



EYD38
High Temperature Melt Pressure
Transducers & Transmitters

Operation Manual

Thank you for choosing the high temperature melt pressure transducers and transmitters manufactured by Xi'an Yunyi Instrument Co. Ltd. We constantly strive to offer you the most satisfied products and services.

Through 20 years of constant development and improvement, the measurement accuracy and service life of melt pressure transducers and transmitters are significantly improved. We used self-developed new corrosion resistant diaphragm organization of production to reduce temperature drift and to make the service span increased by 5 to 10 times and to be used both in strong acid and strong alkali environments since 2000. At present, we continue to maintain the domestic industry-leading R&D and manufacturing technology level, and in some areas to achieve and exceed the level of international counterparts. The products have been exported large quantities to the European Union and the North American market.

● Product introduction

PT Series Melt pressure transducers and transmitters are used in chemical fiber, plastic, rubber and other high-temperature resistant fluid pressure measurement and control field. This series products absorb the advanced technology of foreign counterparts products, using imported raw materials and key components for production, with stable production organization, reliable performance, high accuracy, strong output signal, excellent dynamic performance, high temperature resistant and zero drift small, etc. PT Series transducers and transmitters used with our company's PS Series intelligent pressure gauge can meet variety of different users' pressure measurement and control requirements. It can also be used with import pressure gauges (such as, Dynisco) without any adjustments or modification. PT Series Melt pressure transducers and transmitters can also be replaced with similar import products (such as, Dynisco, GeFran, etc.) Directly.

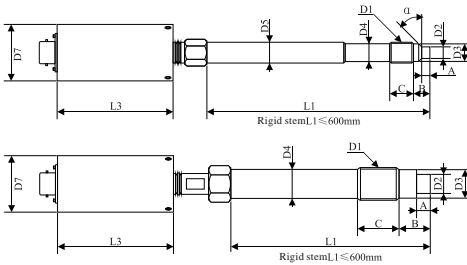
● Main technical specifications and performance

Items	Transducer	Transmitter
Pressure range	0~5MPa~150MPa	
Accuracy	±0.2、0.5、1.0、1.5%FS	
Repeatability	±0.2、0.4、0.8、1.4%FS	
Bridge voltage	10V DC (6~12V DC)	24V DC (9~36V DC)
Output single	5PIN: 2.0mV/V 6PIN: 3.0mV/V、3.33mV/V	0~20mA、4~20mA 0~10V、1~10V、0~5V、1~5V
Temperature resistance	80°C for transducer/transmitter, 400°C for probe and 535°C for specially customized probe	
Temperature drift	≤0.15、≤0.3MPa/100°C	
Insulated resistance	≥500M Ω	
Calibration	80%±1%FS	
Thread dimensions	1/2"-20UNF; M14*1.5; M18*1.5; M22*1.5; M28*1.5; G3/4" Other sizes can be customized	

● PTseries pressure transducer/transmitter installation dimensions table

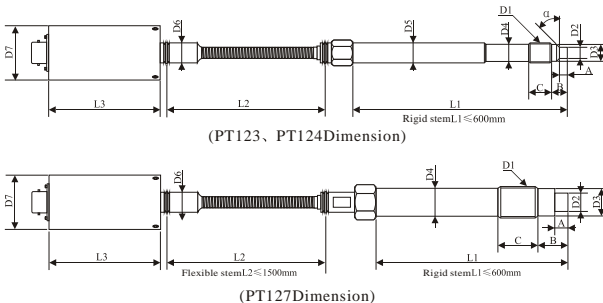
D1	M12×1.5	M14×1.5	1/2" -20	M18×1.5	M22×1.5	M28×1.5	G3/4"	PF3/8"	1 1/2-16"	3.25"	3.5"	
D2	φ 7.8	φ 7.8	φ 7.8	φ 9.8	φ 9.8 φ 15.8	φ 17.8	φ 17.8	φ 9.8	φ 23.5	φ 23.5	φ 23.5	
D3	φ 10	φ 11.8	φ 10.5	φ 15.5	φ 19.5	φ 24	φ 24	φ 14	φ 33.5	φ 33	φ 33	
D4	φ 10	φ 12	φ 10.8	φ 16	φ 19.5	φ 25	φ 24	φ 14				
D5	φ 11.7	φ 13.8	φ 12.7	φ 17								
D6	Standard dimension φ17; other dimensions can be customized											
D7	Standard dimension φ38; other dimensions can be customized											
α	Standard angle 45° /90° ; other angle can be customized											
A	5.5	5.5	5.5	6	10	11	11	8	13	13.5	13.5	
B	11	12.5	12	14	16	17	17	12	21	51	61	
C	17	17	17	20	35	28	40	25	37	19	19	
L1	Standard dimension 150mm; other dimensions can be customized											
L2	Standard dimension 470mm; other dimensions can be customized											
L3	Standard dimension 78mm; other dimensions can be customized											
Seal	45° slopes				plain end face				flange installation			

1. PT series (rigid stem type) high temperature melt pressure transducer/transmitter



	Model
Conventional type	PT111 / PT116 PT111B / PT116B
Intelligent type	PT4116Z
High accuracy type	PT4516 / PT4516B
CE certificate type	PT611

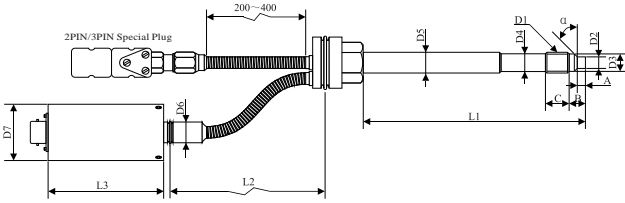
2. PT series (rigid/flexible stem) high temperature melt pressure transducer/transmitter



	Model
Conventional type	PT12x / PT12x6 PT12xB / PT12x6B
Intelligent type	PT4216Z
High accuracy type	PT4616 / PT4616B
CE certificate type	PT612

Note: x represents 0-9 in the design models.
 Example: PT123 → D1 thread 1/2" -20;
 PT124 → D1 thread M14 × 1.5;
 PT127 → D1 thread M22 × 1.5.
 Welcome to inquire more detailed models.

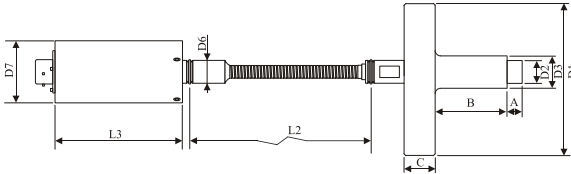
3. PT series (combined pressure & temperature measurement) high temperature melt pressure transducer/transmitter



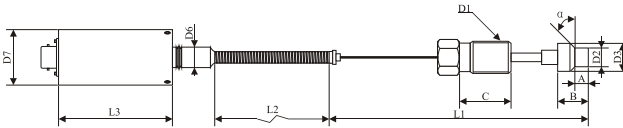
	Model
Conventional type	PT131 / PT1316 PT131B / PT1316B
Intelligent type	PT4226Z
High accuracy type	PT4626 / PT4626B
CE certificate type	PT623

The optional temperature sensor:
E,J,K,S,Pt100 etc.
Other optional thread Sizes

4. Flange type high temperature melt pressure transducer/transmitter

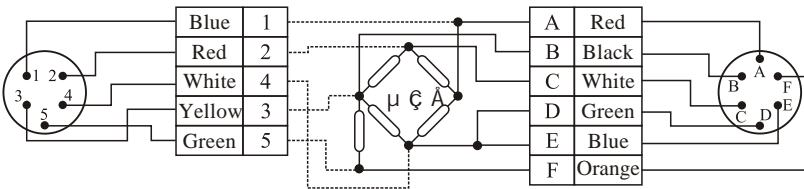


5. Film chamber type high temperature melt pressure transducer/transmitter



● Circuits and the wiring diagram

1. Pressure transducer circuits and the wiring diagram (pressure transducer power supply 10 V DC)



5PIN

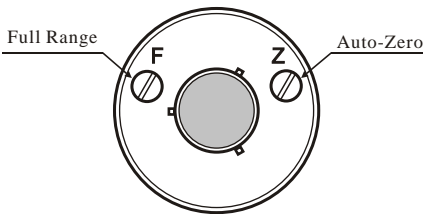
6PIN

- 1: Positive output signal (S+)
- 2: Positive excitation (E+)
- 3: Negative output signal (S-)
- 4: Negative excitation (E-)
- 5: 80% FS calibration (CAL)

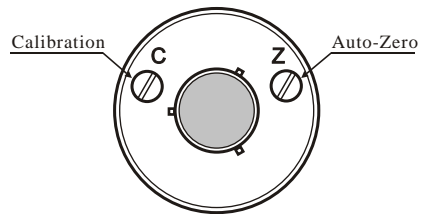
- A: Positive output signal (S+)
- B: Negative output signal (S-)
- C: Positive excitation (E+)
- D: Negative excitation (E-)
- E, F: 80% FS calibration (CAL)

2. Pressure transmitter circuits and the wiring diagram (pressure transmitter power supply 12 V~32V DC)

Output model	Connector Pin Definition	Corresponding pin numbers and cable colors	Control room wiring												
4~20mA Two-wire wiring diagram	Pressure Transmitter S+ S- E- CAL	<table border="0"> <tr> <td style="border: 1px dashed black; padding: 5px;">5PIN</td> <td style="border: 1px dashed black; padding: 5px;">6PIN</td> </tr> <tr> <td>1→Blue</td> <td>A→Red</td> </tr> <tr> <td>3→Yellow</td> <td>B→Black</td> </tr> <tr> <td>4→White</td> <td>E→Blue</td> </tr> <tr> <td>5→Green</td> <td>F→Orange</td> </tr> </table>	5PIN	6PIN	1→Blue	A→Red	3→Yellow	B→Black	4→White	E→Blue	5→Green	F→Orange			
5PIN	6PIN														
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5→Green	F→Orange														
0~5 V 1~5 V 0~10V 1~10V 0~20mA 4~20mA Three-wire wiring diagram	Pressure Transmitter S+ E+ S- E- CAL	<table border="0"> <tr> <td style="border: 1px dashed black; padding: 5px;">5PIN</td> <td style="border: 1px dashed black; padding: 5px;">6PIN</td> </tr> <tr> <td>1→Blue</td> <td>A→Red</td> </tr> <tr> <td>2→Red</td> <td>C→White</td> </tr> <tr> <td>3→Yellow</td> <td>B→Black D→Green</td> </tr> <tr> <td>4→White</td> <td>E→Blue</td> </tr> <tr> <td>5→Green</td> <td>F→Orange</td> </tr> </table>	5PIN	6PIN	1→Blue	A→Red	2→Red	C→White	3→Yellow	B→Black D→Green	4→White	E→Blue	5→Green	F→Orange	
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4→White	E→Blue														
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4→White	D→Green E→Blue														
5→Green	F→Orange														



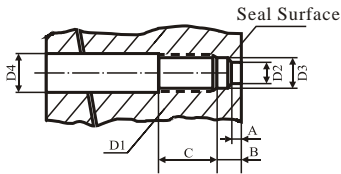
Voltage/Currant Output



Voltage/Currant Output

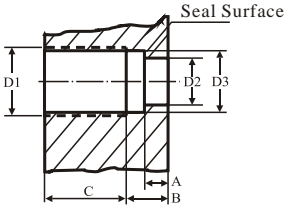
● Installation of transducer and attentions

1. Mounting hole dimensions and sealing



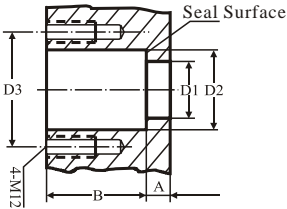
Installing holes' dimensions for 45° sealed slopes

D1	M12×1.5	M14×1.5	1/2"–20	M18×1.5
D2	φ 8.2	φ 8.2	φ 8.2	φ 10.2
D3	φ 10.5	φ 12.5	φ 11.1	φ 16.5
D4	φ 12.5	φ 14.5	φ 13.1	φ 20
A	6	6	6	7
B	9	9.5	9.5	11
C	19	19	19	20



Installing holes' dimensions for plain end face

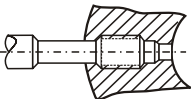
D1	M22 × 1.5	M28 × 1.5	G3/4"	PF3/8"	1 1/2"-16
D2	φ 16.2	φ 18.3	φ 18.3	φ 10.3	23.9
D3	φ 20.5	φ 26.5	φ 24.5	φ 14.9	φ 34
A	11	12	12	9	14
B	15	15	15	11	19
C	40	35	35	35	40



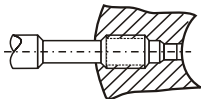
Installing holes' dimensions for flange installation

Flange Diameter	D1	D2	D3	A	B
φ 3.25	φ 23.9	φ 33.7	φ 54	11.23	38.9
φ 3.5	φ 23.9	φ 33.7	φ 63.5	10.3	49.3

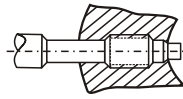
2. The right and wrong sketch for installing holes



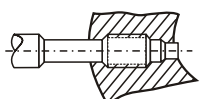
Right



Wrong



Wrong



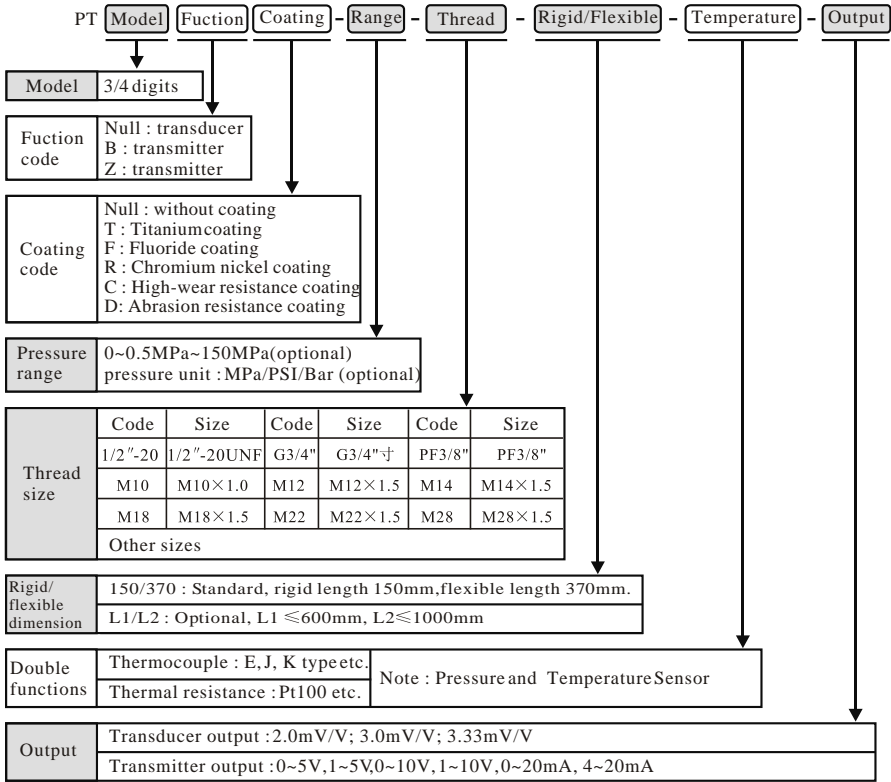
Wrong

3. Attentions for installation

- Holes must be punched strictly in accordance with dimensions of installing holes for virgin installation. Installing holes must be thoroughly cleared in after-installations;
- Our company provides special tools for drilling and clean holes;
- Test system should be inspected before installed to confirm that the measurement accuracy of transducer/transmitter, the method described in the second table instructions;
- Disassembly and installation should be conducted in hot state (material melting state), the probe should be cleaned immediately when dismounting. Keep the probe clean. Be careful with probe;
- Conduct hot-line calibration with pressure gauge. When transducer/transmitter reaches full thermal equilibrium after 1.5 hours installed, the details please see the calibration method of second instrument. The PS series intelligent pressure gauge our company produced has the automatic hot state calibration procedures, press SET button and CAL button and then loosen CAL button until the pressure display zero pressure in thermal equilibrium to automatically calibrate the test system;
- Transducer and transmitter should be kept in dry environment when not used.

● Pressure transducers / transmitters order format

1. Model code format:



2. Example: PT131B-50MPa-1/2"-20-150/370-K-0~10V

Product model PT131

Function code B stands for pressure transmitter.

Pressure range : 0~50MPa

Thread size: 1/2"-20UNF.

Rigid stem length : 150mm/Flexible stem length : 370mm,

Pressure output signal: 0~10V,

Double-function , K type-thermocouple temperature sensor configuration.

3. Ordering instructions

- ① The first order please indicates the previously used sensor model and factory, in order to provide you with corresponding parameters.
- ② The user who has special requirement to transducer and transmitter can negotiate with us.
- ③ The production of our company that transducers and transmitters and related instruments, since the date of sale a year, under normal use circumstances, if appear to unartificial fault, the implementation of free maintenance service.
- ④ Our company accepts maintenance various kinds of imported high temperature melt pressure transducers and transmitters and instruments, and provide technical consultation.

The conversion table of pressure units

	Pa (帕)	MPa (兆帕)	Kg/cm ² (公斤/cm ²)	Bar (巴)	PSI (磅/英寸 ²)	atm (大气压)	mmHg (毫米汞柱)	mmH ₂ O (毫米水柱)	Dyne/cm ² (达因/cm ²)
1 Pa	1	10 ⁻⁶	1.0197×10 ⁻⁵	10 ⁻⁵	1.45×10 ⁻⁴	9.8692×10 ⁻⁶	7.5006×10 ⁻³	0.10197	10
1 MPa	10 ⁶	1	10.197	10	145	9.8692	7.5006×10 ³	1.0197×10 ⁵	10 ⁷
1 Kg/cm ²	9.8067×10 ⁴	9.8067×10 ⁻²	1	0.980665	14.217	0.96784	735.559	10 ⁴	9.8066×10 ⁵
1 Bar	10 ⁵	0.1	1.0197	1	14.5	0.98692	750.06	1.0197×10 ⁴	10 ⁶
1 PSI	6.895×10 ³	6.895×10 ⁻³	7.031×10 ⁻²	6.895×10 ⁻²	1	6.8×10 ⁻²	51.715	7.039×10 ²	6.895×10 ⁴
1 atm	1.01325×10 ⁵	0.101325	1.03328	1.01325	14.706	1	760	1.03325×10 ⁴	1.01325×10 ⁵
1 mmHg	1.33325×10 ²	1.33325×10 ⁻⁴	1.3595×10 ⁻³	1.33325×10 ⁻³	1.933×10 ²	1.316×10 ⁻³	1	13.595	1.33325×10 ³
1 mmH ₂ O	9.8064	9.8064×10 ⁻⁶	9.9997×10 ⁻³	9.8064×10 ⁻⁵	1.422×10 ³	9.6787×10 ⁻⁵	7.3556×10 ²	1	98.064
1 Dyne/cm ²	0.1	0.1×10 ⁻⁶	1.0197×10 ⁻⁶	10 ⁻⁶	1.45×10 ⁻⁵	9.8692×10 ⁻⁷	7.5006×10 ⁻⁴	1.0197×10 ⁻²	1