



XMP ci

Process Pressure Transmitter with HART®-communication

Ceramic Sensor

accuracy according to IEC 60770: 0.1 % FSO

Nominal pressure

from 0 ... 160 mbar up to 0... 20 bar

Output signals

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

Special characteristics

- turn-down 1:5
- two chamber aluminium die cast case or stainless field housing
- internal or flush mounted capacitive ceramic sensor
- HART®-communication
- explosion protection intrinsic safety (ia)
- diaphragm Al₂O₃ 99.9 %

Optional versions

- explosion protection flameproof equipment (d)
- with integrated display and operating module
- several process connections (thread, flange, DRD etc.)

The process pressure transmitter XMP ci measures the pressure of gases, steam and fluids. The special-developed capacitive ceramic sensor for this transmitter has a high overpressure capability and excellent media stability.

Several process connections e.g. thread or flange are available. The transmitter is as a standard equipped with HART®-communication, the customer can choose between a two chamber aluminium die cast case or a stainless field housing.

Preferred areas of use are



Oil and gas industry



Chemical and petrochemical industry

Preferred using in



Fuel and oil



Aggressive media











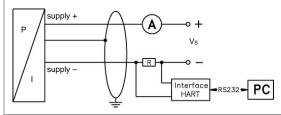




Pressure ranges ¹								
Nominal pressure gauge	[bar]	0.16	0.4	1	2	5	10	20
Overpressure	[bar]	4	6	8	15	25	35	45
Permissible vacuum	[bar]							
		-0.3 -0.5 -1 rices by software to the required pressure ranges. Within the turn-down-possibility (starting at 0.02 bar).						
Output signal / Supply	st tile devi	ices by soliware it	o une required p	oressure ranges.	within the turn-c	iowii-possibility (s	larting at 0.02 ba	1).
2-wire: 4 20 mA		standard: int	ringia aafatu.	(ia) with HART [®]	oommuniooti		\/ _ 1	2 28 V _{DC}
with explosion protection								
· · · · · · · · · · · · · · · · · · ·			meproor equi	ipment (d) with	HAR I COMM	lunication	V _S = 1	3 28 V _{DC}
Current consumption		max. 25 mA						
Performance								
Accuracy ²		nominal pressure < 1 bar: ≤ ± 0.2 % FSO						
		nominal pressure \geq 1 bar: \leq ± 0.1 % FSO for nominal pressure ranges from 0.16 bar up to 0.4 bar: \leq ± (0.2 + (TD-1) x 0.02) % FSO						
			•			•	(TD-1) x 0.02)	
				s from 1 bar up		,	TD-1) x 0.01)	% FSO
				ressure range			5	050.0
Permissible load		$R_{\text{max}} \le [(V_S - V_{S \text{min}}) / 0.02 \text{A}] \Omega$ load during HART®-communication: $R_{\text{min}} = 250 \Omega$ supply: 0.05 % FSO / 10 V permissible load: 0.05 % FSO / kΩ						
nfluence effects		supply: 0.05 %				ole load: 0.05 %	FSO / kΩ	
ong term stability				erence condition				,
Response time		200 msec – wi			onic damping		measurir	ig rate 5/se
Adjustability		electronic dam		00 sec				
		offset 0 80 %		5 (20 ! \			
2	770 " '	turn-down of s						
accuracy according to IEC 60		t point adjustment	(non-linearity,	nysteresis, repea	tability)			
Thermal effects (offset an	ia spanj							
Tolerance band		≤ ± 1 % FSO						
n compensated range		-20 80 °C						
Permissible temperatures								
Permissible temperatures ³	1	without display				ent: -40 70 °C		-40 80° (
		with display:		-25 125 °C	environm	ent: -20 70 °C	storage:	-30 80° (
for pressure port in PVDF the	medium t	emperature is -25	60 °C					
Electrical protection								
Short-circuit protection		permanent						
Reverse polarity protection		no damage, bu	ıt also no fun	nction				
Electromagnetic compatibil	ity	emission and i	mmunity acc	ording to EN 6	1326			
Mechanical stability								
Vibration		5 g RMS (20	. 2000 Hz)		accor	ding to DIN EN	60068-2-6	
Shock		100 g / 11 mse				ding to DIN EN		
Materials		1 100 g / 1 1 1 1 1 1 0 0			4000.	ag to 2t 2t		
Pressure port		standard:		etainless stor	el 1.4404 (316	1 \		
Flessure port		optionally for G	31 1/2" flush:		1.4404 (310	L)		
Housing				r-coated or stair	nless steel 1 4	404 (3161)		
Cable gland		brass, nickel p		oodica or stan	11000 01001 1.4	404 (010L)		
Viewing glass		laminated safe						
			ity glass	0th 0 = 0 = 0 = 0	w.cot			
Seals (media wetted)		FKM; EPDM	00.0.0/	others on red	quesi			
Diaphragm		ceramics Al ₂ O ₃	-					
Media wetted parts		pressure port,	seal, diaphra	agm				
Explosion protection								
Approval AX12-XMP ci		intrinsic safet						
		stainless steel	field housing	j:	alumi	nium die cast ca	ase:	
		zone 0/1 4: II 1			zone	0/1 5: II 1/2G E	x ia IIB T4 Ga/	Gb
			1/2G Ex ia IIC			II 2G Ex	a IIB T4 Gb	
			2G Ex ia IIC		zone	20: II 1D Ex i	a IIIC T85 °C [Da
		zone 20: II 1	ID Ex ia IIIC	T85 °C Da				
		safety techn. n	naximum valı	ues:		/ techn. maximu		
				880 mW, $C_i = 0$		$28 \text{ V}, I_i = 98 \text{ mA},$		$C_i = 0 \text{ nF},$
		$L_i = 0 \mu H, C_{GNI}$				μ H, $C_{GND} = 33$		
Approval AX17-XMP ci					cast case IE	SExU 12 ATEX 1	045 X	
			2G Ex db IIC					
Permissible temperatures for	or	in zone 0: -20		p _{atm} 0.8 bar up	to 1.1 bar			
environment		in zone 1 or hi						
		intrinsic safe	,	-40 70° C				
		flameproof e	enciosure:	-20 70 °C				
The designation depends on t	he nomina	al pressure range.	Nominal press	sure ranges ≤160	mbar are marke	d with "2G".	:th 10"	
The designation depends on t Nominal pressure ranges > 16 The designation depends on t	60 mbar aı	nd ≤10 bar are ma	rked with "1/20	sure ranges ≤160 G". Nominal press	ure ranges > 10	bar are marked v	vith "1G".	

Miscellaneous			
Display (optionally)	LC-display, visible range 32.5 x 22.5 mm;		
	5-digit 7-segment main display, digit height 8 mm, range of indication ±9999;		
	8-digit 14-segment additional display, digit height 5 mm;		
	52-segement bargraph; accuracy 0.1 % ± 1 digit		
Ingress protection	IP 67		
Installation position	any		
Weight	min. 400 g (depending on housing and mechanical connection)		
Operational life	100 million load cycles		
CE-conformity	EMC Directive: 2014/30/EU		
ATEX Directive	2014/34/EU		

Wiring diagram



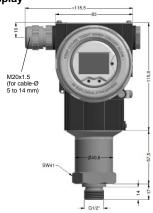
Pin configuration

	aluminium die cast case:	stainless steel field housing:
Electrical connections	terminal clamps	terminal clamps
	(clamp section: 2.5 mm ²)	(clamp section: 1.5 mm ²)
Supply +	IN+	IN+
Supply –	IN-	IN-
Test	Test	-
Shield	(b)	(

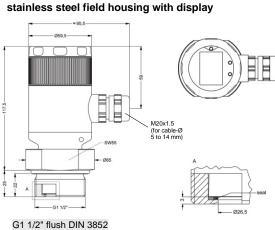
Housing designs ⁶ (dimensions in mm)

aluminium die cast case with display



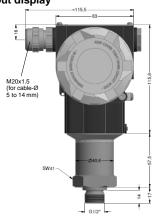




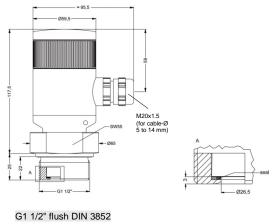


aluminium die cast case without display





stainless steel field housing without display



⁶ aluminium die cast case is horizontally rotatable as standard

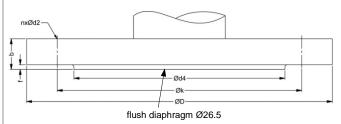
Process connections (dimensions in mm)

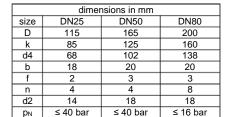
SW55 4xØ10,5 4xØ10,5 G1 1/2" A DESCRIPTION OF THE PROPERTY OF THE PROPERTY

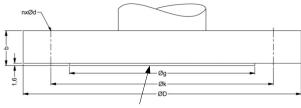
G1 1/2" flush DIN 3852

Inch thread

Flange (DIN 2501) Flange (ANSI)







DRD 7

flush diaphragm Ø26.5

dimensions in mm					
size	2"/150 lbs	3"/150 lbs			
D	152.4	190.5			
g	91.9	127			
k	120.7	152.4			
b	19.1	23.9			
n	4	4			
d	19.1	19.1			
PΝ	≤ 10 bar	≤ 10 bar			

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pressure measurement

XMP ci_E_120123

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⁷ mounting flange is included in the delivery (already pre-assembled) HART® is a registered trademark of HART Communication Foundation; Windows® is a registered trademark of Microsoft Corporation



Ordering code XMP ci XMP ci Pressure 5 1 E gauge [bar] 🗥 Input 0 0 0.16 6 4 0 0 0 0.40 0 1 0 1 1 0 1 0 2 0 1 0 2 0 5 5 10 0 1 2 0 0 2 9 9 9 20 customer consult Aluminium die cast case with display 0 without display N Stainless steel field housing with display ٧ without display Ν customer 9 9 consult Output intrinsic safety (ia) 4 ... 20 mA / 2-wire with HART®-communication flameproof equipment (d) 4 ... 20 mA / 2-wire with HART®-communication ¹ G customer 9 consult Accuracy p_N < 1 bar: 0.2 % FSO В p_N ≥ 1 bar: 0.1 % FSO customer 9 consult Electrical connection terminal clamp alu housing A K 0 8 8 0 terminal clamp field housing 9 9 9 customer consult Mechanical connection standard pressure connections: G1/2" DIN 3852 0 0 G1/2" EN 837 2 0 0 1/2" NPT Ν 0 0 process connections: G 1 1/2" DIN flush (DIN 3852) 0 flange DN 25 / PN 40 (DIN 2501) F 2 0 flange DN 50 / PN 40 (DIN 2501) 2 flange DN 80 / PN 16 (DIN 2501) 1 4 flange DN 2" / 150 lbs (ANSI B16.5) ² 3 flange DN 3" / 150 lbs (ANSI B16.5) ² 3 3 DRD Ø 65 mm ³ D R D customer 9 9 9 consult Diaphragm ceramics Al₂O₃ 99,9 % customer 9 consult FKM 1 **EPDM** 3 customer 9 consult Pressure port standard: stainless steel 1.4404 (316L) option for G 1 1/2" flush: PVDF 4 В customer 9 consult Special version 0 0 9 9 standard customer consult

Δ if setting range shall be different from nominal range please specify in your order

- ¹ only possible in combination with aluminium die cast case
- 2 2"/150 lbs and 3"/150 lbs only possible for nominal pressure ranges $p_N\,\leq 10$ bar
- $^{\rm 3}$ mounting flange is included in the delivery (already pre-assembled)
- 4 for pressure port in PVDF the operation medium temperature is -25 \dots 60 $^{\circ}\text{C}$

HART® is a registered trade mark of HART Communication Foundation

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modifications to the specifications and

right to make

We reserve the

time of publishing.

represent the state of engineering at the

BDISENSORS GmbH - The specifications given in this document

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