



DTR.AS-dP.01(ENG)

APLISENS

MANUFACTURE OF PRESSURE TRANSMITTERS
AND CONTROL INSTRUMENTS

USER'S MANUAL

DIFFERENTIAL PRESSURE TRANSMITTER TYPE AS-dP

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CONTENTS

1. APPLICATIONS AND MAIN FEATURES	2
2. USER KIT	2
3. IDENTIFYING MARKS. ORDERING PROCEDURE	2
4. TECHNICAL DATA	2
4.1. MEASUREMENT RANGES:.....	2
4.2. METROLOGICAL PARAMETERS.....	2
4.3. ELECTRICAL PARAMETERS.....	2
4.4. OPERATING CONDITIONS:.....	2
4.5. CONSTRUCTION MATERIALS:.....	2
4.6. PROTECTION RATING OF CASE – IP65.	2
4.7. ELECTRICAL CONNECTORS.....	2
5. INSTALLATION AND MECHANICAL CONNECTIONS	2
6. ZERO AND MEASUREMENT RANGE POSITION SETTING	3
7. EXPLOITATION	3
8. GUARANTEE	3
FIG.1. AS-DP SERIES PRESSURE TRANSMITTER.....	3
FIG.2A. TRANSMITTER WIRING DIAGRAMS FOR DC VOLTAGE SUPPLY.....	4
FIG.2B. TRANSMITTER WIRING DIAGRAM FOR AC VOLTAGE SUPPLY.....	4

1. APPLICATIONS AND MAIN FEATURES.

The AS-dP series differential pressure transmitters are designed to measure levels in closed tanks and to measure differences pressure on the filters, on the orifices etc..

Transmitters are intended to water supply systems and heating engineering .

2. USER KIT

Transmitters are delivered in single and/or multiple packs together with a "Product Certificate" which also is as a guarantee card and with the User's Manual (DTR).

3. IDENTIFYING MARKS. ORDERING PROCEDURE.

The rating plate of transmitter contains at least the following information:

name of manufacturer, type, serial number, measuring range, output signal, supply voltage.

In order should give: sign the type of transmitter (AS-dP), measuring range, output signal.

4. TECHNICAL DATA

4.1. Measurement ranges:

0 ÷ 1 bar; 0 ÷ 2,5bar; 0 ÷ 4bar; 0 ÷ 10 bar; 0 ÷ 16bar; 0÷25bar

4.2. Metrological parameters

Accuracy	0,4%	Thermal compensation range	0...70 °C
Hysteresis, repeatability	0,05%	Thermal error	0,2% / 10 °C
Overpressure limit	6 x range, max 6MPa	Long-term stability	0,5% / year

4.3. Electrical parameters

Electrical supply: 10,5...36VDC and output signal 4...20 mA (two wire transmission).

Electrical supply: 15...30VDC and output signal 0...10 V (three wire transmission).

Electrical supply: 24 VAC and output signal 0...10 V in three wire system with ADP-1 type electrical connector only.

Load resistance for current output $R[\Omega] \leq \frac{U_{sup}[\text{V}]-10,5 \text{ V}}{0,02 \text{ A}}$

Load resistance for voltage output $R[\Omega] \geq 5k$

Insulation strength testing voltage 500 VAC or 750 VDC

4.4. Operating conditions:

Operating temperature range (ambient temp.) -25 ÷ 80 °C

Medium temperature range

-25 ÷ 120°C – direct measurement

> 120°C – measurement with a pulse line using

(example for 160°C is necessary to use minimum 150m m of the pulse line)

4.5. Construction Materials:

Diaphragm and process connector 00H17N14M2 (SS316L)

Casing for electronic parts 0H18N9 (SS304)

PD type electrical connector itamide

4.6. Protection Rating of Case – IP65.

4.7. Electrical Connectors.

a). Electrical connector PD-type applied for transmitters with:

- electrical supply 10,5...36VDC and output signal 4...20mA
- electrical supply 15...30VDC and output signal 0...10V.

b). - electrical connector ADP-1-type applied for transmitters with:

- electrical supply 24VAC and output signal 0...10V.

5. INSTALLATION AND MECHANICAL CONNECTIONS

5.1. AS-dP series transmitters are equipped with P (M20x1,5) process connectors.

For medium temperature above 120°C is necessary to use transmitter with temperature isolation (see 4.4.).

- 5.2. Electrical connectors make in accordance with Fig. 2a for DC supply or Fig. 2b for AC supply. In environments with a large electromagnetic noise the strand or strand in shield line type is recommended. Isolate transmitter signal lines from power electrical supply lines or from big electrical energy receivers. The devices used together with the transmitters should be resistant to electromagnetic interference from the transmission line in accordance with compatibility requirements.

6. ZERO AND MEASUREMENT RANGE POSITION SETTING

Unscrew the transmitter electrical connector to get access to potentiometers knobs. Power the transmitter in accordance with its technical parameters. Supply a pressure signal equal to the lower limit of the measurement range, and regulate the output signal equal to 4mA (0V) by turning the "zero" potentiometer. Turn the knob to the right to increase the output signal. After the zero position has been set, supply a pressure signal equal to the upper range limit, and use the "range" potentiometer to adjust the output current (voltage) equal to 20mA (10V). Recheck the zero position, and repeat the procedure if necessary.

Note:

Adjusting the zero and range position with potentiometers is possible up to 10%.

For transmitters with 0...10V lowering of „zero“ is possible to 0,05V value only (transmitters not achieve 0V output signal value).

7. EXPLOITATION

Protect transmitters before mechanical damage and flooding. Don't admit to come into being the residue on the diaphragm.

8. GUARANTEE

The manufacturer guarantees the proper operation of the transmitter for a period of 24 months from the date of purchase and servicing provided under the guarantee and following the guarantee period.

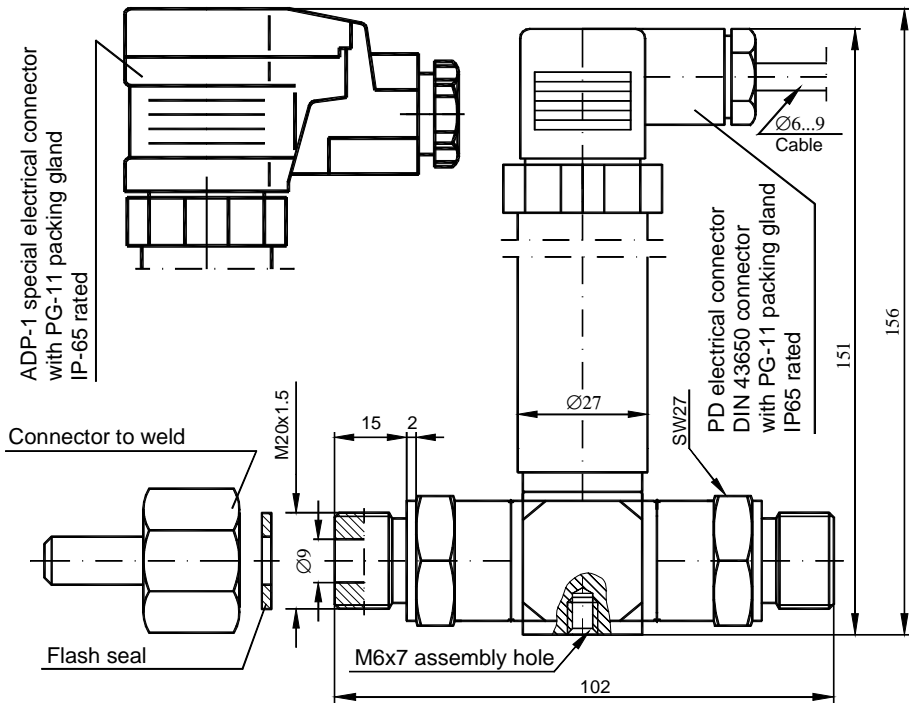


Fig.1. AS-dP series differential pressure transmitter.

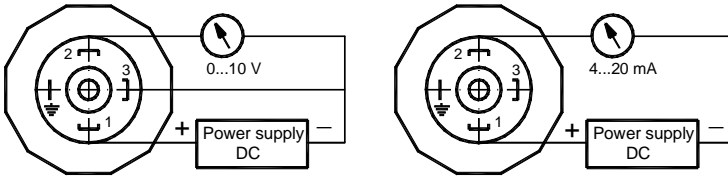


Fig.2a. Transmitter wiring diagrams for DC voltage supply.

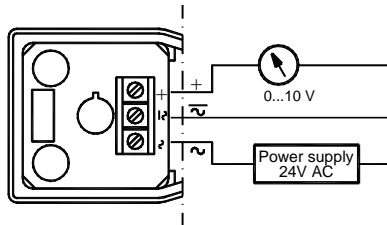


Fig.2b. Transmitter wiring diagram for AC voltage supply.

To repair transmitter with AC voltage supply is necessary to deliver the transmitter with electrical connector.