



XMP i

**Precision Pressure Transmitter
for the Process Industry
with HART®-Communication**

Stainless Steel Sensor

**accuracy according to IEC 60770:
0.1 % FSO**

Precision Pressure Transmitter

XMP i

Nominal pressure:

from 0 ... 400 mbar
up to 0 ... 600 bar

Output signals:

2-wire: 4 ... 20 mA
others on request

Special characteristics:

- ▶ turn-down 1:10
- ▶ two chamber aluminium die cast case or stainless field housing
- ▶ internal or flush welded diaphragm
- ▶ HART®-communication
- ▶ IS-version
Ex ia = intrinsically safe for gases and dusts

Optional versions:

- ▶ IS-version
Ex d = flameproof enclosure
- ▶ integrated display and operating module
- ▶ special materials as Hastelloy® and Tantal
- ▶ cooling element for media temperatures up to 300 °C

The process pressure transmitter XMP i has been especially designed for the process industry and measures vacuum, gauge and absolute pressure ranges of gases, steam, fluids and dust up to 600 bar.

Different process connections such as threads and flanges with an internal or flush welded diaphragm are available and can be combined with a cooling element for media temperatures up to 300°C.

The transmitter is as a standard equipped with HART®-communication; the customer can choose between a two chamber aluminum die cast case or a stainless field housing.

Preferred areas of use are



Oil and gas industry



Chemical and petrochemical industry



Energy Industry

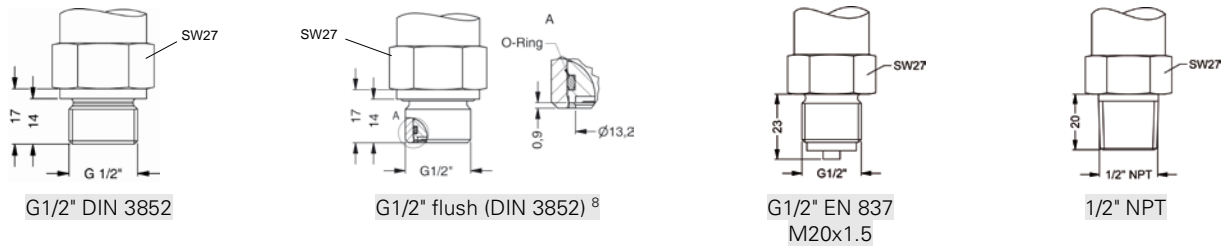


Heavy Industry



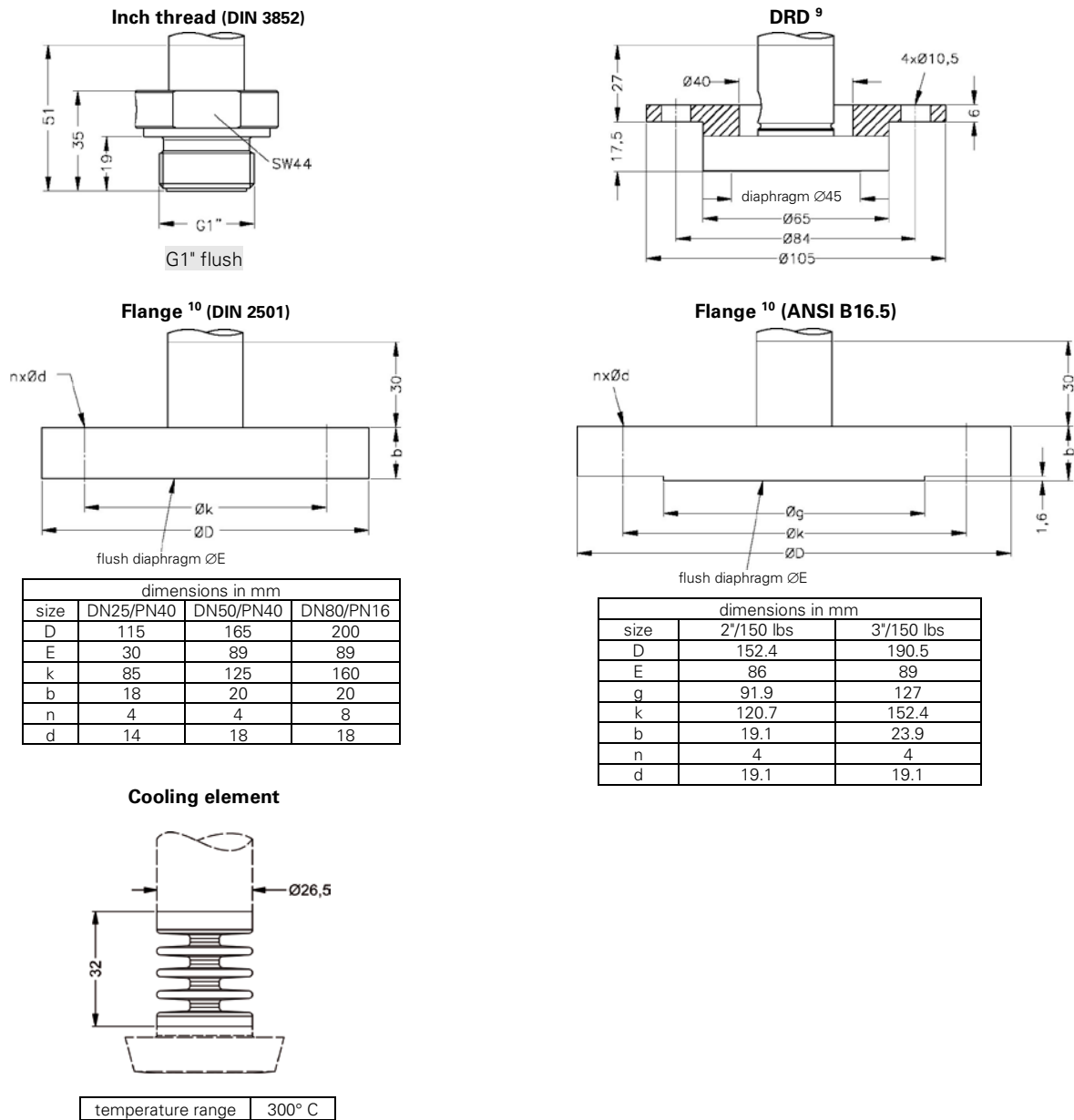
Pressure ranges ¹												
Nominal pressure gauge / abs.	[bar]	0.4	1	2	4	10	20	40	100	200	400	600
Overpressure	[bar]	2	5	10	17,5	35	80	105	210	600	1000	1000
Burst pressure	[bar]	3	7,5	15	25	50	120	210	420	1000	1250	1250
¹ On customer request we adjust the devices within the turn-down-possibility by software to the required pressure ranges.												
Vacuum ranges												
Nominal pressure gauge	[bar]	-0.4 ... 0.4		-1 ... 1		-1 ... 2		-1 ... 4		-1 ... 10		
Overpressure	[bar]	2		5		10		17,5		35		
Burst pressure	[bar]	3		7,5		15		25		50		
Output signal / Supply												
Standard	2-wire: 4 ... 20 mA IS-intrinsically safe version with HART [®] -communication / V _S = 12 ... 28 V _{DC}											
Current consumption	max. 25 mA											
Performance												
Accuracy ²	≤ ± 0.1 % FSO		The accuracy is calculated as follows									
Performance after turn-down	- turn-down ≤ 1:5: no change		≤ 0.1 + 0.015 x (turn-down - 5) % FSO									
	- turn-down > 1:5:		e.g. turn-down 9: ≤ 0.1 + 0.015 x (9 - 5) % FSO = 0.16 % FSO									
Permissible load	R _{max} = [(V _S - V _{Smin}) / 0.02 A] Ω					load during HART [®] communication: R _{min} = 250 Ω						
Influence effects	supply: 0.05 % FSO / 10 V					permissible load: 0.05 % FSO / kΩ						
Long term stability	≤ ± 0.1 % FSO / year at reference conditions											
Response time	100 msec – without consideration of electronic damping						measuring rate 10/sec					
Adjustability	electronic damping: 0 ... 100 sec						turn-down of span up to 1:10					
	offset 0 ... 90 % FSO;											
² accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)												
Thermal errors / Permissible temperatures												
Tolerance band ^{3,4}	≤ 0.2 % FSO x turn-down (in compensated range -20 ... 85 °C)											
Permissible temperatures ⁵	medium: -40 ... 125 °C for filling fluid silicon oil -10 ... 125 °C for filling fluid food compatible oil						without display: environment: -40 ... 80 °C storage: -40 ... 80 °C with display: environment: -20 ... 70 °C storage: -30 ... 80 °C					
Permissible temperature medium for cooling element 300°C	filling fluid silicon oil			overpressure: -40 ... 300 °C			low pressure: -40 ... 150 °C					
	filling fluid food compatible oil			overpressure: -10 ... 250 °C			low pressure: -10 ... 150 °C					
³ an optional cooling element can influence thermal effects for offset and span depending on installation position and filling conditions												
⁴ for flange- and DRD-version: tolerance band offset ≤ ± 1.6 % FSO / tolerance band span ≤ ± 0.6 % FSO												
⁵ max. temperature of the medium for nominal pressure gauge > 0 bar: 150 °C for 60 minutes with a max. environmental temperature of 50 °C (without cooling element).												
Electrical protection												
Short-circuit protection	permanent											
Reverse polarity protection	no damage, but also no function											
Electromagnetic compatibility	emission and immunity according to EN 61326											
Mechanical stability												
Vibration	5 g RMS (25 ... 2000 Hz)					according to DIN EN 60068-2-6						
Shock	100 g / 11 msec					according to DIN EN 60068-2-27						
Filling fluids												
Standard	silicon oil											
Options for process connections	food compatible oil (with FDA approval) (Mobil DTE FM 32; Category Code: H1; NSF Registration No.: 130662) Halocarbon and others on request											
Materials												
Pressure port	stainless steel 1.4404 (316L)											
Housing	aluminium die cast, powder-coated or stainless steel 1.4404 (316L)											
Field housing	stainless steel 1.4404 (316L)											
Cable gland	brass, nickel plated											
Viewing glass	laminated safety glass											
Seals (media wetted)	thread: standard: FKM option: FFKM (min. permissible temperature from -15 °C, possible for nominal pressure ranges P _N ≤ 100 bar); others on request option: welded version for pressure ports according to EN 837 with P _N between 1 and 40 bar DRD and flange: none, not included in the scope of delivery											
Diaphragm	standard: stainless steel 1.4435 (316 L) options for process connections: Hastelloy [®] C-276 (2.4819), Tantal (possible from 1 bar)											
Media wetted parts	pressure port, seals, diaphragm											

Standard pressure ports (dimensions in mm)



⁸ not possible for vacuum and nominal pressure ranges > 40 bar

Process connections up to 40 bar (dimensions in mm)



⁹ mounting flange is included in the delivery (already pre-assembled)

¹⁰ DN80/PN16, 2"/150 lbs and 3"/150 lbs only possible for nominal pressure ranges $P_N \leq 6$ bar

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