



EP 500

Pressure Transmitter

Special Application:
Level Measurement via Air Bubbling

Characteristics:

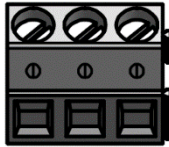
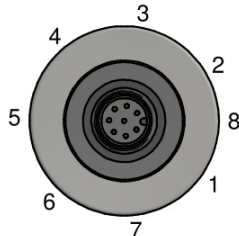
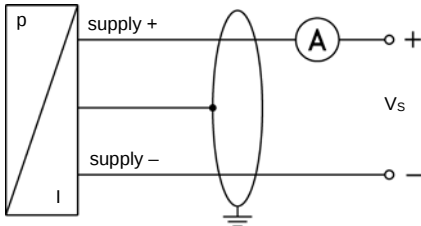
- ▶ capacitive ceramic sensor
- ▶ nominal pressure ranges from 0 ... 60 mbar up to 0 ... 20 bar
- ▶ output signal 4 ... 20 mA / 2-wire
- ▶ hat rail housing
- ▶ programming via integrated interface

Technical Data



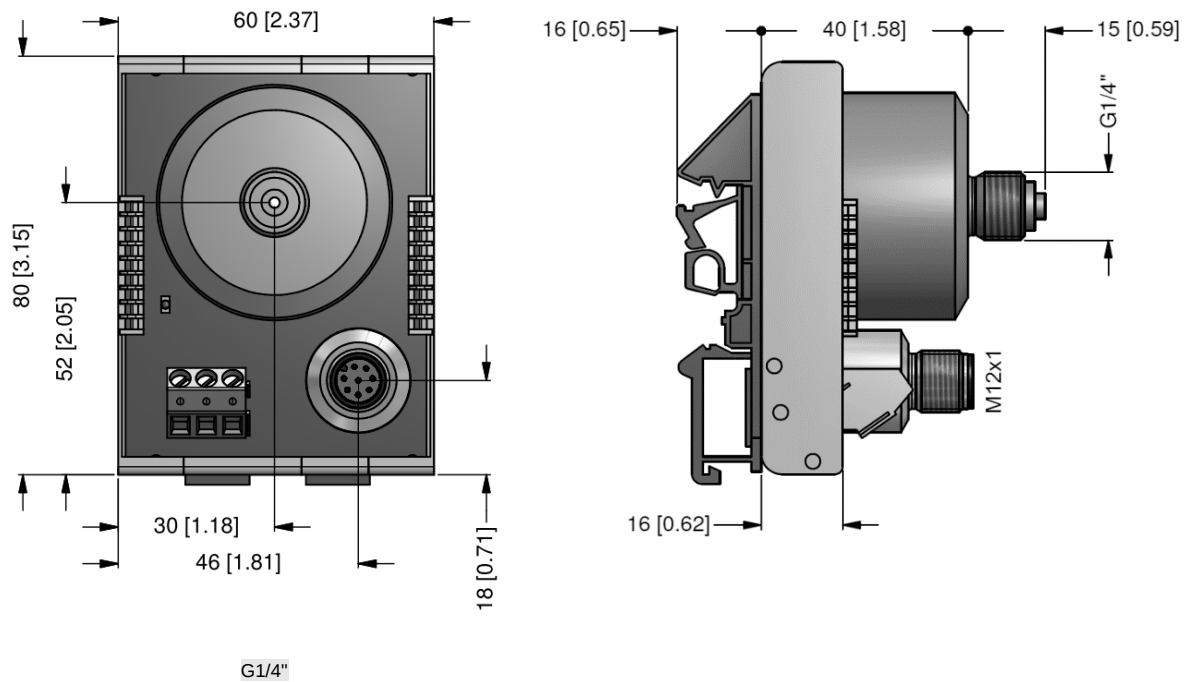
Input pressure range									
Nominal pressure p_N gauge	[bar]	0.06	0.16	0.4	1	2	5	10	20
Nominal pressure p_N absolute	[bar]	on request							
Permissible overpressure	[bar]	2	4	6	8	15	25	35	40
Permissible vacuum for p_N gauge	[bar]	-0.2	-0.3	-0.5		-1			

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / $V_S = 12 \dots 32 V_{DC}$; $V_{S \text{ Nom.}} = 24 V_{DC}$
Current consumption	max. 21 mA
Performance	
Accuracy ¹	IEC 61298-2 ² : $\leq \pm 0.2 \% \text{ FSO}$ BFSI: $\leq \pm 0.1 \% \text{ FSO}$
Turn-on time	700 msec
Permissible load	$R_{\text{max}} = [(V_S - V_{S \text{ min}}) / 0.02 \text{ A}] \Omega$
Long term stability	$\leq \pm 0.1 \% \text{ FSO} / \text{year}$ at reference conditions
Response time (10 ... 90 %)	120 msec – without consideration of electronic damping
Measuring rate	8/sec
¹ for nominal pressure ranges ≤ 0.4 bar the accuracy is calculated as follows: $\leq \pm [0.2 + 0.04 \times (\text{nominal pressure range} / \text{adjusted range})] \% \text{ FSO}$	
² accuracy according to IEC 61298-2 – limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (offset and span)	
Tolerance band	$\leq \pm 1 \% \text{ FSO}$
In compensated range	-20 ... 80 °C
Permissible temperatures	
medium	-40 ... 125 °C
electronics / environment / storage	-40 ... 85 °C

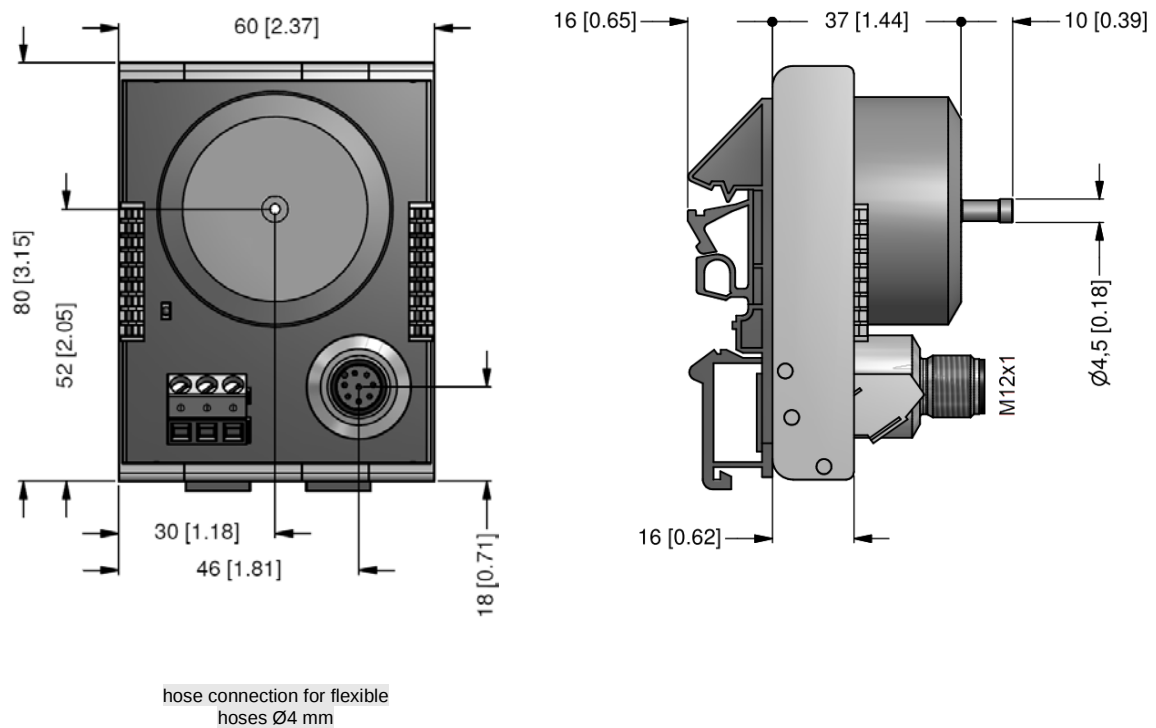
Electrical protection			
Short-circuit protection		permanent	
Reverse polarity protection		no damage, but also no function	
Electrical connection			
Input		terminal clamps (3-pin)	
Communication connector		M12x1 (8-pin), metal	
Materials			
Pressure port		stainless steel 1.4301	
Housing		PA6 (housing foot: PA66)	
Seals (media wetted)		FKM	
Diaphragm		ceramic Al ₂ O ₃ 96 %	
Media wetted parts		pressure port, seals of sensor, diaphragm	
Category of the environment			
Lloyd's Register (LR)		EMV1, EMV2, EMV3	number of certificate: 13/20056
Det Norske Veritas (DNV)		temperature: B humidity: B vibration: A electromagnetic compatibility: B enclosure: -	number of certificate: TAA00001GM
Miscellaneous			
Ingress protection		IP00	
Function display		green SMD-LED - lights by information flow through the transmitter	
Installation position		any	
Operational life		100 million load cycles	
Weight		approx. 200 g	
Adjustability		configuration via programming kit CIS 700 ³ ; following configurations are possible: - electronic damping: 0 ... 100 sec - offset: 0 ... 67 % FSO - turn down of span: max. 1:20 - configuration of pressure unit - calibration via connected pressure reference	
³ programming kit has to be ordered separately (software appropriate for Windows®95, 98, 2000, NT Version 4.0 or higher, and XP)			
Pin configuration			
Electrical connections		terminal clamps	M12x1 (8-pin), metal
			
	Supply +1	1	-
	Supply +2	-	4
	Supply –	2	2
	Tx	-	5
	Rx	-	6
	GND	-	7
	NC	-	1
	Shield	3	3
Wiring diagram			
2-wire-system (current)			
			

Dimensions (mm / in)

standard



option for $p_N \leq 3$ bar



Ordering code EP 500

EP 500

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Pressure																				
	gauge	U	P	5																
	absolute	U	P	6																consult
Input																				
	[bar]																			
	0.06				0	6	0	0												
	0.16				1	6	0	0												
	0.4				4	0	0	0												
	1.0				1	0	0	1												
	2.0				2	0	0	1												
	5.0				5	0	0	1												
	10				1	0	0	2												
	20				2	0	0	2												
	customer				9	9	9	9												consult
Output																				
	4 ... 20 mA / 2-wire								1											
	customer								9											consult
Accuracy																				
	0.2 % FSO								B											
	customer								9											consult
Mechanical connection																				
	hose connection Ø 4.5 mm ¹									Y	0	2								
	G1/4" EN 837									4	0	0								
	customer									9	9	9								consult
Seal																				
	FKM											1								
	customer											9								consult
Pressure port																				
	stainless steel 1.4301 (304)												2							
	customer												9							consult
Diaphragm																				
	ceramics Al ₂ O ₃ 96%													2						
	customer													9						consult
Special version																				
	standard															0	0	0		
	customer															9	9	9		consult

¹ hose connection only up to 3 bar