵ pins 4, 5, 6, 7 are wired through 1:1

Ordering Code PA 430

PA 430



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															
Contact ¹																				
	without contact				0															
	1 contact				1															
	2 contacts				2															
Electrical connection (output)																				
	DIN 43650					1	0	0												
	Binder series 723 (5-pin)					2	0	0												
	Binder series 723 (7-pin) ²					A	0	1												
	M12x1 (5-pin) / metal version					N	1	0												
Electrical connection (input)																				
	DIN 43650						1	0	0											
	Binder series 723 (5-pin)						2	0	0											
	Binder series 723 (7-pin)						A	0	1											
	M12x1 (5-pin) / metal version						N	1	0											
Unit																				
	without ³								0											
	bar								1											
	mbar								2											
	mWC								3											
	%								P											
	mA								A											
	customer								9											
Label on display																				
	standard								1											
	neutral								N											
	customer								9											
Special version																				
	standard									0	0	0								
	customer									9	9	9								

¹ max. 1 contact for: 4 ... 20 mA / 2-wire with plug DIN 43650; 0 ... 10 V / 3-wire with Binder 723 (5-pin) or M12x1 (5-pin); Ex-protection no contact possible with 0 ... 10 V / 3-wire with plug DIN 43650
² intended for the use with DMP 331i, DMP 333i and LMP 331i with el. connection Binder Serie 723 (7-pin)
³ the unit signs are loose-settled

