

Relative and absolute pressure transmitter type 528

Pressure range
-1 ... 0 – 60 bar



The compact type 528 pressure transmitter is based upon the well proven ceramic technology developed by Huba Control over 20 years ago. These transmitters are suitable for applications across a broad spectrum of industries.

- Compact, rugged construction
- Negligible temperature influence on accuracy
- Saving time by quick cable mounting by the customer with swift connector
- Large selection of connections available

Technical overview

Pressure range

Relative	-1 ... 0 – 60 bar
Absolute	0 ... 1 – 16 bar

Operating conditions

Medium	Liquids and gases
	FPM -15 ... +125 °C
	EPDM -40 ... +125 °C
	NBR -20 ... +100 °C
	MVQ -40 ... +125 °C
Temperature	Medium
	Ambient -30 ... +85 °C
	Storage -50 ... +100 °C
Tolerable overload / Repture pressure	-1 ... 4 bar 3.0 x fs
	6 ... 60 bar 2.5 x fs

Materials

Cover	Stainless steel 1.4305 / AISI 303
Plug accommodation	Polyarylamide 50% GF VO
Materials in contact with medium	Pressure connection Stainless steel 1.4305 / AISI 303
	Sensor Ceramic Al ₂ O ₃ (96%)
	Sealing material FPM, EPDM, NBR, MVQ

Electrical overview

	Output	Power supply	Load	Current consumption
2 wire	4 ... 20 mA	7 ... 33 VDC	< $\frac{\text{supply voltage} - 7V}{0.02 A}$ [Ohm]	< 23 mA
2 wire (Ex)	4 ... 20 mA	10 ... 30 VDC	< $\frac{\text{supply voltage} - 10V}{0.02 A}$ [Ohm]	< 20 mA
	0 ... 5 V	8 ... 33 VDC	>10 kOhm / < 100 nF	< 7 mA
	1 ... 6 V	8 ... 33 VDC	>10 kOhm / < 100 nF	< 7 mA
3 wire	0 ... 10 V	12 ... 33 VDC	>10 kOhm / < 100 nF	< 7 mA
	0 ... 10 V	24 VAC ± 15%	>10 kOhm / < 100 nF	< 7 mA
	ration. 10 ... 90%	5 VDC ± 10%	>10 kOhm / < 100 nF	< 7 mA
Polarity reversal protection	Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage.			

Protection class

Protection class III

Dynamic response

Response time	< 2 ms, 1 ms typ.
Load cycle	< 100 Hz

Protection standard

Connector DIN EN 175301-803, Braids	IP 65
Connector RAST 2.5	IP 00
Swift connector, Metri Pack, Connector M12x1	IP 67

Electrical connection

Swift connector with or without cable 1.5 m (PVC spec.)

Connector DIN EN 175301-803-A
Connector DIN EN 175301-803-C (mini DIN)
Metri Pack Serie 150
Connector M12x1
Braids
Connector RAST 2.5 (3 wire, only)

Pressure connection

Inside thread	G ¼	with O-Ring seal FPM spec. (-30 ... +135 °C)
	¼ -18 NPT	
Outside thread	G ¼	sealed at back DIN 3852 form E with Profile seal ring in FPM spec. (-30 ... +135 °C)
	R ¼	DIN 2999
	G ½	sealed at back and manometer (combi) with Profile seal ring in FPM spec. (-30 ... +135 °C)
	G ½	sealed at front

Installation arrangement

Unrestricted

Tests / Admissions

Electromagnetic compatibility	CE conformity acc. EN 61326-2-3
Shock acc. IEC IEC 68-2-27	100 g, 11 ms half sine wave, all 6 directions, free fall from 1 m on concrete (6x)
Constant shock acc. IEC 68-2-29	40 g for 6 ms, 1000x all 3 directions
Vibration acc. IEC 68-2-6	20 g, 15 ... 2000 Hz, 15 ... 25 Hz with amplitude ± 15 mm, 1 Octave/min. all 3 directions, 50 constant load

Protection against explosion

Intrinsic safety «i» (with current output only)	Ex II 1/2 G Ex ia IIC T4 Ga/Gb
EC type examination certificate	Ex II 1/2 D Ex ia IIC T125°C Da/Db
Connection to certified intrinsically safe resistive circuits with maximum values	SEV 10 ATEX 0145
Effective internal inductance and capacitance for versions with plugs complying with EN 175301-803 or M12x1	Ui = 30 VDC; Ii = 100 mA = Pi = 0.75 W
	Li = 0 nH; Ci = 0 nF

Weight

~ 90 g

Accuracy acc. to EN 60770-1

Parameter	Unit	
Characteristic line (at reference conditions) ¹⁾	% fs	± 0.8
Resolution	% fs	0.1
Thermal characteristic ²⁾	% fs/10K	± 0.2

Test conditions: 25 °C, 45% RH, power supply 24 VDC

Order code selection in bar

528. X X X X X X X X X X X X

Pressure mode	Relative			9																	
	Absolute			8																	
Pressure range ³⁾	-1 ... + 0 bar			9	0	1															
	0 ... + 1 bar				1	1															
	0 ... + 1.6 bar				1	2															
	0 ... + 2.5 bar				1	4															
	0 ... + 4 bar				1	5															
	0 ... + 6 bar				1	7															
	0 ... + 10 bar				3	0															
	0 ... + 16 bar				3	1															
	0 ... + 25 bar				9	3	2														
	0 ... + 40 bar				9	3	3														
0 ... + 60 bar				9	4	0															
Sealing material	FPM	Fluoro elastomer											0								
	EPDM	Ethylene propylene											1								
	NBR	Butadiene Acrylonitrile											2								
	MVQ	Silicone polymer											3								
Version	Not free of oil and grease												0								
	Free of oil and grease (without sealing parts)												1								
Output / power supply	0 ... 5 V	7 ... 33 VDC																		1	
	1 ... 6 V	8 ... 33 VDC																		6	
	0 ... 10 V	12 ... 33 VDC																		2	
	0 ... 10 V	24 VAC ±15%																		8	
	0 ... 10 V	24 VAC ±15%																		1,2,6	
	0 ... 10 V	24 VAC ±15%																		7	
	4 ... 20 mA	7 ... 33 VDC																		3	
4 ... 20 mA	10 ... 30 VDC	Ex protection											0	4	1,3						
Electrical connection ⁴⁾	Swift connector																			0	
	Connector DIN EN 175301-803-A																				1
	Connector DIN EN 175301-803-C (mini DIN)																				2
	Connector M12x1 ⁵⁾ 2w: IN=1 / OUT=3 3w: IN=1 / OUT=4 / GND=3																				3
	Connector M12x1 ⁵⁾ 2w: IN=1 / OUT=4 3w: IN=1 / OUT=3 / GND=4																				M
	Connector RAST 2.5													0	7	4					
	Metri Pack Serie 150 ⁵⁾													0		5					
	Braids 80 ±10 mm																				6
	Braids 290 ±10 mm																				7
	Braids 480 ±10 mm																				8
	Braids 730 ±10 mm																				9
Swift connector with cable 1.5 m																				L	
Pressure connection ⁶⁾	Inside thread	G ¼ with O-Ring seal FPM spec. (-30 ... +135 °C)																		1	
	Outside thread	¼ -18 NPT																		3	
	Outside thread	G ¼ sealed at back DIN 3852 form E with Profile seal ring in FPM spec. (-30 ... +135 °C)																		4	
	Outside thread	R ¼ acc. to DIN 2999																		7	
	Outside thread	G ½ sealed at back and manometer (combi) with Profile seal ring in FPM spec. (-30 ... +135 °C)																		8	
	Outside thread	G ½ sealed at front																		9	
Material ⁶⁾	Stainless steel 1.4305																			N	
Pressure range variation	Indicate W and state range on order (e.g.: W0... + 3bar/OUT0...5V)																				W

Accessories

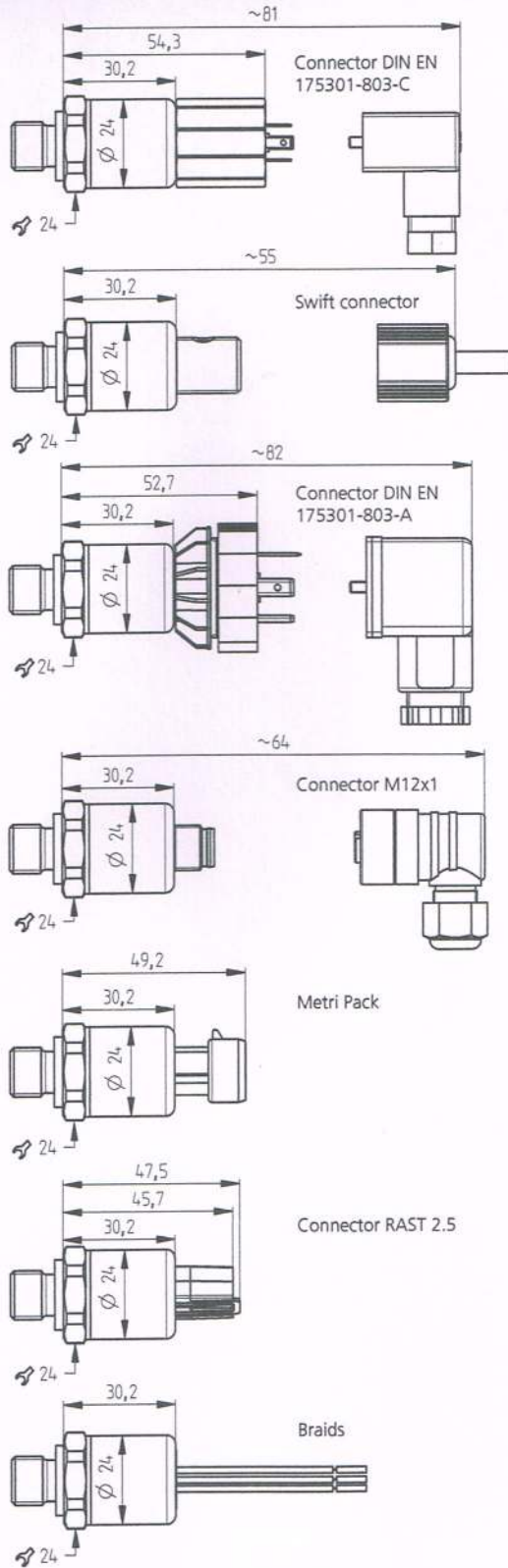
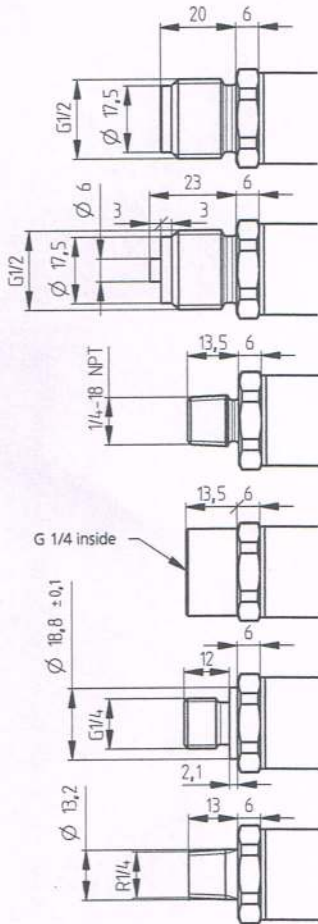
	Order number
Swift connector	107359
Female connector DIN EN 175301-803-A with seal	103510
Female connector DIN EN 175301-803-C (mini DIN) with seal	104244
Female connector for connector M12x1	106975

Order code selection in psi

528. X X X X X X X X X X X

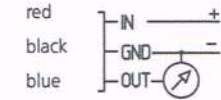
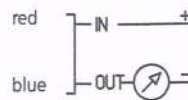
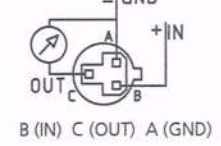
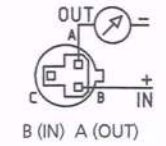
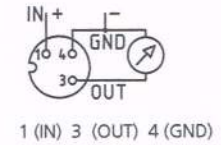
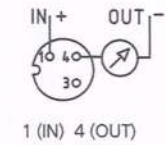
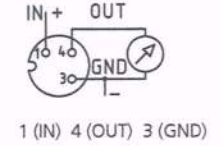
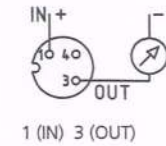
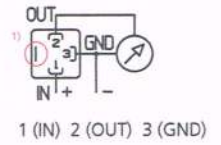
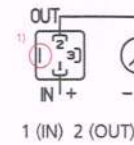
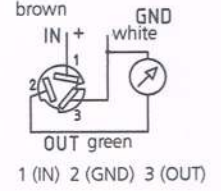
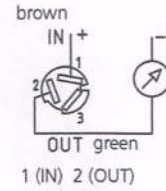
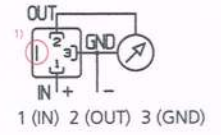
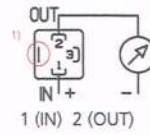
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	0 ... + 60 psi			B	5																																								
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	0 ... +150 psi			C	0																																								
	0 ... +200 psi			C	1																																								
	0 ... +300 psi			9	C	2																																							
	0 ... +500 psi			9	C	3																																							
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Pressure range variation	Indicate W and state range on order (e.g.: W0... + 16psi/OUT1...8V)																																												

N
W



2 wire

3 wire



Device design with explosion protection: 4 ... 20 mA
The grounding connection is conductively connected to the transmitter housing.

Connector DIN EN 175301-803-A (Ex)

Connector M12x1 (Ex)

