

18.605 G

Submersible OEM-Pressure Transmitter

Applications

- ▶ level measurement in water and fuel oil tanks

Characteristics

- ▶ piezoresistive stainless steel sensor
- ▶ accuracy 0.5 % FSO according to IEC 60770
- ▶ nominal pressure ranges from 0 ... 1 mH₂O up to 0 ... 10 mH₂O



Technical Data



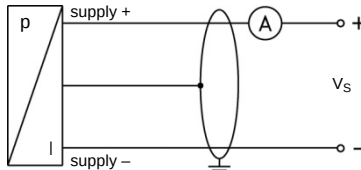
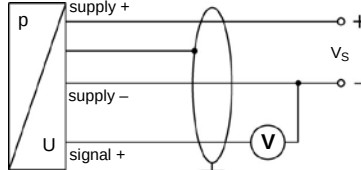
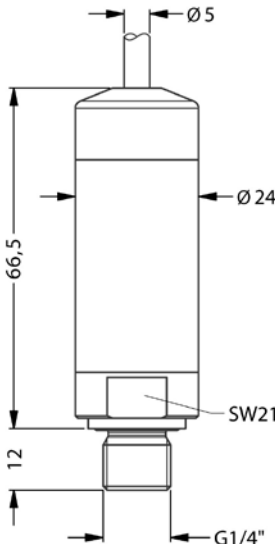
Input pressure range					
Nominal pressure gauge	[bar]	0.1	0.25	0.4	0.6
Level	[mH ₂ O]	1	2.5	4	6
Overpressure	[bar]	1	1	1	3
Burst pressure ≥	[bar]	1.5	1.5	1.5	5
Vacuum resistance		unlimited			

Output signal / Supply		
Standard	2-wire:	4 ... 20 mA / V _S = 8 ... 32 V _{DC}
Option 3-wire	3-wire:	0 ... 10 V / V _S = 14 ... 30 V _{DC}
	3-wire ratiometric:	10 ... 90% of V _S / V _S = 2.7 ... 5 V _{DC}

Performance	
Accuracy ¹	P _N > 160 mbar: ≤ ± 0.5 % FSO P _N ≤ 160 mbar: ≤ ± 1 % FSO
Permissible load	2-wire: R _{max} = [(V _S - V _{S min}) / 0.02 A] Ω 3-wire: R _{min} = 10 kΩ
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ
Response time	2-wire: ≤ 10 msec 3-wire: ≤ 3 msec
Long term stability	≤ ± 0.2 % FSO / year at reference conditions
Measuring range	1 kHz

¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

Thermal effects (Offset and Span) / Permissible temperatures	
Thermal error	≤ ± 0.3 % FSO / 10 K in compensated range 0 ... 70 °C
Permissible temperatures	medium / electronics / environment / storage: -10 ... 70 °C
Electrical protection	
Short circuit protection	permanent 3-wire ratiometric: none
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	Emission and immunity according to EN 61326

Mechanical stability		
Vibration	10 g, 25 Hz ... 2 kHz	according to DIN EN 60068-2-6
Shock	100 g / 1 msec	according to DIN EN 60068-2-27
Materials (media wetted)		
Housing	stainless steel 1.4301 (304)	
Seals	FKM	
Diaphragm	stainless steel 1.4435 (316 L)	
Cable sheath	PVC (oil resistant)	
Miscellaneous		
Weight	approx. 120 g (without cable) cable: 25 g / m	
Cable length	3 m, 6 m, 9 m or 12 m; others on request	
Suitable for following media	water, fuel oil	
Current consumption	2-wire: max. 25 mA 3-wire ratiometric: typ. 1.5 mA 3-wire voltage: typ. 5 mA (short circuit current: max. 20 mA)	
Ingress protection	IP 68	
CE-conformity	EMC Directive: 2004/108/EC	
Wiring diagrams		
2-wire-system (current) 		3-wire-system (voltage) 
Pin configuration		
Electrical connections	cable colours (DIN 47100)	
Supply +	wh (white)	
Supply -	bn (brown)	
Signal + (only for 3-wire)	gn (green)	
Shield	gn/ye (green / yellow)	
Dimensions (in mm)		
 G1/4" DIN 3852 with PVC cable (with air tube)		

Ordering code 18.605 G

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Input	[mH ₂ O]	[bar]																		
	1.0	0.1	1	0	0	0														
	2.5	0.25	2	5	0	0														
	4	0.4	4	0	0	0														
	6	0.6	6	0	0	0														
	10	1.0	1	0	0	1														
	customer		9	9	9	9														consult
Pressure																				
	bar						B													
	mH ₂ O						M													
	customer						9													consult
Output																				
	4 ... 20 mA / 2-wire						1													
	0 ... 10 V / 3-wire						3													
	10 ... 90% of V _S / 3-wire ratiometric						R													
	customer						9													consult
Accuracy																				
P _N > 160 mbar:	± 0.5 % FSO						5													
P _N ≤ 160 mbar:	± 1 % FSO						8													
	customer						9													consult
Electrical connection																				
	PVC-cable						1													
	customer						9													consult
Cable length																				
	3 m						0	0	3											
	6 m						0	0	6											
	9 m						0	0	9											
	12 m						0	1	2											
	customer						9	9	9											
Mechanical connection																				
	G1/4" DIN 3852									3	0	0								
	customer									9	9	9								consult
Seals																				
	FKM												1							
	customer												9							consult
Special version																				
	standard														0	0	0			
	customer														9	9	9			consult