

AT-102-MSX AT-102S-MSX

ATEX/IECEx Exd Magnesense® low differential pressure transmitter





Monitors Differential Pressure, Air Velocity and Volumetric Flow

All pressure ranges can be configured in unidirectional or bidirectional modes, providing a total of 32 ranges

Display LCD optional



ATEX

CC 0080

Il 2G Ex db IIC T5, T6 Gb -60°C \leq Ta \leq +50°C (T6)
-60°C \leq Ta \leq +60°C (T5)

II 2D Ex tb IIIC T75 °C Db
Certificate: INERIS 21 ATEX 0033 X

IECEX

Ex db IIC T5, T6 Gb -60°C \leq Ta \leq +50°C (T6)
-60°C \leq Ta \leq +60°C (T5)
Ex tb IIIC T75°C Db
Certificate: IECEX INE 21.0064X

Specifications

| Service: | air and compatible gases and dry gases. Not suitable for combustible gases. |
|--------------------------|--|
| Wetted parts: | consult factory. |
| Temperature limits: | MSX®: from -4 to 158°F (-20 to 70°C). |
| | case: -76 to 140°F (-60 to 60°C)* T5 |
| | (-60 to 50°C) T6 |
| Pressure limits: | Ranges 0 and 1: 3.6 psi max operation, 6 psi burst; Ranges 2 and 3: 6 psi max operation, 6 psi burst. |
| | Pls check table 2 |
| Accuracy: | \pm 1% FS |
| Stability: | \pm 1% f.s. / year. |
| Power requirements: | 10 to 35 VDC (2-wire); 17 to 36 VDC or isolated 21.6 to 33 VAC (3-wire). |
| Output signals: | 4 to 20 mA (2-wire); 0 to 5 V, 0 to 10 V (3-wire). |
| Response time: | instantaneous (default) or 3 s (selectable). |
| | Provides a 95% response time of 1.5 to 45 seconds (additional delay in response time due to flame arrestors; |
| | from full scale to ø up to 5 sec. |
| Zero & span adjustments: | Digital push button (to be made in safe area). |
| Loop resistance: | Current output: 0-1250 Ohm max. |
| | Voltage Output: min. load resistance 1 kOhm. |
| Current consumption: | 21 mA max |
| Display (optional): | 4 digit LCD. |
| Electrical connections: | 4-wire removable European style terminal block for 16 to 26 AWG |
| Housing material: | aluminum (stainless steel optional). |
| Finishing: | texture epoxy coat RAL7015 (aluminum case) |
| | RAL 5015 (top cover) |
| Pressure connections: | 1/8" NPT F brass (stainless steel optional). |
| Electrical connections: | 2 x 1/2" NPT F standard (cable gland not included). |
| Enclosure rating: | IP66 |
| Dimensions: | see drawing below |
| Weight: | from 5,5 to 16 kg |

^{*} Operating ambient temperature is defined also according to the options and pressure instrument choosed.

CAUTION FOR USE ONLY WITH AIR OR COMPATIBLE GASES!

IMPORTANT NOTES FOR INSTALLATION:

Cables must be fitted through 1/2" NPT cable gland or Atex/IECEx conduit (not supplied with instrument).

Make sure after cabling to close tight cover and cable gland, in order to keep IP66 rating (only without venting valve).

Open cover only after de-energizing instrument.

Attention: check local safety rules and warnings on unit and manual for a correct use of the instrument in hazardous area.

1. Model configuration

| CODE | AT-102 | | | ŀ | - 1 | ИSX | - | | | - | | - | | - | | ŀ | - | | | | | |
|--|--|-----|---|---|-----|-----|---|---|---|---|----|-----------|-----|---|---|-----|---|---|--|--|--|--|
| | AT-102 (only for stainless steel material version) | | | | | | | | | | | | | | | | | | | | | |
| Enclosure extension | Enclosure without extension | N | | L | | | | | | | | | | | | | | | | | | |
| | Enclosure with extension | n/a | | Γ | | | | | | П | | LCD B 1 2 | | | | | | | | | | |
| Case material | Aluminum | | Α | | | | | | | | | | | | | | | | | | | |
| | Stainless steel (only AT-102 version) | | S | L | | | | | | | | | | | | | | | | | | |
| Dwyer model | MSX | | | | ١ | ИSX | | | | | | | | | | | | | | | | |
| | Unidirectional | | | | | | | 1 | | | | | | | | | | | | | | |
| Direction | Bidirectional | | | | | | | 2 | | | | | | | | | | | | | | |
| | .5 in w.c., 125 Pa, 12.5 mm w.c. | | | | | | | | 0 | | | | | | | | | | | | | |
| | 1 in w.c., 250 Pa, 25 mm w.c. | | | | | | | | 1 | | | | | | | | | | | | | |
| Range | 5 in w.c., 1250 Pa, 125 mm w.c. | | | | | | | | 2 | | | | | | | | | | | | | |
| | 28 in w.c., 7000 Pa, 700 mm w.c. | | | | | | | | 3 | | | | | | | | | | | | | |
| | Inches water column | | | | | | | | | | IN | | | | | П | | | | | | |
| Pressure unit | Pascal | | | | | | | | | | PA | | | | | ı | | | | | | |
| | Millimeters water column | | | | | | | | | | MM | | | | | | | | | | | |
| B | Without display | | | | | | | | | | | | | | | | | | | | | |
| Display | Display LCD | | | | | | | | | | | | LCD | | | | | | | | | |
| Options | See options available below | | | | | | | | | | | | | | | | | | | | | |
| Cover | Blind | d | | | | | | | | | | | | | | | В | | | | | |
| | Glass window | | | | | | | | | | | | | | | | | W | | | | |
| Pressure port / | Brass | | | | | | | | | | | | 1 | | | | | | | | | |
| venting valve material | Stainless steel | | | | | | | | | | | | | | 2 | | | | | | | |
| Pressure port / venting valve (check table | STD pressure port 1/8" F NPT / no venting valve | | | | | | | | | | | | | | | VS0 | | | | | | |
| 2 based on max static pressure) | STD pressure port / STD venting valve | | | | | | | | | | | | | | | VS1 | | | | | | |
| | STD pressure port / LD venting valve | | | | | | | | | | | | | | | VS2 | | | | | | |
| Cable entry | 1/2" NPT ANSI/ASME B1.20.1 | | | | | | | | | | | | | | | | | | | | | |
| Other options | Stainless steel tag | | | | | | | | | | | | | | | | | | | | | |

n/a: NOT AVAILABLE

FC: Factory calibration certificate

NIST: NIST traceable calibration certificate

2. Max static pressure admitted - Pressure ports and venting valve configuration

| | | 6: 1:6 1 1 | | . , | Maximum pressure value with: | | | | | |
|------|-----|--------------------------------------|--------------|---------------------|----------------------------------|-------------------------------|------------------|--|--|--|
| | | Simplified scheme of pressure port / | breatning de | evice (venting v | only one pressure port connected | both pressure ports connected | | | | |
| Code | VS0 | | STD | Enclosure | None | 10 kPa | 10 kPa 15 kPa | | | |
| | VS1 | PRESSURE PORTS | STD | breathing device | STD | 20 kPa | | | | |
| | VS2 | | STD | (venting LD LD | | 40 kPa* | 20 kPa | | | |

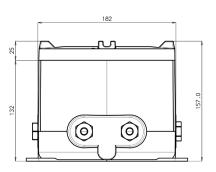
Pls check also max static pressure of instrument on spec. as it may be smallor than 10 kPa

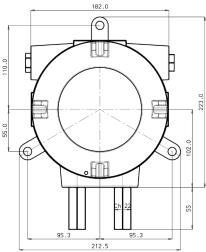
 $^{^{*}}$ Not to be used with range 0 and 1 as max static of MSX with range 0 and 1 is 3,5 psi (24,82 KPa)

Dimension

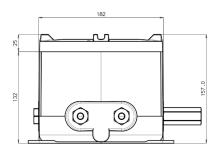
Aluminum case

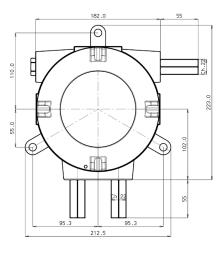
VSO STD pressure port/no venting valve



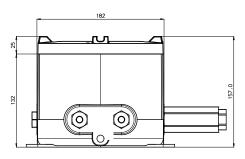


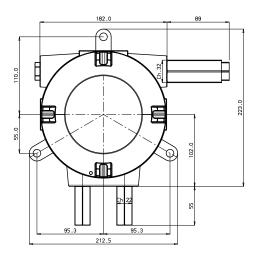
 $\begin{array}{c} VS1 \\ \text{STD pressure port/ STD venting valve} \end{array}$





 $\begin{array}{c} VS2 \\ \text{STD pressure port/LD venting valve} \end{array}$





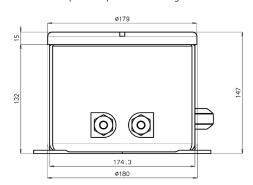
Stainless steel case

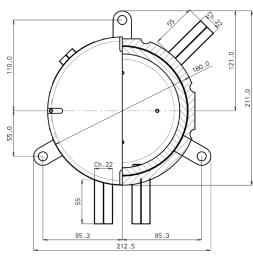
 $\begin{array}{c} VS0 \\ \text{STD pressure port/no venting valve} \end{array}$

Ø179 Ø179 Ø180

0°121 0°121 0°121 0°121 0°121 0°121 0°121 0°121 0°121 0°121

VS1
STD pressure port/STD venting valve





 $\begin{array}{c} VS2 \\ \text{STD pressure port/LD venting valve} \end{array}$

