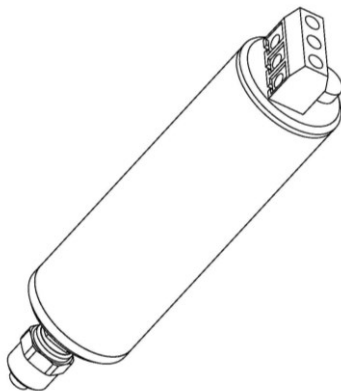







USER'S MANUAL

INTERSYSTEM PRESSURE TRANSDUCER TYPE PM-22



Symbols used

Symbol	Description
	Warning to proceed strictly in accordance with the information contained in the documentation in order to ensure the safety and full functionality of the device.
	Information particularly useful during installation and operation of the device.
	Information on disposal of used equipment.

BASIC REQUIREMENTS AND SAFE USE

- The manufacturer will not be liable for damage resulting from incorrect installation, failure to maintain the device in a suitable technical condition, or use of the device other than for its intended purpose.

- Installation should be carried out by qualified staff having the required authorizations to install electrical and pressure-measuring devices. The installer is responsible for performing the installation in accordance with these instructions and with the electromagnetic compatibility and safety regulations and standards applicable to the type of installation.



- In systems with pressure transmitters there exists, in case of leakage, a danger to staff on the side where the medium is under pressure. All safety and protection requirements must be observed during installation, operation and inspections.

- If a device is not functioning correctly, disconnect it and send it for repair to the manufacturer or to a firm authorized by the manufacturer.

In order to minimize the risk of malfunction and associated risks to staff, the device is not to be installed or used in particularly unfavourable conditions, where the following dangers occur:



- Possibility of mechanical impacts, excessive shocks and vibration;

- Excessive temperature fluctuation, exposure to direct sunlight;

- Condensation of water vapour, dust, icing.

Changes in the production of the device may precede a paper updating for the user - the current user manuals are available at www.aplisens.pl

CONTENTS

1. APPLICATION. MAIN FEATURES	2
2. USER MATERIALS	2
3. IDENTIFYING MARKS. ORDERING PROCEDURE.....	2
4. TECHNICAL DATA	2
4.1. MEASURING RANGES	2
4.2. PARAMETERS (FOR STANDARD VERSION)	2
4.3. PERMITTED ENVIRONMENTAL CONDITIONS	2
5. CONSTRUCTION	2
6. INSTALLATION AND CONNECTIONS.....	2
7. CALIBRATION	3
8. USING	3
9. WARRANTY	3
10. SCRAPPING, DISPOSAL.....	3
11. FIGURES.....	3
FIG. 1A. INTERSYSTEM PRESSURE TRANSMITTER TYPE PM-22.....	3
FIG. 1B. ELECTRICAL CONNECTION OF THE PM-22 TRANSMITTER	3

1. APPLICATION. MAIN FEATURES

The PM-22 transmitters are intended to convert standard pneumatic signal 20...100 kPa on the electrical signal 4...20 mA. The PM-22 pressure transmitters can only be used for the measurement of nonaggressive gases.

2. USER MATERIALS

The transmitter and clamping ring are delivered in single and/or multiple packs. Together with the transmitter user receives: User's Manual numbered IO.PM-22.01(ENG) and Product Certificate, which is also as the warranty card.

3. IDENTIFYING MARKS. ORDERING PROCEDURE

Every transmitter carries a rating plate containing at least the following information: name of manufacturer, product type, series number, measuring range, output signal and power supply.

For information about order code of the PM-22 transmitter please refer to the information in the Catalogue.

4. TECHNICAL DATA

4.1. Measuring ranges

Standard measurement range: 20...100 kPa.

In the case of special transmitter version, measuring range can be set from -100 to 200 kPa, with minimum measuring span set at 1 kPa.

4.2. Parameters (for standard version)

Output signal	4...20 mA
Accuracy	0.16%
Power supply	8 ÷ 36V DC
Hysteresis and repeatability	0.05%
Thermal error	0.2% / 10°C
Temperature compensation range	0 ÷ +50°C
Overpressure limit	250kPa
Load resistance	$R[\Omega] = (U - 8V) / 0.02A$
Weight	0.05kg

4.3. Permitted environmental conditions

Operating temperature range	0 ÷ 60 °C -25° ÷ 60 °C (in additional booths)
Relative humidity	to 80% without condensation
Vibration during operation	max 4g
<i>g - acceleration of gravity</i>	

5. CONSTRUCTION

The piezoresistant silicon sensor is used as a pressure measuring element.

The input pressure is connected via process connection fitting into the $\varnothing 6 \times 1$ flexible tube. The output signal is connected via screw terminals which are suitable for wiring cross-sections up to 1.5 mm².

The special transmitter version can be equipped with an electrical connection DIN 43650 Connector.

The housing is equipped with the clamping ring used for mounting, and in standard version - the cork allowing access to the "zero" and "span" potentiometers. The housing and process connection (fig.1a) are made of brass with nickel coating.

6. INSTALLATION AND CONNECTIONS

The PM-22 transmitter should be mounted in confined spaces, free of dust, corrosive gas, etc. In the case of non-compliance with these conditions, transmitter must be installed in enclosure which provides appropriate protection.



Gas that is a working medium should not contain dust, oil, water, contaminations aggressive agents, solids larger than 1.5 μm , relative humidity ensuring that dew point temperature is not lower than 10 °C from the ambient temperature (acc. to EN 60654-2:1999).

The transmitter should be mounted using the clamping ring, in a way that protects process connection against the moisture penetration.

The pressure signal fed is via a flexible plastic Ø6x1 tube.
Electrical connections should be in accordance with fig.1b.



It is recommended to use twisted pair cabling for the signal lines. If electromagnetic interference is expected, twisted screened cable should be used.
Avoid routing cables with other electrical cables (with inductive load, etc.) or near large electrical equipment.

7. CALIBRATION

Using potentiometers “zero” and “span” point can be calibrated up to the 10% of the value without interaction settings.

In the standard version access to the potentiometers is located under a rubber stopper at the top of the transmitter housing. In special version access to the potentiometers is achieved by unscrewing the electrical connector.

8. USING



The transmitter, process connector and impulse tubes protect from damage, control their condition.
Protect the transmitter installation against dusts, liquids and aggressive substances.
Every 2 years, or in accordance with the provisions of the applicable user, check and correct characteristic.
The transmitters should be stored in accordance with the conditions of section 4.3.

9. WARRANTY

Manufacturer warrants to the conditions specified in the Product Certificate which is also a guarantee card.

10. SCRAPPING, DISPOSAL



Waste or damaged transmitters should be dismantled and disposed of in accordance with Directive (2012/19/EC) on waste electrical and electronic equipment (WEEE) or returned to the manufacturer.

11. FIGURES

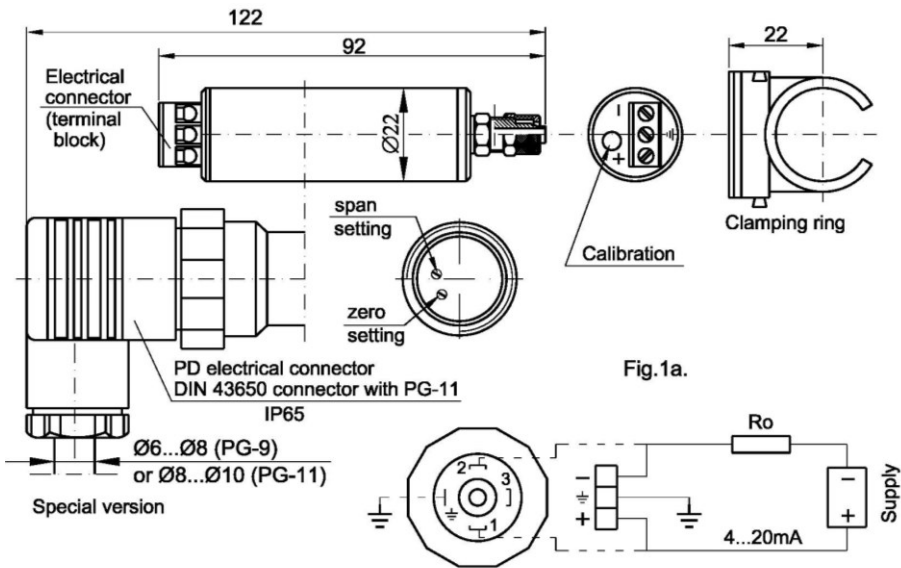


Fig.1a.

Fig.1b.

Fig. 1a. Intersystem pressure transmitter type PM-22.

Fig.1b. Electrical connection of the PM-22 transmitter