



Operation Instructions

Digital explosion-proof melt pressure transmitter
PT115FX/PT125FX/PT135FX series



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01 Product introduction

Digital Display Explosion-proof Melt Pressure Transmitter is an intelligent 4-20mA+Hart protocol melt pressure transmitter designed for explosive hazardous locations, it adopts a digital display head with on-site display, can be operated on-site for easier operation, threaded and flange mounting options are available, high-performance core components for its high measurement accuracy, and only when properly handled, their service life will be longer.

The product conforms to the national JJG882-2019 "pressure transmitter calibration regulations".

02 Product Model and Specifications

Product model: PT115FX (straight rod type), PT125FX (hose type), PT135FX (temperature and pressure double measurement type)

Measuring range: (0-1.75)MPa, (0-3.5)MPa, (0-5)MPa, (0-7)MPa,
(0-10)MPa, (0-20)MPa, (0-35)MPa, (0-50)MPa,
(0-70)MPa, (0-100)MPa, (0-140)MPa, (0-200)MPa

Output Signal	(4-20) mA two-wire system +hart protocol
Supply Voltage	(12-30) Vdc
Load resistance (Ω)	< (Supply voltage -12) /0.02
Explosion-proof Grade	Ex d IIC T6 G6 ; Ex ia IIC T6 Ga
Basic Error (%)	$\pm 0.5\%$ (level 0.5), $\pm 0.25\%$ (level 0.25)(expressed as a percentage of the full scale output value)
Repeatability shall not be greater than the absolute value of the basic error, and the return difference shall not be greater than the absolute value of the basic error.	

03 Transportation and Storage

3.1 The product is normally packaged individually and when stored, please carefully repack the packaging it originally came with.

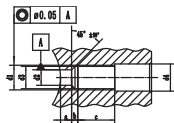
3.2 At the front thread of the rigid rod, the induction diaphragm is protected by a protective cap, which should be tightened at any time during storage and only opened when using the installation. It is strictly prohibited to press the diaphragm with sharp materials.

3.3 Long-term storage needs to meet the following conditions:

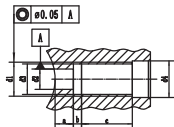
- ① Ambient temperature: -20~85°C, relative humidity: 0%~100%R.H
- ② Not exposed to rain or affected by water seepage/leakage.
- ③ Vibration and shock kept to a minimum.

04 Product Installation Hole

Before installing the product, make sure that the mounting holes are machined to the correct size and that the holes are free of burrs.

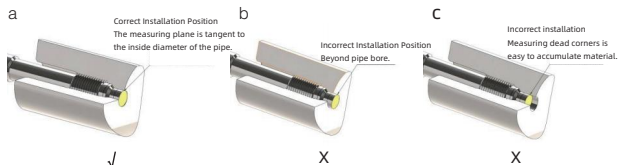


d1	d2	d3	d4	a	b	c
1/2-20UNF	Φ8	Φ11.5	Φ14	5.7	3.2	19
M18×1.5	Φ10	Φ16.5	Φ20	6	4	25
M10×1	Φ6.2	Φ9.1	Φ14	6.7	3.2	19
M14×1.5	Φ8	Φ12.5	Φ15	5.7	3.2	19
G1/4	Φ8	Φ11.7	Φ14	5.7	3.2	19
M12×1.5	Φ8	Φ10.5	Φ14	5.7	3.2	19



d1	d2	d3	d4	a	b	c
G3/8	Φ10	Φ15	Φ18	9	4	25
G3/4	Φ18.1	Φ24.5	Φ28	12	5	35
M22×1.5	Φ16	Φ20.5	Φ24	10	5	40
M20×1.5	Φ14	Φ18.5	Φ22	5.7	3	35

Correct Installation Mode



05 Product Installation

5.1 Before installing the product, please check whether the technical parameters on the nameplate are correct or not, mainly including mounting threads, pressure range, output signal, power supply requirements. The main parameters include mounting thread, pressure range, output signal and power supply requirements.

5.2 Ensure that the mounting holes are drilled to the correct dimensions. If the product is installed in a previously used mounting hole, professional cleaning tools should be used to ensure that the mounting hole is completely clean and free of any plastic residue.

5.3 Remove the protective cap from the front of the product.

5.4. Apply high-temperature anti-seize grease to the threaded surfaces of the product to prevent thread seizure. If you need to install a gasket when sealing the flat surface, please put the high temperature anti-seize grease on the surface. If you need to install a sealing gasket for flat sealing, please apply high-temperature anti-seize grease on the sealing gasket and stick the gasket on the product.

5.5 Place the product smoothly into the mounting hole, first manually, and then use a wrench to tighten it on the hexagon. If the product is to be mounted in a previously used mounting hole, it is recommended that the product be mounted under conditions of heating to the melting point of the plastic.

The recommended maximum mounting torque is 40 Nm.

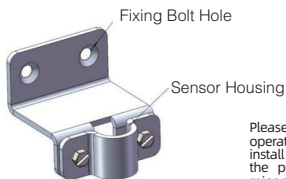
06 Product disassembly

6.1 Disassembly must be done under heated conditions (plastic melting point). When disassembling the sensor, make sure that the diaphragm is not contact pressure. The force for dismounting the sensor must be applied only to the shaft (hexagon) and not to the sensor head. Do not apply any force to the sensor head. If the mounting holes need to be blocked, seal them with a plug of the same mechanical size.

6.2 After disassembling the product, the diaphragm, sealing surfaces and threads must be quickly wiped clean with a soft cloth.

07 Product disassembly

Use our professional mounting bracket to fix the product, the fixing position should avoid vibration and installation in a strong magnetic environment, and should not be exposed to rain or water seepage/leakage, the temperature should not exceed 85°C.



Please strictly follow the operation instructions to install and disassemble the product, caused by misoperation damage, we does not assume the quality responsibility.

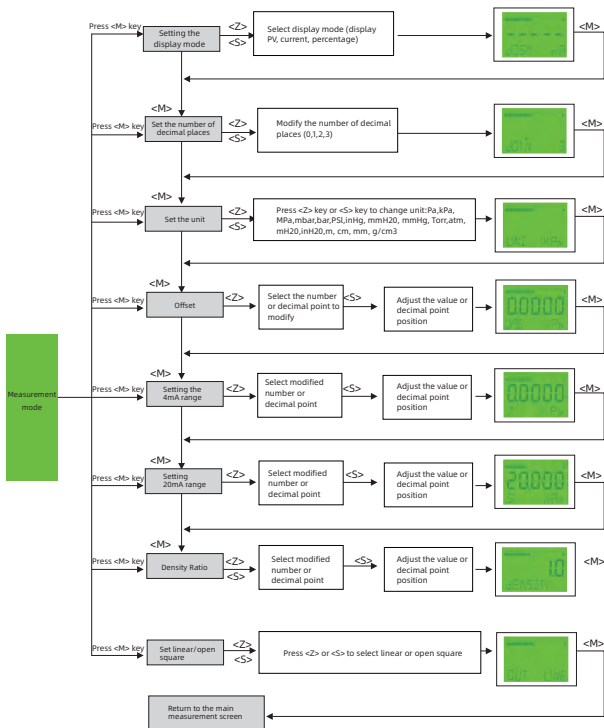
08 Wiring and Cabling

After the cable is laid out, it is connected to the terminal block of the signal receiving end according to the electrical connection definition of our company. Signal cable should be wired separately through the wiring channel, strong and weak power need to be wired separately, please avoid high temperature areas when wiring, the recommended ambient temperature is below 85 °C.

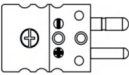
09 Product Calibration

The product is calibrated after the product is installed, connected to the measuring instrument and energized, without any pressure, and after the system temperature has reached the operating temperature for 30min~60min.

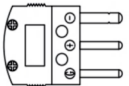
Meter head operation method:



Temperature signal output:

Thermocouple type		Thermocouple temperature signal		Cable color
K type thermocouple		+		Red
		-		Blue
E type thermocouple		+		Red
		-		Brown
J type thermocouple		+		Red
		-		Yellow

Temperature signal output:

		Three-wire PT100		Cable color
		+		Red
		G		Red
		-		White

M16-7PIN(Binder)

Terminal		Two wire thermocouple/thermal resistor	Three-wire PT100	Four-wire PT100	Double branch and two wire system PT100	Double branch and three wire system PT100
		Signal definition				
1		+	+	+	+	+
2				+		
3		—	—	—	—	—
4			—	—		—

11 Fault Analysis

Common faults and troubleshooting methods:

Fault	Reason	Troubleshooting Methods
	1. The hole size problem: the size is small, the concentricity is not enough, and the hole has rough edges. 2. The temperature is more than 400°C.	1. Check the hole size. 2. Check whether the normal operating temperature exceeds 400 °C or whether the temperature exceeds 400 °C during the heating process.
	1. The installation hole caused by burrs. 2. Cold machine installation, solidification caused by materials. 3. External use of hard objects to press the diaphragm.	1. Clear the burrs in the hole. 2. Use special cleaning tools to clear the hard material in the hole and install with the heating machine. 3. Only use fingers to press.
	1. The hole size problem: the diaphragm has extended out of the inner wall of the cylinder. 2. Brush the diaphragm with a hard object.	1. Re-open the hole or add the gasket according to the size. 2. It is strictly prohibited to use hard objects to brush the diaphragm.
	Excessive mounting torque.	Install according to the recommended torque, and try to make the installation force 90° with the screw.
Pressure did not change	Reason	
	1. Check whether the power supply and cable connections are correct.	
	2. Check whether the diaphragm is intact.	
	3. Check whether the output signal is consistent with the input signal of the receiving module.	
Pressure fluctuation	4. Check whether the sensor housing is at a temperature below 80 °C.	
	1. Need to use a shielded cable.	
	2. The equipment should be reliably grounded.	
	3. The shielded wire is connected to the electric control PE wire.	
Pressure measurement is not accurate	1. Check whether the power supply and cable connections are correct.	
	2. Check whether the diaphragm is intact.	
	3. Check whether the output signal is consistent with the input signal of the receiving module.	



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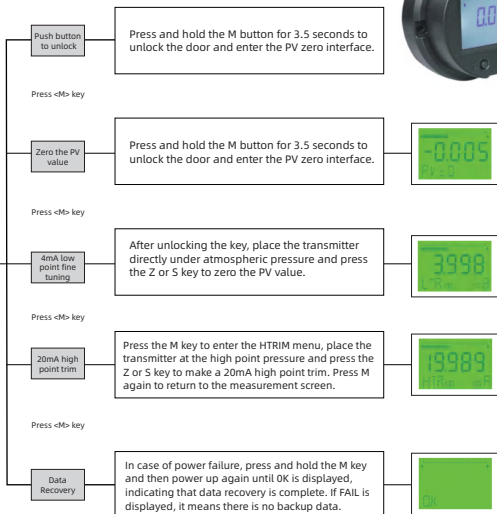
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Three button operating instructions



10 Electrical Connection

Pressure output signal wiring definition:

