BD|SENSORS
pressure measurement

17.609 G

OEM Pressure Transmitter

Application

- refrigeration

Characteristics

- stainless steel sensor, welded
- accuracy 0.5 % FSO
  according to IEC IEC 61298-2
- nominal pressure ranges from
  0 … 6 bar up to 0 … 60 bar
  -1 … 6 bar up to -1 … 60 bar

Technical Data

Pressure ranges							
Nominal pressure gauge	[bar]	6	10	16	25	40	60
Overpressure	[bar]	12	20	32	50	80	120
Burst pressure ≥	[bar]	30	50	80	125	200	300
Vacuum resistance		unlimited					
Vacuum ranges							
Nominal pressure gauge	[bar]	-1 ... 6	-1 ... 10	-1 ... 16	-1 ... 25	-1 ... 40	-1 ... 60
Overpressure	[bar]	12	20	32	50	80	120
Burst pressure	[bar]	30	50	80	125	200	300

Output signal / Supply				
Standard	2-wire:	4 ... 20 mA	/	V_S = 8 ... 32 V_{DC}
Options	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]	≤ ± 0.5 % FSO			
Permissible load	2-wire:	$R_{max} = [(V_S - V_{S\,min}) / 0.02\ A]\ \Omega$	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	≤ ± 0.3 % FSO / year at reference conditions			
Measuring rate	1 kHz			
[1] *accuracy according to IEC IEC 61298-2 – 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: -40 ... 125 °C	electronics / environment: -40 ... 85 °C		storage: -40 ... 85 °C
Electrical protection				
Short-circuit protection	permanent	3-wire ratiometric: none		
Reverse polarity protection	no damage, but also no function			
Electromagnetic protection	emission and immunity according to EN 61326			

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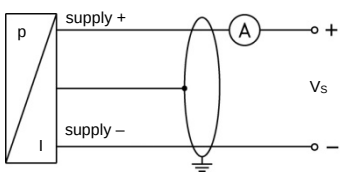
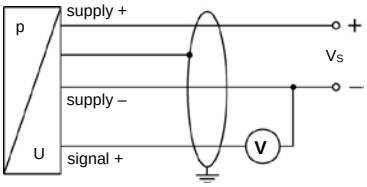
Mechanical stability		
Vibration	20 g RMS / 10 … 2000 Hz	according to DIN EN 60068-2-6
Shock	500 g / 1 msec half sine	according to DIN EN 60068-2-27
Materials		
Pressure port	stainless steel 1.4571 (316Ti)	
Housing	stainless steel 1.4301 (304)	
Seal of sensor	none (welded)	
Diaphragm	stainless steel 1.4542 (630)	
Media wetted parts	pressure port, diaphragm	
Miscellaneous		
Mechanical connection	7/16"-20 UNF	
Weight	approx. 120 g	
Current consumption	2-wire: max. 25 mA 3-wire voltage: max. 7 mA (short circuit current: max. 20 mA)	3-wire ratiometric: typ. 3 mA
Operational life	100 million load cycles	
CE-conformity	EMC Directive: 2014/30/EU	

Wiring diagrams

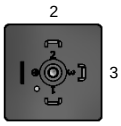
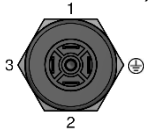
2-wire-system (current)



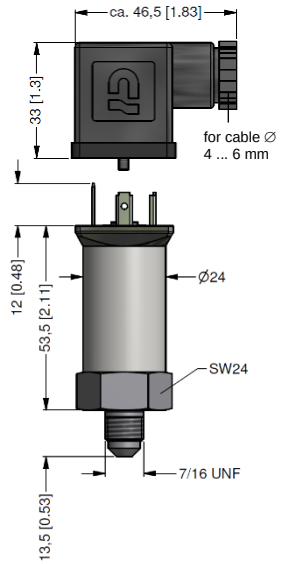
3-wire-system (voltage)



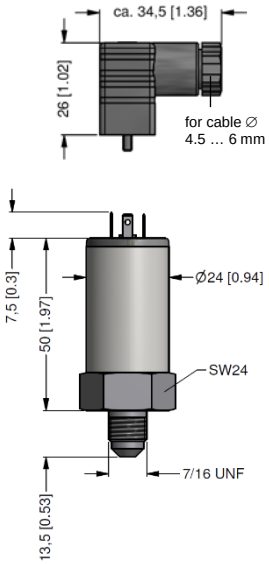
Pin configuration

Electrical connection	ISO 4400	Micro (contact distance 9.4 mm)	M12x1 (4-pin), metal	cable colours (IEC 60757)
				
Supply +	1	1	1	WH (white)
Supply –	2	2	2	BN (brown)
Signal + (for 3-wire)	3	3	3	GN (green)
Shield	ground pin ⏚	ground pin ⏚	4	GNYE (green-yellow)

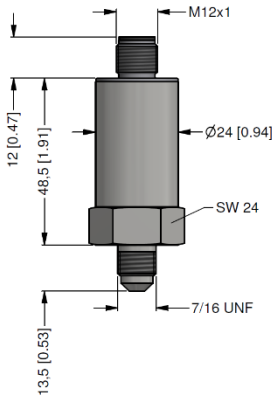
Dimensions (mm / in)



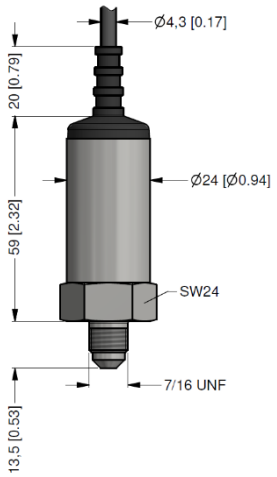
ISO 4400
(IP 65)



Micro, contact
distance 9.4 mm (IP 65)



M12x1, 4-pin
(IP 67)



cable outlet with
PVC-cable (IP 67) [2,3]

[2] *standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)*
[3] *different cable types and lengths available, permissible temperature depends on kind of cable*

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BD|SENSORS pressure measurement

Ordering code 17.609 G

17.609 G -□□□□-□-□-□-□□□-□□□-□-□□□

Input	**[bar]**																	
	6	6	0	0	1													
	10	1	0	0	2													
	16	1	6	0	2													
	25	2	5	0	2													
	40	4	0	0	2													
	60	6	0	0	2													
	-1 ... 6	V	6	0	2													
	-1 ... 10	V	1	0	3													
	-1 ... 16	V	1	6	3													
	-1 ... 25	V	2	5	3													
	-1 ... 40	V	4	0	3													
	-1 ... 60	V	6	0	3													
	customer	9	9	9	9													consult
Pressure																		
	gauge					R												
Output																		
	4 … 20 mA / 2-wire						1											
	0 … 10 V / 3-wire						3											
	10 … 90 % of V_S / 3-wire ratiometric						R											
Accuracy																		
	0.5 % FSO							5										
	customer							9										consult
Electrical connection																		
	male and female plug ISO 4400								1	0	0							
	male and female plug Micro								C	1	0							
	male plug M12x1 (4-pin), metal								M	2	0							
	cable outlet with PVC-cable [1]								T	M	0							
	customer								9	9	9							consult
Mechanical connection / Seal																		
	7/16"-20 UNF											U	0	0	2			
	customer											9	9	9	9			consult
Special version																		
	standard															0	0	0
	customer															9	9	9	consult

[1] standard: 2 m PVC cable without ventilation tube (permissible temperatur: -5 … 70 °C)

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