PX633

Submersible Level Transmitter

INSTRUCTION SHEET

M5720/1118

Safety Precautions

⚠ Pressure transmitter should be installed by professional engineers or qualified technical personnel. The product specifications and important information provided on the label should be carefully read before installation and wiring operations.

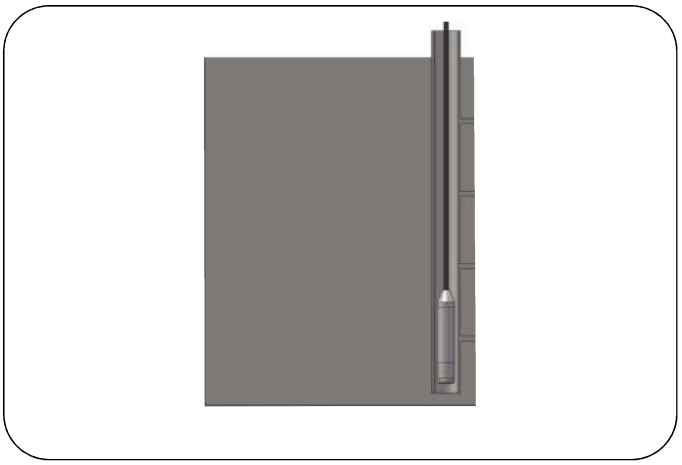
⚠ Pressure transmitter is powered by an external power supply. The power supply circuit should comply with energy-limiting circuit by relevant standards, and pay attention to the high voltage circuits that may exist.

⚠ The maximum static pressure overload has been stated on the product label, the process maximum pressure should not exceed the full span of sensor.

⚠ When using pressure transmitter in hazardous areas, installation, use and maintenance should also comply with the operation manual and relevant requirements of national standards.

Product usage

Protection sleeve

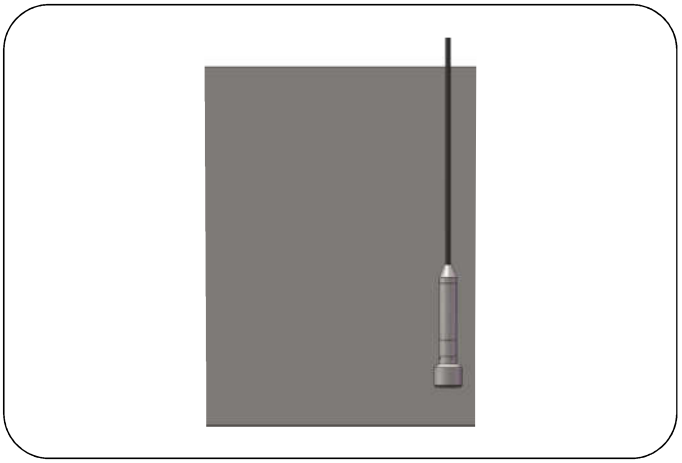


Submersible Level Transmitter should be suspended inside the protective sleeve to avoid the impact on the level transmitter from fast flowing medium.

Top end of protection casing should extend above the level surface, to avoid the influence on measurement accuracy from surface disturbances.

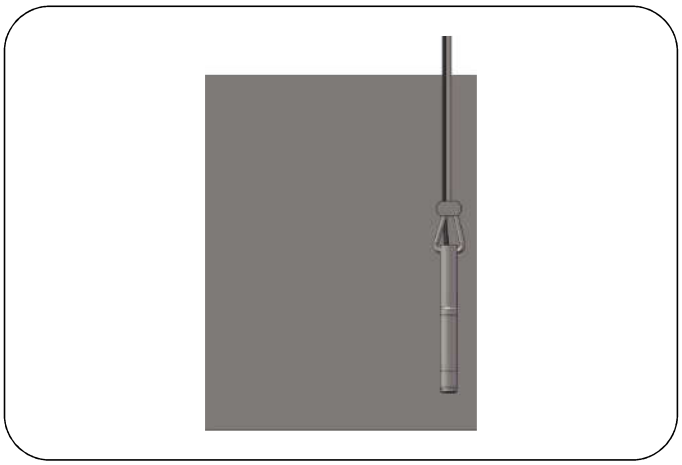
Level transmitter probe should be higher than the bottom, at least 20cm, to avoid the blockage of impurities and sand.

Counter weight



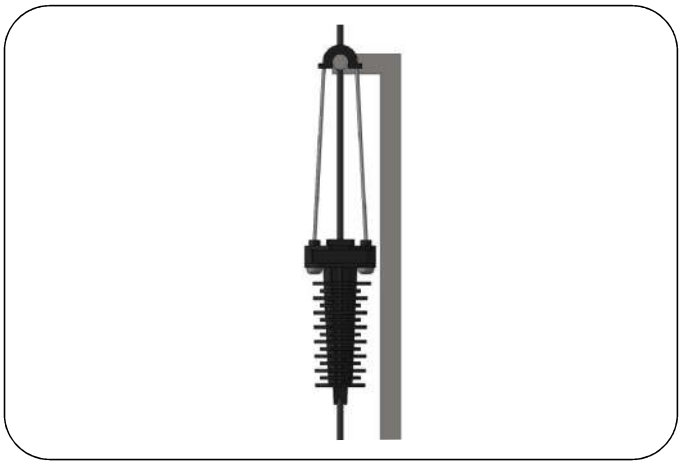
In cases were a protective tube is unable to be used, a counterweight can be used to stabilize a transmitter in fast flowing areas.

Wire rope supporting



For products with more than 50 meters cable, the wire rope and cable bundled multi-point should be used to strengthen the level transmitter support.

Clamps installation



Clamps can be used to fix and support the entire product for direct cable connection level transmitter. Cable outlet should be of sufficient length to be directly connected to the control room, or adapter junction box, avoid bare connections in the field environment.

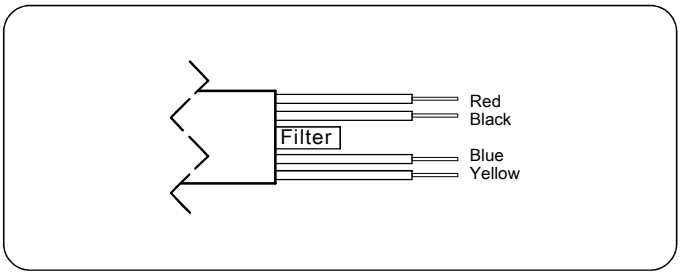
⚠ **In order to avoid damage to the diaphragm, do not remove the package and cover before installation. Be sure to keep the protective cap installed snugly.**

⚠ **The pressure transmitter must be installed and secured against collision or turbulence. At the same time consider the medium flow conditions and other factors on the pressure transmitter location and measurement.**

⚠ **During installation or maintenance, the pressure transmitter should be carefully submerged into the medium, to avoid damage to the diaphragm due to impact with the liquid surface.**

Electrical connection

Cable outlet

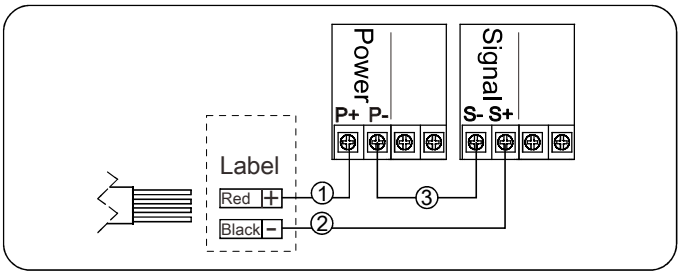


Label	Two wires
Red	Power+
Black	Power-
Blue	
Yellow	

⚠ **Tube provide reference to current atmospheric pressure for accurate gauge pressure measurements. Be careful. Avoid the filter dropping off and keep it dry.**

Signal connection

4-20mA Two wire(cable)



① Connect the positive power supply (P+) to the red wire of level transmitter;
② Connect the positive signal module (S+) to the black wire of level transmitter;
③ Connect the negative signal module (S-) to the negative power supply (P-).

Power supply

It is recommended to use an independent linear direct-current power supply. Verify that the combined loop resistances (signal cable, display meter, and other equipment) are not to high, so that the voltage supplied to the pressure transmitter meets the normal operating requirements.

- Standard current signal output: 12-30VDC

Grounding

- Using cable with shielded twisted-pair signal has the best effect. To avoid ground loop, shielded layer adopts single-end grounded.
- Transient protection module is effective only in the case of good grounding. Metal shell and internal grounding terminals are used to the nearest ground directly.

Maintenance

Requires no maintenance

External cleaning

Please notice the following when cleaning:

- Use washing agent which will not damage to the instruments
- Protect process diaphragm from mechanical damage, eg: the mechanical damage caused by sharp objects.
- Mechanical cleaning of metal diaphragm is prohibited.
- Do not point the nozzles to the diaphragm directly when doing internal cleaning by pressure washer.

Transportation / storage

- Do not store outside
- Keep dry and dust-free
- Do not expose to the corrosive medium
- Avoid solar radiation
- Avoid mechanical shock and vibration
- Storage temperature: -30-80℃
- Maximum relative humidity: 95%

EMC statement

- This pressure transmitter conforms to 2014/30/EU EMC standard and bears the CE mark
- Users need to ensure the whole equipment conform to all the applicable standards.

Retransport

- Remove all media from surfaces of the pressure transmitter. Always refer safety data sheet for proper personal protection equipment when handling dangerous medium!
- Please adopt proper package to avoid damage in transportation.

Discard disposal

- The instrument is not restrained by WEEE instruction 2002/96/EG and laws of relevant countries.
- Please pass the instrument to specialized recycling companies other than local recycling points.

9th March, 2015

1. Cable core structure:

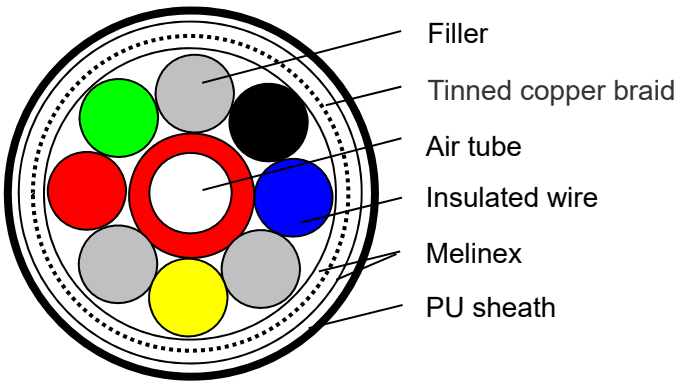
The conductor core		
Number of Core * section	number of piles / Diameter	Material
5×0.2mm^2	7/0.2mm	tinned copper wire
Insulated wire core		
Material	Color	Outer diameter
PE	Yellow, red, green, black, blue	1.4±0.1mm
Air tube		
Material	Color	Outer diameter
PP	Red	2.2±0.2mm

2. Cabling and structure

Cabling direction: S (counter-clockwise)

Wrapped in a layer of polyester film after stranded cable

Structure



3. Shielding

144 Net tinned copper braid shielding, wrapped with a layer of polyester film after knitting.

4. Sheath

Material	PU
Color	Black
Nominal thickness (mm)	0.6
Outer diameter	7.3 ± 0.2mm

5. Function

Working voltage	Less than 60V
DC resistance of conductor（20℃）	Less than 89.6Ω/km
Insulation resistance	Between the cores of cable: Over 1000MΩ/km
	Between the cable cores and the cable of Ground connection: Over 1000 MΩ/KM
withstand voltage	between the cores of cable: 50Hz, 1kV(AC), won't be shrinking in 1minut
	between the cable cores and the cable of Ground connection: 50Hz, 1kV(AC), won't be shrinking in 1minut
Working temperature	-40 to 80℃

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If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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