

PRESSURE TRANSMITER FP-PT(W)

Operational instruction

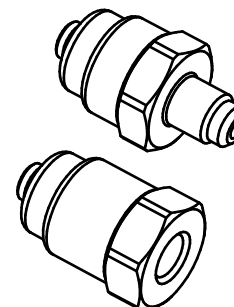


Fig. 1. General view

APPLICATION

Pressure transmitter FP-PT(W) are designed for installation on the pressure line and suction line of the refrigeration circuit, for the purpose of measuring gauge pressure. The main function of the sensors is to convert the operating pressure range into a unified current signal 4-20 mA. Pressure sensors relate to the elements of automatic control, control and regulation of the refrigeration cycle. Pressure sensors are compatible with all types of refrigerants (except ammonia), have high vibration and shock resistance.

SAFETY INSTRUCTIONS

- ⚠ Carefully read this instruction. Ignoring these rules may lead to malfunctioning of this device, staff injuries and malfunctioning of pressure transmitter.
- ⚠ Installation and service must be done by qualified staff with appropriate level of knowledge and skills as well as access to electrical works of relevant class.
- ⚠ Follow the electrical connection sketch of pressure transmitter, electric polarity, as well as requirements electrical safety standards.
- ⚠ Electromagnetic waves may have a negative effect on device operation, shield it if necessary.

INSTALLATION INSTRUCTION

- Check the compliance of the design data with the technical characteristics of the pressure transmitter in Table 1. The transmitter must be connected to a line whose pressure value does not exceed the value indicated in the sticker.
- Before installation, disconnect power line of the transmitter.
- When tightening the threaded connection, hold the fastening point. The maximum permissible torque is 30 Nm.
- It is recommended to install the sensor in a strictly vertical position, this setting reduces the risk of blocking of the nozzle of the sensor, by solid parts and dirt.

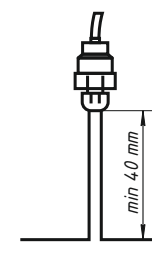


Fig 2. Extension line mount

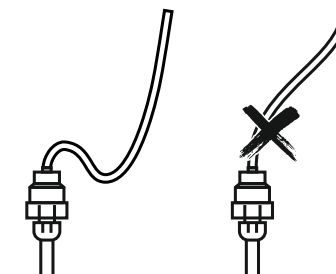


Fig. 3. Loop cable installation

- The sensor must be connected with a cable from 3 to 6.0 mm in diameter. Connect the electrical connections of the sensor according to Table 2.
- It is recommended to install the sensor (for the low-pressure side of the system) on the remote line in order to avoid freezing of the sensor body with frost and reduce the effect of pressure fluctuations on the readings. See fig. 2.
- It is recommended to install the cable in a loop to prevent a large amount of water from running down the cable onto the sensor body. See fig. 3.
- Connect the electrical connections of the sensor according to Table 2.
- The maintenance of the sensor consists in a systematic check of the tightness of the connection, the integrity of the housing and periodic verification of the readings.

TRANSPORTATION AND STORAGE

- Make sure that the pressure transmitter are not damaged during transport.
- Pressure sensors should be stored in the manufacturer's packaging in a dry ventilated warehouse in a clean and chemically non-aggressive environment at a temperature of -40 °C to 90 °C and a relative humidity of 80%.

DISMOUNTLING AND UTILIZATION

- Before dismantling, make sure that the pressure in the area where the transmitter is installed is equal to atmospheric pressure, the pressure sensor is power off, after that remove the transmitter.
- Dispose of the pressure sensor in accordance with national regulatory requirements (for the countries of TC GOST 1639-2009 "Scrap and waste of non-ferrous metals and alloys").

Tab. 1. Technical data

Parameter		Value
Measuring rang	FP-PT-10A/B(W)	-0.5...10 bar
	FP-PT-35A/B(W)	0...35 bar
Output signal		4-20 mA (beyond measurement 3.9 mA and 20,1 mA)
Power supply		8...25 VDC
Connection to the media	FP-PT-10(35)A(W)	7/16"-20" UNF (external thread (male))
	FP-PT-10(35)B(W)	7/16"-20" UNF (internal thread (female))
Media compability		All refrigerants, except ammonia NH ₃
Electrical connection		PVC cable, 2×0,25 mm ²
Non-linearity		≤0.5 % FS
Accuracy		≤1.0% FS
Response time		≤4 ms
Compensated temperature range	FP-PT-10A/B(W)	-30...40 °C
	FP-PT-35A/B(W)	0...80 °C
Protection class		IP65
Shock resistance		Not more than 500 g, 1 ms
Vibration stability		Not more than 20 g, 25...2 kHz
Maximum allowable pressure	FP-PT-10A/B(W)	25 bar
	FP-PT-35A/B(W)	60 bar
Sensor temperature range		-40...90 °C
Media temperature range		-40...120 °C
Storage temperature range		-40...90 °C
Weight	FP-PT-10A/B(W)	83 g
	FP-PT-35A/B(W)	94 g
Case material		Brass L63 (C27 400)
Material of the plastic part		Polyamide
Cable length (diameter)		2 m (3.8 mm)
Cable wire cross section		0.25 mm ² (AWG 23)

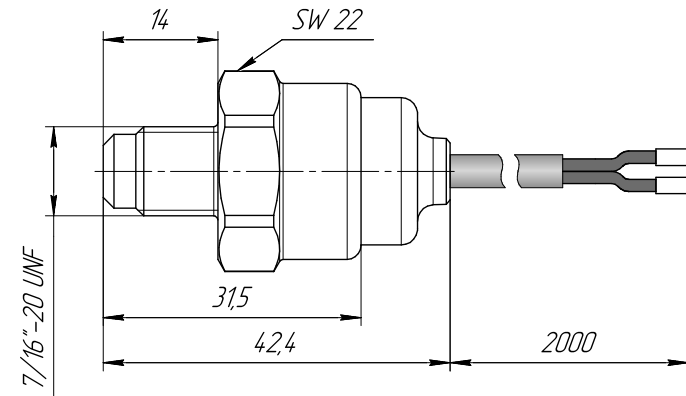


Fig. 4. Technical drawing of the model FP-PT-10(35) A(W)

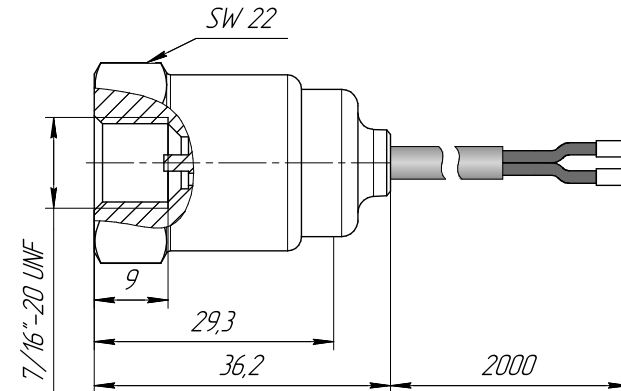


Fig. 5. Technical drawing of the model FP-PT-10(35) B(W)

Tab. 2. Electrical connections

Wire color	Purpose
brown	Power supply «+»
white	Power supply «-»