

EP 500

Pressure Transmitter

Special application:
level measurement via air bubbling

Characteristics:

- ▶ capacitive ceramic sensor
- ▶ nominal pressure range 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 abs. [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 = 9 ... 32 V _{DC} ; V _S Nom. = 24 V _{DC}
Current consumption	max. 21 mA
Performance	
Accuracy ¹	IEC 60770 ² : ≤ ± 0.2 % FSO BFSL: ≤ ± 0.1 % FSO
Turn-on time	700 msec
Permissible load	R _{max} = [(V _S - V _S min) / 0.02 A] Ω
Long term stability	≤ ± 0.1 % FSO / 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: ≤ ± [0.2 + 0.04 x (nominal pressure range / adjusted range)] % FSO	
² accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal errors (Offset and Span)/ Permissible temperatures	
Thermal error	≤ ± (0.02 x nominal range / adjusted range) % FSO / 10 K in compensated range 0 ... 80°C
Permissible temperatures	medium: -40 ... 125°C electronics / environment / storage: -40 ... 85°C

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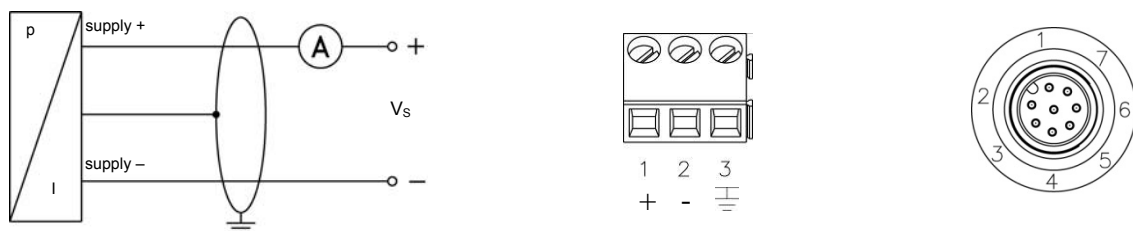
Technical Data

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	standard: stainless steel 1.4301 on request: brass
Housing	version EP 500: PA6 (housing foot: PA66) version EP 500 - 500: ABS
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
Germanischer Lloyd (GL)	C, EMC1 number of certificate: 86 482 - 09 HH
Miscellaneous	
Ingress protection	IP 00
Function display	green SMD-LED - lights by information flow through the transmitter
Installation position	any
Operational life	> 100 x 10 ⁶ pressure 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)

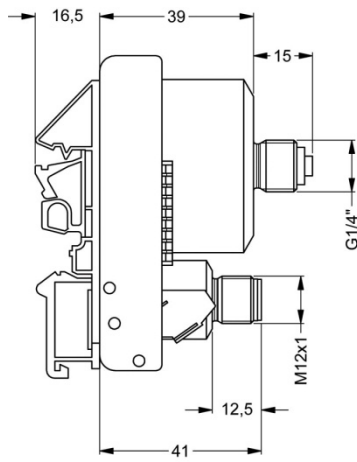
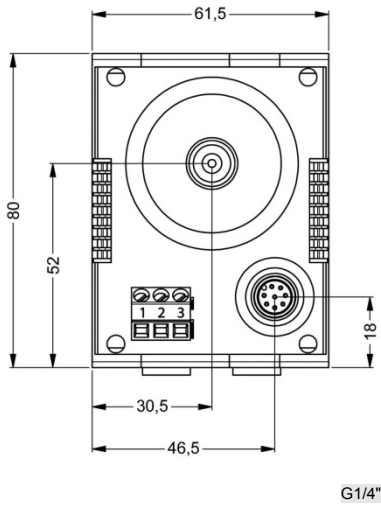
Pin configuration			
Electrical connections		terminal clamps	M12x1 (8-polig), metal
	Supply +1	1	-
	Supply +2	-	4
	Supply -	2	2
	Tx	-	5
	Rx	-	6
	GND	-	7
	NC	-	1
	Shield	3	3

Wiring diagram

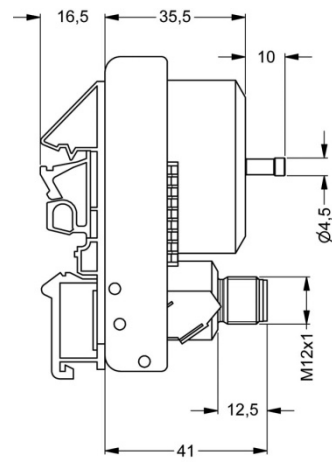


Dimensions (in mm)

standard EP 500:

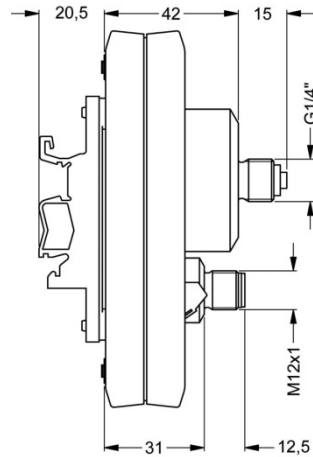
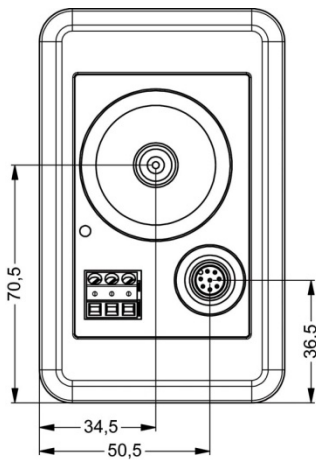


optionally for $P_N \leq 5$ bar:



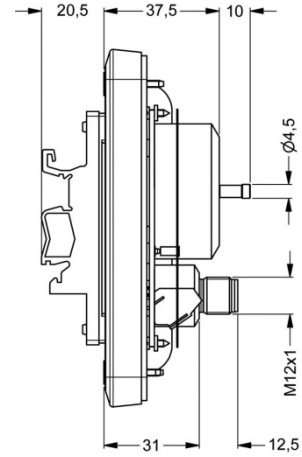
hose connection for flexible hoses $\text{Ø} 4$ mm

option EP 500 - 500



G1/4"

optionally for $P_N \leq 5$ bar:



hose connection for flexible hoses $\text{Ø} 4$ mm

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