

## Instructions

# Economical Melt Pressure Sensor

PT111B/PT124B/PT131B Series



attestation

ISO 9001:2015

Please read this instruction manual carefully before installation



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## Introduction

PT111B/PT124B/PT131B melt pressure transmitter is an accurate measuring equipment. It adopts high quality core element and one key to reset zero circuit design, which could obtain 1.0% FSO measurement accuracy.

## Application

PT111B/PT124B/PT131B series melt pressure transmitters are It is an ideal product for on-site display of melt pressure measurement during the extrusion of pipes, sheets, recycled plastics and other plastics

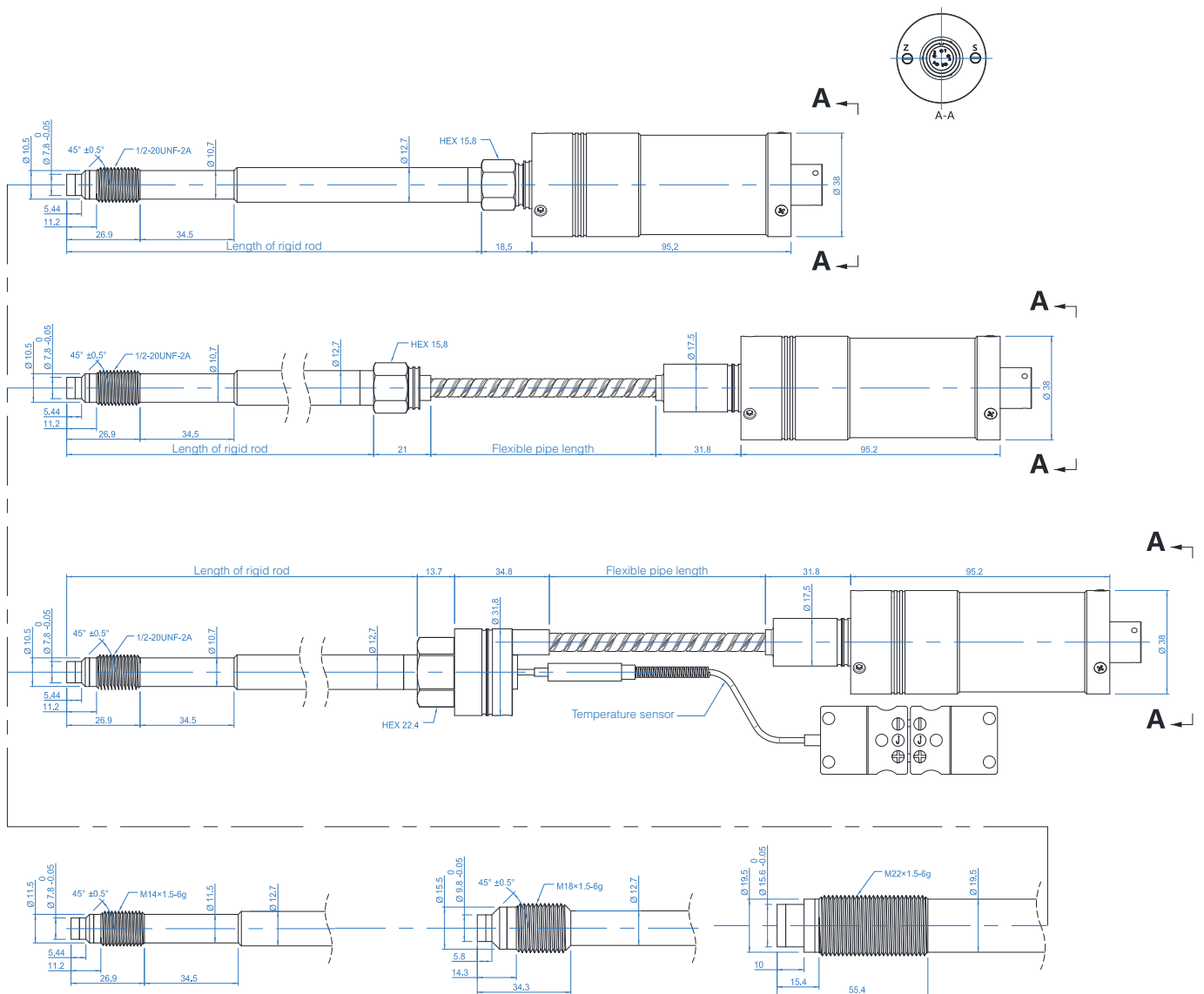
## Product features

- Five-core electrical connection
- Cost-effective
- Accuracy +/-0.1% FS
- Good stability and repeatability

## Technical data

Pressure Range	0~35bar ; 0~2000bar	
Accuracy	±1.0%	
Over load Pressure	1.5FSO	
Bridge Resistance	350Ω Wheatstone bridge	
Output Signal	4-20mA	0~10Vdc , 0~5Vdc
Power	9~36Vdc(Standard24Vdc)	18~36Vdc
Load Resistance (Ω)	<(U-9)/0.02	>10k
Calibration	80%FSO	
Process Connection	M14×1.5 , 1/2UNF , M22×1.5	
Insulation Resistance(50Vdc)	1000MΩ	
Diaphragm Material	17-4PH , inconel718 , C276	
Diaphragm Max Temp	300°C	
Film Material	TiAlN	
E-connection	5-pin connector(Standard)	
Electrical Environment Temp	-20°C~85°C	
Thermocouple	J Type , E Type , K Type , pt100	
Protection Degree	IP65	
Installation Torque	<30Nm	
Filing Material	Mercury filing	

## Dimensions

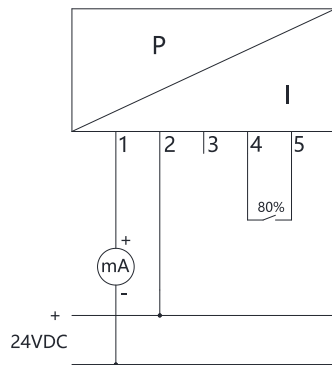


## Electrical connection & Debugging

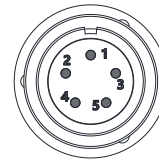
After the pressure sensor has been installed on the line, the electrical connection must be the same as shown in the wiring diagram below.

The PT111B/PT124B/PT131B pressure sensor is equipped with an integrated amplification circuit, the calibration process must be that the pipeline is heated and the pressure is zero. The zero point is adjusted by twisting the top of the shell "Z" position screw, with a toothpick - like item, tap the button by 3 seconds, (" please don't touch point S"). If mV signal has no this function, it can be rezero through the back - end instrument. The output signal is then detected by 80% (see the wiring diagram), and the pressure sensor will provide a standard 80% measurement signal.

## 4...20mA (2-wire)

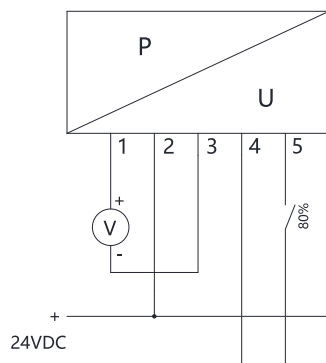


## 5-pin connector / XS12J5Y-5PIN

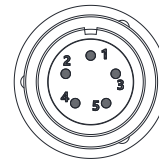


PIN	Function	Wire Color
1	Power-	Blue
2	Power+	Red
3		White
4	80%-	Yellow
5	80%+	Black

## 0...5V/10V (4-wire)



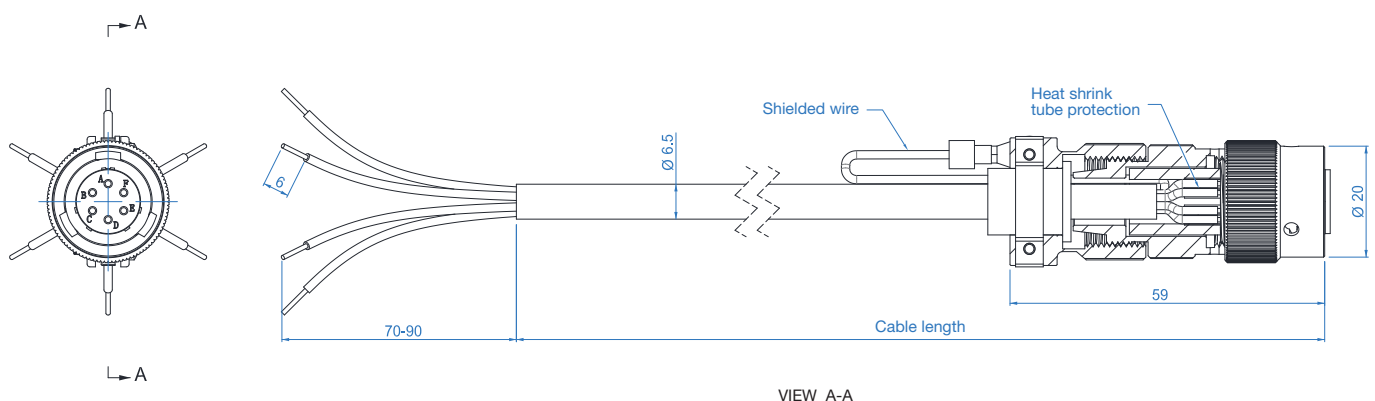
## 5-pin connector / XS12J5Y-5PIN



PIN	Function	Wire Color
1	Signal+	Blue
2	Power+	Red
3	Signal-	White
4	Power- / 80%-	Yellow
5	80%+	Black

\*3 and 4 pins are connected internally

The cable shall be made with shield cable, and the temperature-resistance of each core shall not be less than 105 °C. Each core connection column shall be insulated and protected by heat shrink pipe, and the shield wire shall be connected to the plug metal. Special care shall be taken during cable welding, otherwise it may lead to wrong signal transmission or damage the product. It is recommended to use the welded special cable wire by Ziasiot. For excess lines in the cable, each wire should be wrapped separately with insulating tape.



## Ordering guide

Serie No	PT	X	-	X	-	X	-	X	-	X	-	X	-	X	-	X
Product type	Rigid Stem	111B														
	Rigid+flexible stem	124B														
	With thermocouple	131B														
Pressure range	10MPa 100bar 1500psi			1.5M												
	20MPa 200bar 3000psi			3M												
	35MPa 350bar 5000psi			5M												
	50MPa 500bar 7500psi			7.5M												
	70MPa 700bar 10000psi			10M												
	100MPa 1000bar 15000psi			15M												
Process connection	1/2-20UNF					1/2										
	M14×1.5					M14										
	M22×1.5 (Rotatable rigid rod)					M22										
	M18×1.5					M18										
Rigid stem length	6inch (152mm) (6F Standard length)							6								
	9inch (229mm)							9								
	12.5inch (318mm)							12								
	15inch (381mm)							15								
	18inch (460mm)							18								
Flexible stem length	18inch (460mm)									/18						
	24inch (600mm)									/24						
	30inch (760mm)									/30						
Output signal	4~20mA											MA				
	0~10Vdc											10V				
Thermocouple	J Type															J
	K Type															K
	E Type															E
	Pt100															RTD1

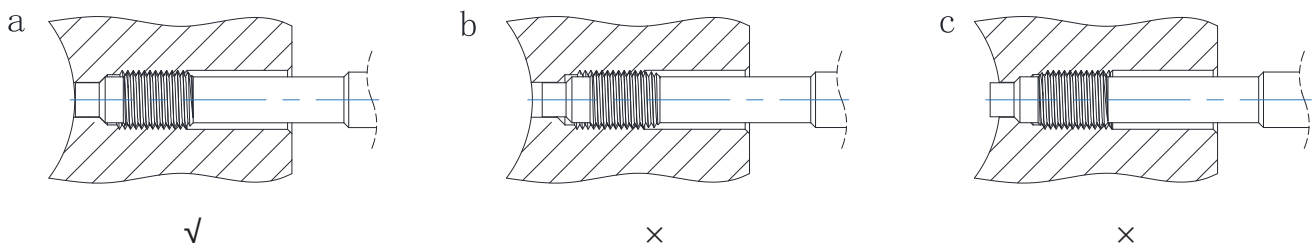
## Installation & Removal

### Installation

When installing the pressure sensor, the sensor hole should be within the size requirement marked in following drawing and the assembly accuracy can be checked by testing bolts. Before installing the sensor, first clean the impurities in the hole and between the threads, then the thread of the sensor is coated with heat-resistant slurry, the screw teeth can be avoided. The installation force is very important, the installation torque of the sensor can only act on the shaft (hexagon), do not apply any force to the head of the sensor. The housing should be kept away from high temperature areas.

1/2-20 UNF /M14×1.5= Maximum starting torque: 40Nm

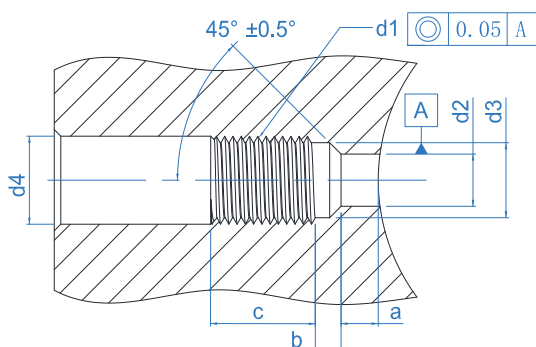
M18 x 1.5 = Maximum starting torque: 50 Nm



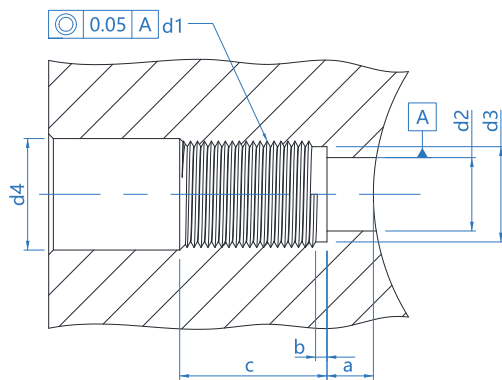
### Removal

The removal of the pressure sensor must be done under heating conditions (plastic melting point). When removing the sensor, please note that the diaphragm has no contact pressure. the force to unload the sensor must be applied only on the shaft (hexagon) and do not apply any force to the sensor head.

### Thread Installation



d1	M18×1.5	M14×1.5	1/2-20UNF-2A
d2	∅ 9.9 <sup>+0.1</sup>	∅ 7.9 <sup>+0.1</sup>	∅ 7.9 <sup>+0.1</sup>
d3	∅ 16.1 <sup>+0.1</sup>	∅ 11.7 <sup>+0.1</sup>	∅ 10.7 <sup>+0.1</sup>
d4	∅ 20	∅ 15	∅ 14
a	6.1 <sup>-0.1</sup>	5.7 <sup>-0.1</sup>	5.7 <sup>-0.1</sup>
b	4 <sup>-0.2</sup>	3.2 <sup>-0.2</sup>	3.2 <sup>-0.2</sup>
c	25	19	19



d1	M22×1.5
d2	∅ 15.8 <sup>+0.1</sup>
d3	∅ 19.9 <sup>+0.1</sup>
d4	∅ 24
a	10 <sup>+0.2</sup>
b	2 <sup>-0.2</sup>
c	35

## Sensors cleaning

In order to clean the diaphragm, the sealing surface and thread of the sensor must have the same temperature as the melting point of the plastic. Both the diaphragm and the sealing surface can be wiped clean with a soft cloth, and the thread can be cleaned with a steel brush or a copper brush.

(Do not touch the surface of the diaphragm with the steel brush)

## Transport and storage

PT111B/PT124B/PT131B pressure transmitter is usually packed separately. At the front thread of the rigid rod, the induction diaphragm is protected by a protective cap. This protective cap should be tightened at any time during storage, and only opened during installation.

Note: Mounting brackets, extension cables, connectors, cleaning kits, drill kits, dummy plug etc accessories, please contact with us.