Pressure transmitters

ATM.ECO



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Technical Specifications

Pressure measuring range (bar)

	0.1 ... 0.5, (1)	> 0.5 ... 2	> 2 ... 100
Overpressure	3 bar	3 x FS (≥ 3 bar)	3 x FS
Burst pressure	> 200 bar	> 200 bar	> 850 bar
Accuracy, (4), (± % FS)	≤ 0.25	≤ 0.25	≤ 0.25
Total Error, (5), (± % FS)			
0 ... 70°C, (typ. / max.)	≤ 1.0 / 1.5	≤ 0.7 / 1.0	≤ 0.7 / 1.0
-25 ... 100°C, (typ. / max.)	≤ 2.0 / 2.5	≤ 1.0 / 1.5	≤ 1.0 / 1.5
-40...100°C (typ. / max.)	≤ 1.5 / 2.0	≤ 1.0 / 1.5	≤ 1.0 / 1.25
Response time, (typ.)	< 1ms / 10 ... 90% FS	< 1ms / 10 ... 90% FS	< 1ms / 10 ... 90% FS
Long term stability, (6)	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

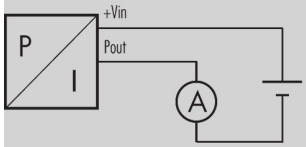
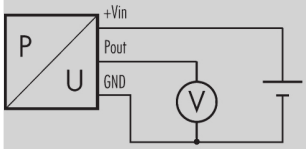
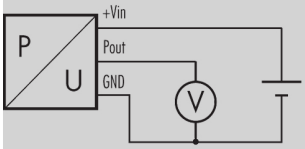
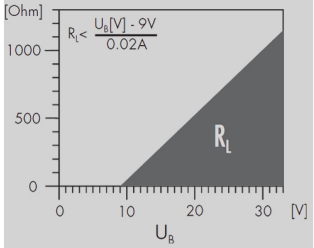
	> 100 ... 600, (2), (3)	> 600 ... 1000
Overpressure	3 x FS (≤ 850 / ≤ 1500 bar)	1500 bar
Burst pressure	> 850 / ≤ 1500 bar	> 1500 bar
Accuracy, (4), (± % FS)	≤ 0.25	≤ 0.25
Total Error, (5), (± % FS)		
0 ... 70°C, (typ. / max.)	≤ 0.7 / 1.0	≤ 0.7 / 1.0
-25 ... 100°C, (typ. / max.)	≤ 1.0 / 1.5	≤ 1.0 / 1.5
-40...100°C (typ. / max.)	≤ 1.0 / 1.25	≤ 1.0 / 1.25
Response time, (typ.)	< 1ms / 10 ... 90% FS	< 1ms / 10 ... 90% FS
Long term stability, (6)	< 0.1% FS / < 0.2% FS	< 0.1% FS / < 0.2% FS

(1) 50 mbar on request
(2) Process connection frontal and flush diaphragm available ≤ 600 bar
(3) Overpressure and burst pressure 1500 bar (stainless steel) optional
(4) Zero based accuracy according to DIN-16086, incl. hysteresis and repeatability at ambient temperature
(5) Total error including accuracy and temperature influences at maximum signal span (16 mA / 10 V DC)
(6) 1 year (typ. / max.), the long term stability can be improved by aging (burn-in) the sensor

Temperature range

Operating temperature	-40 ... 125°C
Process temperatur	-40 ... 150°C
Storage temperatur	-40 ... 125°C

Electrical specifications

	4 ... 20 mA	0 ... 5 V	0 ... 10 V
Power supply	9 … 33 VDC	10 … 30 VDC	12 … 30 VDC
Supply influence	< 0.05% FS	< 0.05% FS	< 0.05% FS
Current consumption		3 mA	3 mA
Circuit diagram			
Load resistance		$R_L > 10kOhm$	$R_L > 10kOhm$
Load influence	< 0.05% FS	< 0.05% FS	< 0.05% FS

Qualifications

	Description	Level	Typical interferences
EN 60068-2-6	Vibration	10g (4...2000 Hz / ± 10 mmpp)	
EN 60068-2-27	Shock	100g (impulse duration 6 ms)	
EN 55022	Emission, class B	< 30 dBµV/m (0.03 ... 1 GHz)	
EN 61000-4-2	Electrostatic discharge	8 kV contact 15 kV air	
EN 61000-4-3	Irradiated RF	10V/m (0.08 ... 2.7 GHz, 3s)	Radio sets, wireless phones
EN 61000-4-4	Transients (burst)	4 kV	Motors, valves
EN 61000-4-5	Surge	Line-Line: 0.5 kV/42 Ω Line-Earth: 1 kV/42 Ω	Overvoltage
EN 61000-4-6	Conducted RF	10 V (0.15...80 MHz, 3 s)	Frequency converters

Physical specifications

Materials	
Transducer	Stainless steel (316L / 1.4435)
Housing	Stainless steel (316L / 1.4404)
Seals	Viton (Standard), EPDM, Kalrez
Cable	PUR, FEP, PE

Equipment

Overview

10.00.0091	Accessories overview
HART001	Cable Socket Connector
HART002	Cable socket connector, Binder 723, IP67, 5-pins

Additional documents

Operating and safety instructions

	Article number
10.88.0092	DMM029

Ordering information

		X.	XXXX.	XXXX.	XX.	XXX
Type						
	ATM.ECO					
Pressure type						
	Gauge	1				
	Absolute (vacuum)	2				
	Sealed gauge	3				
Pressure measuring range						
	100 mbar... 600 bar		XX			
	> 600 bar		XX			
Process connection						
	G 1/4 F, (Fig. 1)		00			
	1/4 NPT M, (Fig. 6)		10			
	1/2 NPT M, (Fig. 7)		19			
	G 1/4 M, (Fig. 2)		11			
	G 1/4 M, manometer DIN-16288		12			
	G 1/2 M, (Fig. 3)		13			
	G 1/2 M, frontal diaphragm, (Fig. 4), (3)		14			
	G 1/2 M, flush diaphragm, (Fig. 5), (3)		15			
	G 1/2 M, manometer DIN-16288		16			
	G 1/2 M with bore Ø 14 mm		17			
	Customized connection available		99			
Electrical connection						
	DIN-43650, with metal threaded part, demountable, IP 65 (Fig. 8), (4)			01		
	Binder 723, 5 pins, IP 67, (Fig. 9), (4)			03		
	Binder 723, 5 pins, IP 67, demountable			43		
	MIL C26482, 10-6, IP 40, (Fig. 11), (4)			06		
	Lumberg RSF4, 5 pins (Fig. 15), (4)			07		
	PE cable, black , IP 67(Fig. 12), (5), (6)			13		
	PUR cable, black, IP 67 (Fig. 12), (5), (7)			15		
	FEP cable, black, IP 67 (Fig. 12), (5)			21		
	Customized connection available			99		
Output signal						
	4 ... 20 mA			05		
	4 ... 20 mA surge protection			08		
	0 ... 5 VDC			46		
	0 ... 10 VDC			47		
Accuracy						
	≤ ± 0.25 % FS				1	
Temperature range						
	0 ... 70°C compensated (allowed process temperature: -40 ... 125°C)				0	
	-25 ... 100°C compensated (allowed process temperature: -40 ... 125°C)				1	
	-25 ... 100°C compensated (allowed process temperature: -40 ... 150°C) with cooling fins				2	
	-40 ... 100°C compensated (allowed process temperature: -40 ... 125°C)				3	
Option 1						
	Throttle, (8)					A
	Special oil filling: Anderol Food (for food applications)					G
	Special oil filling: AS100					J

	Special oil filling: PAO4 (silicone free)					Q
Option 2						
	Electronics packed in gel: Gauge pressure					C
	Electronics packed in gel: Absolute pressure					D
Option 3						
	Seals: Viton (standard)					U
	Seals: EPDM					S
	Seals: Kalrez					T
	Seals: NBR (ACS) (9)					H

(1) 50 mbar on request
(2) mbar, PSI, kPa etc. available
(3) Process connection available ≤ 600 bar
(4) Cable socket connector not included
(5) Please specify the required cable length and medium
(6) Suitable for drinking water (food approved)
(7) For operating temperature > 50°C, PE or FEP cable must be used
(8) Only with pressure connection Fig. 2, Fig. 3, Fig. 6 and Fig. 7
(10) ACS Certification

Technical drawings

Pressure connections

Fig. 1

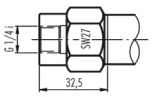


Fig. 2

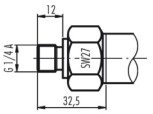


Fig. 3

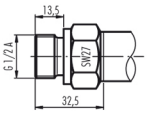


Fig. 4

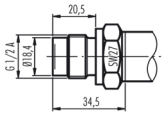


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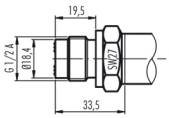


Fig.6

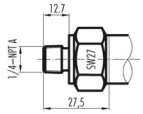
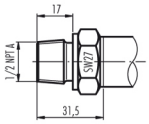
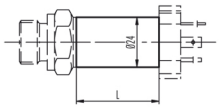


Fig. 7



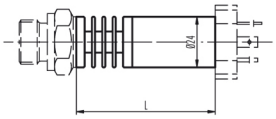
Dimensions

Version for medium temperature up to 125°C



L = 25 mm for connector DIN 43650

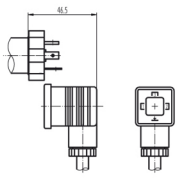
Version for medium temperature >125°C up to 150°C



L = 52 mm for connector DIN 43650

Electrical Connections

Fig. 8



Pin	2-wire	3-wire
1	+Vin	+Vin
2	Pout	Pout
3		GND
E		
E	EP (only Ex)	

Fig. 9

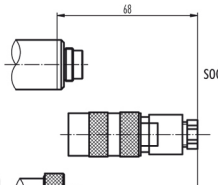
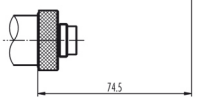
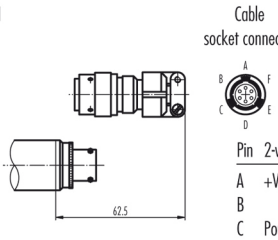


Fig. 10



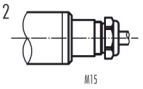
Pin	2-wire	3-wire
1	Pout	Pout
2		
3	+Vin	+Vin
4		GND
5	EP (only Ex)	

Fig. 11



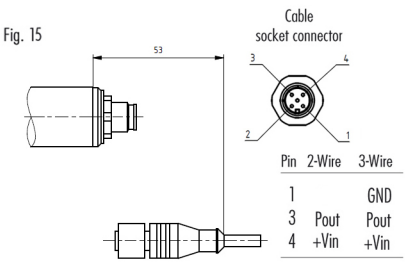
Pin	2-wire	3-wire
A	+Vin	+Vin
B		GND
C	Pout	Pout
D		
E	EP (only Ex)	

Fig. 12



Colour	2-wire	3-wire
white	+Vin	+Vin
yellow	Pout	GND
brown		Pout
grey	EP (only Ex)	

Fig. 15



Pin	2-Wire	3-Wire
1		GND
3	Pout	Pout
4	+Vin	+Vin

Specifications may change without notice.

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