Analogue Pressure Transmitter ATM

As of 17-09-2013

The analog pressure transducers of the ATM series operate on the piezoresistive principle and allow to measure (sealed) gauge or absolute pressure.

- Measurement of (Sealed) Gauge or Absolute Pressure
- Ranges from 100 mbar to 25 bar
- Optional 40 bar 1000 bar for Sealed Gauges.
- Linearity better ±0,1 %FS
- Current or Voltage Output
- Media Temperatures up to 150 °C (optional)

Technical Description

Their robust und compact design qualifies ATM sensors for the usage under adverse conditions. Numerous available variants and ranges allow a manifold of applications.

Specifications

Sensor Type and Measuring Range

(Sealed) Gauge or Absolute Pressure: 100 / 160 / 250 / 400 / 600 mbar and 1 / 1,6 / 2,5 / 4 / 6 / 10 / 16 / 25 bar

Linearity / Accuracy

Linearity Standard:	≤ ±0,5 %FS	(0,1 .. 25 bar)
Linearity Optimised:	≤ ±0,25 %FS	(0,1 .. 25 bar)
Linearity High Perf.:	≤ ±0,1 %FS	(0,6 .. 25 bar)

Accuracy: Temperature dependence - zero point: ≤ ±0,08 %FS / °C, span: ≤ ±0,02 % FS / °C (both varying with measuring and operating temperature range). Long-time drift: 0,5 to 0,1 % FS per year acc. to measuring range.

Temperature Conditions

Storage:	0 .. +50 °C
Operating (Standard):	0 .. +70 °C
Operating (Optional):	-25 .. +85 °C

Media Compatibility

Gases, fluids and vaporous media compatible with stainless steel.

Overrange Limits

Independent from sensor type: 3 bar for upper range limits up to 1 bar, otherwise 3 times the upper range limit.

Enclosure

Dimensions:		30 x 85 mm (ØxL)
Material	Housing:	Stainless steel
	Diaphragm:	Stainless steel
	Seal:	Viton
Weight	Total:	≈ 110 g
Ingress Protection:		IP 54

Process Connections

Alternatively (1 x): G 1/4“**f**, G 1/4“**m**, G 1/2“**m**, 1/4“ NPT**m** or 1/2“ NPT**m** (each of stainless steel)

Electrical Connections (Outputs)

Current (0 / 4 .. 20 mA) **or** Voltage (0 .. 5 / 10 V)

Power Supply

24 VDC (15 to 30 V) via connector/connection cable

Special Features

Response Time

Response time to a jump from 10 to 90 % F.S. faster 1 ms.

Operating Safety

Electrical Conn.: reverse polarity & short circuit protected.

Surge Protection (Optional)

Lightning protection: safeguard accord. to EN 61000-4-5.

Ordering Information

Part No. Structure: ATM-*aaa.bb*cc.*ddee.fg*

aaa **Pressure Type**

231	Gauge Pressure
232	Absolute Pressure
233	Sealed Gauge Pressure

bb	Range	bb	Range	bb	Range
00	0,10 bar	07	2,5 bar	14	60 bar**
01	0,16 bar	08	4,0 bar	15	100 bar**
02	0,25 bar	09	6,0 bar	16	160 bar**
03	0,40 bar	10	10,0 bar	17	250 bar**
04	0,60 bar	11	16,0 bar	18	400 bar**
05	1,00 bar	12	25,0 bar	19	600 bar**
06	1,60 bar	13	40 bar**	20	1000 bar**
99	Specific Range		On request		

cc **Process Connection**

00	G 1/4“**f**
11	G 1/4“**m**
12	G 1/4“**m**, for manometer DIN 16288
13	G 1/2“**m**
14	G 1/2“**m**, frontal diaphragm
15	G 1/2“**m**, flush diaphragm
16	G 1/2“**m**, for manometer DIN 16288
17	G 1/2“**m**, with bore diameter 14 mm
10	1/4" NPT**m**
19	1/2" NPT**m**

dd **Electrical Connection**

01	Connector, screwable, DIN 43650 (IP 65)
03	Connector, not screwable, Type Binder 723 (IP 67)
43	Connector, screwable, Type Binder 723 (IP 67)
13	PE cable (IP 67)
15	PUR cable (IP 67)
21	Teflon cable (IP 67)

ee **Output option**

00	Current:	0 .. 20 mA (3-wire, R_L < 1,2 kΩ)
05	Current:	4 .. 20 mA (2-wire, R_L < 1 kΩ)
46	Voltage:	0 .. 5 V (3-wire, R_L > 10 kΩ)
47	Voltage:	0 .. 10 V (3-wire, R_L > 10 kΩ)

f **Linearity**

0	≤ ±0,5 % FS
1	≤ ±0,25 % FS
2	≤ ±0,1 % FS (only from 0 .. 0,6 bar range up)

g	Temperature range (compensated)	Media Temperature (permissible)
0	0 .. +70 °C	0 .. +80 °C
1	-25 .. +85 °C	-25 .. +100 °C
2	-25 .. +85 °C	-25 .. +150 °C
9	-25 .. +85 °C	Customer specific

** Only as sealed gauge sensors available.

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