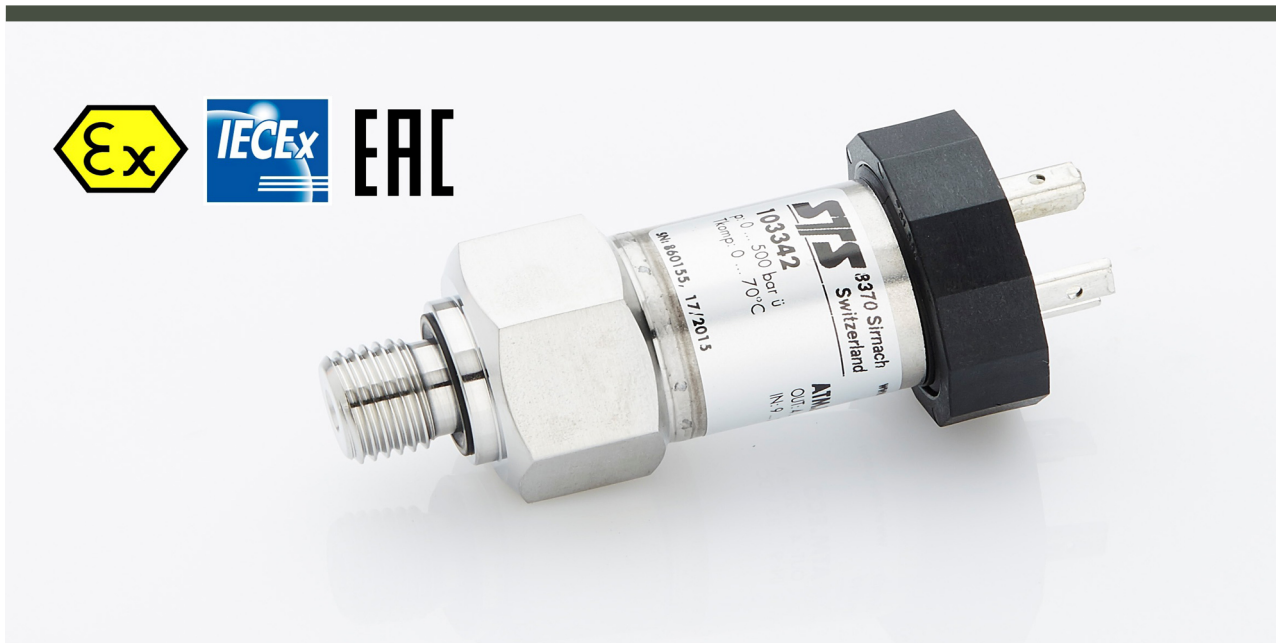


Pressure Transmitter - ATEX / IECEx certified

ATM.ECO/Ex - Analog Transmitter with Temperature compensation



CUSTOMER BENEFITS

- Certificate: ATEX, IECEx & EAC
- Entry level series into precision pressure measurement
- High accuracy is ensured by sophisticated digital temperature compensation algorithms
- Fast customization thanks to configurable product design

Technical Specifications

PRESSURE MEASURING RANGE (BAR)

	0.1 ... 0.5, (1)	> 0.5 ... 2	> 2 ... 100
Overpressure	3 bar	3 x FS (\geq 3 bar)	3 x FS
Burst pressure, (4)	> 200 bar	> 200 bar	> 850 bar
Accuracy, (5) (\pm % FS)	\leq 0.25	\leq 0.25	\leq 0.25
Total Error, (6), (\pm % FS)			
0 ... 70°C, (typ. / max.)	\leq 1.0 / 1.5	\leq 0.7 / 1.0	\leq 0.7 / 1.0
-25 ... 100°C, (typ. / max.)	\leq 2.0 / 2.5	\leq 1.0 / 1.5	\leq 1.0 / 1.5
Response time, (typ.)	< 1ms / 10 ... 90% FS	< 1ms / 10 ... 90% FS	< 1ms / 10 ... 90% FS
Long term stability, (7)	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

	> 100 ... 600, (2)	> 600 ... 690, (3), (8)
Overpressure	3 x FS (\leq 850 / \leq 1500 bar)	1500 bar
Burst pressure, (4)	> 850 / \leq 1500 bar	> 1500 bar
Accuracy, (5) (\pm % FS)	\leq 0.25	\leq 0.25
Total Error, (6), (\pm % FS)		
0 ... 70°C, (typ. / max.)	\leq 0.7 / 1.0	\leq 0.7 / 1.0
-25 ... 100°C, (typ. / max.)	\leq 1.0 / 1.5	\leq 1.0 / 1.5
Response time, (typ.)	< 1ms / 10 ... 90% FS	< 1ms / 10 ... 90% FS
Long term stability, (7)	< 0.1% FS / < 0.2% FS	< 0.1% FS / < 0.2% FS

(1) 50 mbar on request

(2) Overpressure and burst pressure 1500 bar (stainless steel) optional

(3) Process connection frontal and flush diaphragm available \leq 600 bar

(4) Transducer

(5) Zero based accuracy according to DIN-16086, incl. hysteresis and repeatability at ambient temperature

(6) Total error including accuracy and temperature influences at maximum signal span (16 mA)

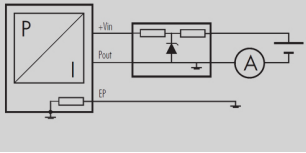
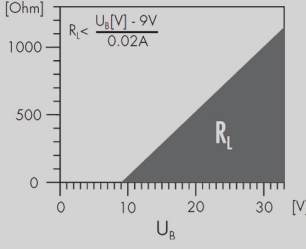
(7) 1 year (typ. / max.), the long term stability can be improved by ageing (burn-in) the sensor

(8) Maximum pressure allowed by FM/FMc certification body 690bar

TEMPERATURE RANGE

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

ELECTRICAL SPECIFICATIONS

	4 ... 20 mA
Power supply	9 ... 28 VDC
Supply influence	< 0.05% FS
Circuit diagram	
Load resistance	
Load influence	< 0.05% FS

ATEX APPROVAL

Certificate, (1)	SEV 09 ATEX 0108 X	IECEX SEV 10.0003 X	IECEX MSC 14.0002 X
Gas	II 1G Ex ia IIB/IIC T3 ... T6	EN 60079-0 / -11 / -26	
Dust	II 1D Ex ia IIIC IP6x T140°C ... T70°C	EN 61241-0 / -11	
Mining	I M1 Ex ia I	EN 50303	
Temperature class, (2)	T6	T4	T3
Ambient temperature	-40 ... 50°C	-40 ... 90°C	-40 ... 125°C
Process temperature	-40 ... 50 °C	-40 ... 100 °C	-40 ... 150 °C
Maximum values of the intrinsically safe circuit	28V / 93 mA / 0.65W		

(1) For detailed Ex specifications see certificate and operating and safety instructions

(2) Without any information about temperature class the transmitter will be delivered for T4

FM / FM-C APPROVAL

FM	3028239
FM-C	3028239C

QUALIFICATIONS

	Description	Level	Typical interferences
EN 60068-2-6	Vibration	10 G (4...2000 Hz / \pm 10 mmpp)	
EN 60068-2-27	Shock	100 G (impulse duration 6 ms)	
EN 55022	Emission, class B	< 30 dB μ V/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	3 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

Equipment

CABLE SOCKET CONNECTOR

HART001	Cable Socket Connector
HART002	Cable socket M16 (Binder 723), IP67, 5-pins

OVERVIEW

10.00.0091	Accessories overview

Additional documents

OPERATING AND SAFETY INSTRUCTIONS

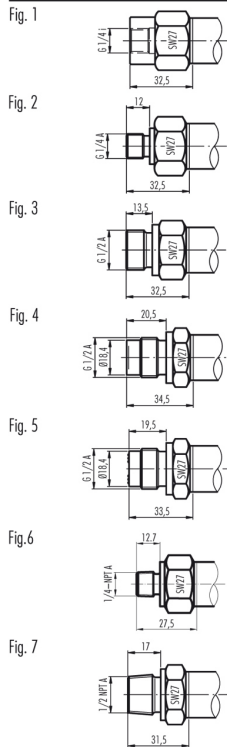
	Article number
10.88.0092	DMM029

	Special oil filling: PAO4 (silicone free)			Q
Option 2				
Option 3				
	Seals: Viton (standard)			U
	Seals: EPDM			S
	Seals: Kalrez			T

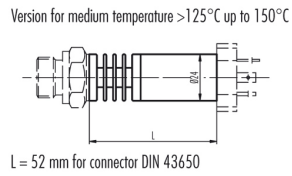
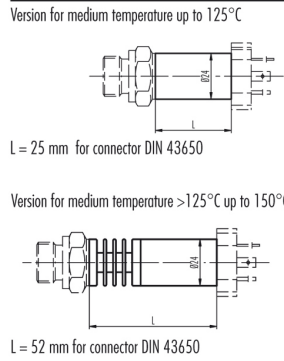
- (3) Process connection available ≥ 6 bar to ≤ 600 bar
- (4) Cable socket connector not included
- (5) Please specify the required cable length and medium
- (6) For operating temperature $> 50^{\circ}\text{C}$, FEP cable must be used
- (7) Only with pressure connection Fig. 2, Fig. 3, Fig. 6 and Fig. 7
- (16) Connector side not to be used in Zone 0 or Ex ia IIC, explosion risk

Technical drawings

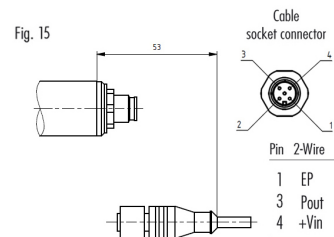
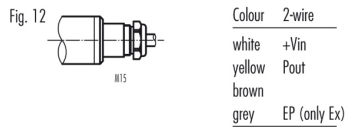
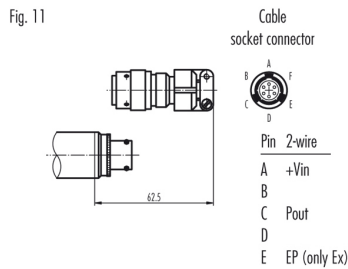
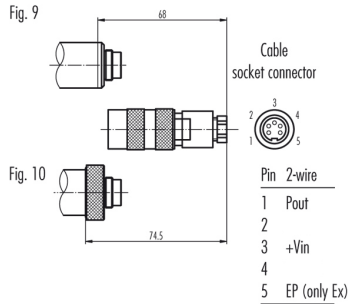
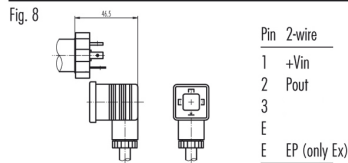
Pressure connections



Dimensions



Electrical Connections



Specifications may change without notice.

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