



# XMP ci

**Process Pressure Transmitter with** HART®-communication

Ceramic Sensor

accuracy according to IEC 61298-2: 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 Al<sub>2</sub>O<sub>3</sub> 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



Fax:









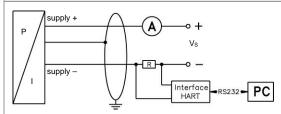


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<sup>2</sup> accuracy according to IEC 61298- Thermal effects (offset and s		nping: 0 100 se					9 10110 0700
<sup>2</sup> accuracy according to IEC 61298- Thermal effects (offset and s Tolerance band							
Thermal effects (offset and sp	turn-down of s	turn-down of span: max. 1:5 (span min. 0.02 bar)					
· · · · · · · · · · · · · · · · · · ·	2 – limit point adjustme	nt (non-linearity, hys	steresis, repea	tability)			
Tolerance band	pan)						
	≤ ± 1 % FSO						
in compensated range	-20 80 °C						
Permissible temperatures	·						
Permissible temperatures <sup>3</sup>	without displa	y: medium: -25 .	125 °C	environm	ent: -40 70 °C	storage:	-40 80° (
•	with display:	medium: -25 .		environm	ent: -20 70 °C		-30 80° (
<sup>3</sup> for pressure port in PVDF the med	lium temperature is -25	i 60 °C					
Electrical protection							
Short-circuit protection	permanent						
Reverse polarity protection	no damage, b	ut also no function	n				
Electromagnetic compatibility		immunity according		326			
Mechanical stability	<u> </u>	•					
Vibration	5 g RMS / 10	2000 Hz		accol	ding to DIN EN 6	30068-2-6	
Shock	500 g / 1 mse				ding to DIN EN 6		
Materials	000 g / 1 11100	o man onto		4000.	ang to Dirt Lite	,0000 <u>L L</u> 1	
Pressure port	standard:	ctr	ainlace etaal	1.4404 (316	1 \		
Flessure port		31 1/2" flush: P\		1.4404 (310	L)		
Housing		cast, powder-coa		less steel 1 4	404 (316L)		
Cable gland	brass, nickel p		atod of otdiri	1000 01001 11 1	101 (0102)		
Viewing glass	laminated safe						
Seals (media wetted)	FKM; EPDM	, ,	thers on requ	ıost			
Diaphragm	ceramics Al <sub>2</sub> C		iners on requ	2631			
<u> </u>		-					
Media wetted parts	pressure port,	seal, diaphragm					
Explosion protection							
Approval AX12-XMP ci		ty IBExU 05 ATI	EX 1106 X				
		field housing:			nium die cast cas		
		1G Ex ia IIC T4 G		zone	0/1 <sup>5</sup> : II 1/2G Ex		Gb
		1/2G Ex ia IIC T4				a IIB T4 Gb	
		2G Ex ia IIC T4 G		zone	20: II 1D Ex ia	ı IIIC T85 °C [	Эа
		1D Ex ia IIIC T85					
	,	maximum values:			techn. maximur		0 0 5
		98 mA, P <sub>i</sub> = 680 n	$mVV, C_i = 0 n$	$1$ F, $U_i = 2$	$^{18}$ V, $I_i = 98$ mA, $I_i = 98$ mA, $I_i = 98$	P <sub>i</sub> = 680 mW,	$C_i = 0 \text{ nF},$
Approval AV17 VMD at	L <sub>i</sub> = 0 µH, C <sub>GN</sub>	<sub>D</sub> = 27 nF <b>nclosure</b> with alu	minium di-		$\mu$ H, $C_{GND} = 33 \text{ n}$		
Approval AX17-XMP ci		<b>1Closure</b> with alu 2G Ex db IIC T5 (		Jasi Case IE	LXU IZ ATEX 10	J40 A	
Pormissible temperatures for				n 1 1 har			
=			o.o bar up i	o i.i bal			
			70° C				
environment	intrinsic saf flameproof	,	70 °C 70 °C				
environment	•						
	ominal pressure range	Nominal pressure r	ranges <160 n	nhar are marke	d with 2G"		
environment  The designation depends on the n Nominal pressure ranges > 160 m.						th "1G".	

# **Process Pressure Transmitter**

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

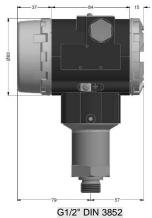


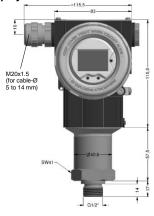
confi	

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

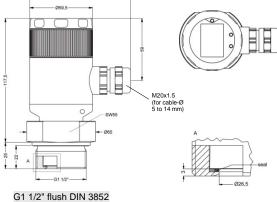
## Housing designs <sup>6</sup> (dimensions in mm)

# aluminium die cast case with display



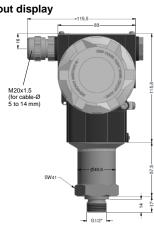


# stainless steel field housing with display

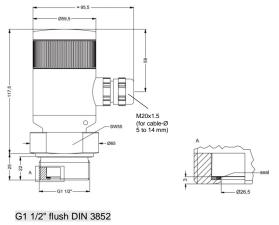


## aluminium die cast case without display





#### stainless steel field housing without display

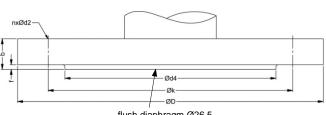


<sup>6</sup> aluminium die cast case is horizontally rotatable as standard

#### Process connections (dimensions in mm)

# DRD 7 Inch thread 4xØ10,5 17,5 flush diaphragm Ø26.5 G1 1/2" flush DIN 3852

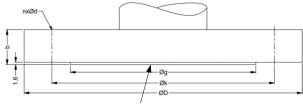
#### Flange (DIN 2501)



flush diaphragm Ø26.5

	dimensions in mm				
size	DN25	DN50	DN80		
D	115	165	200		
k	85	125	160		
d4	68	102	138		
b	18	20	20		
f	2	3	3		
n	4	4	8		
d2	14	18	18		
PΝ	≤ 40 bar	≤ 40 bar	≤ 16 bar		

Flange (ANSI)



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	

XMP ci\_E\_140425

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<sup>&</sup>lt;sup>7</sup> 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 <sup>1</sup> G customer 9 consult Accuracy p<sub>N</sub> < 1 bar: 0.2 % FSO В p<sub>N</sub> ≥ 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) <sup>2</sup> 3 flange DN 3" / 150 lbs (ANSI B16.5) <sup>2</sup> 3 3 DRD Ø 65 mm <sup>3</sup> D R D customer 9 9 9 consult Diaphragm ceramics Al<sub>2</sub>O<sub>3</sub> 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

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

- <sup>1</sup> 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
- <sup>3</sup> mounting flange is included in the delivery (already pre-assembled)
- $^4$  for pressure port in PVDF the operation medium temperature is -25  $\dots$  60  $^{\circ}\text{C}$

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01.04.2022

modifications to the specifications and

right to make

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time of publishing.

represent the state of engineering at the

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