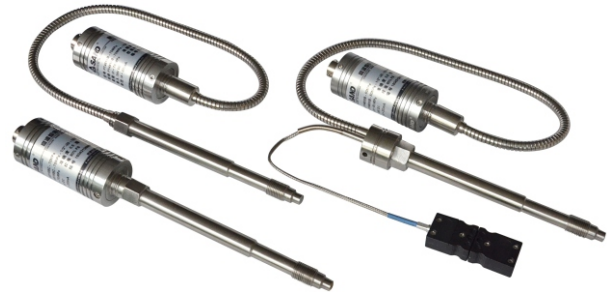


PT4XXXB SERIES MELT PRESSURE TRANSMITTER

FEATURES

- ◆ Better than $\pm 0.5\%$ accuracy
- ◆ 4~20mA, 0~20mA, 0~10V, 0~5V outputs
- ◆ 0-35 to 0-2000 bar / 0-500 to 0-30000 psi
- ◆ Internal 80% shunt calibration
- ◆ Standard Inconel diaphragm
- ◆ Various coatings available
- ◆ Applications with process temperature of up to 400°C
- ◆ Optional auto-zero function
- ◆ Optional safe relay function



DESCRIPTION

SAND PT4XXXB series melt pressure transmitters are ideal for the measurement of melt pressure in extrusion processes at temperatures of up to 400°C. The PT4XXXB transmitters provide industry standard amplified signal designed to work with DCS and PLC directly. Optional auto-zero function for local or remote configuration and integrated safe relay switch for excess pressure protection.

SPECIFICATIONS

Pressure range	0~35 to 2000bar(0~500 to 0~30000psi)
Accuracy	$\pm 0.5\%$ FS
Repeatability	$\pm 0.2\%$ FS
Input excitation	24Vdc recommended, 9-36Vdc
Output signal	4~20mA, 0~20mA, 0~10V, 0~5V, 1~5V
Maximum diaphragm temperature	662° F (350°C) for rigid stem 752° F (400°C) for flexible
Zero shift due to temperature change	20 psi/100°C 0.15MPa/100°C
Process connection	1/2-20 UNF thread (45° conical seal) M14x1.5, M18x1.5, M22x1.5 etc
Maximum Overload Pressure Rating	1.5 x FS(<1000bar) 1.2 x FS(>1000bar)
Pressure Units	PSI, Bar, MPa or Kg/cm2
Internal Shunt Calibration	80% FSO $\pm 1\%$ FSO
Measurement principle	4-arm bonded foil strain gage Wheatstone bridge
Electrical Connection	6PIN, 7PIN, 8PIN
Max Torque	30Nm(22lbf ft)
Temperature Sensor (optional)	E, J, K, S type or Pt100

Safe relay function

An optional function available for excess pressure protection. The relay threshold is selected by customer at time of order.

Relay specifications:

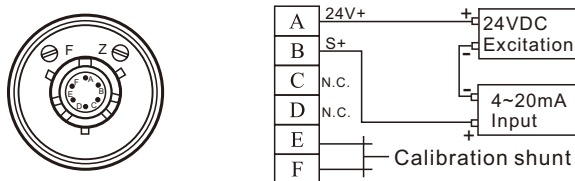
- Rated current:1A
- Rated voltage:24vdc
- The relay contacts will open when the system is detected that the pressure exceeds the relay threshold

Auto-zero function

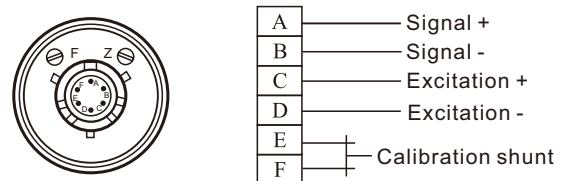
Sensors with an additional Auto-Zero function are extremely an high level of user-friendliness. The zero variations can be eliminated either directly on the unit itself or remotely from control room by shorting two pins.

ELECTRICAL CONNECTION

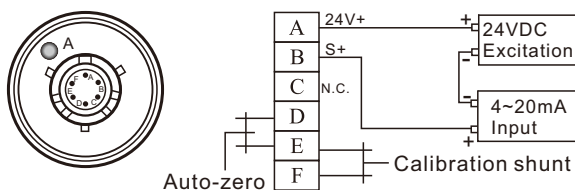
Current Output (4~20mA,two wires)



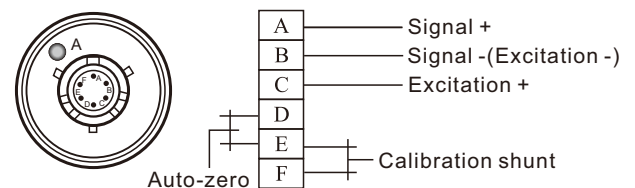
Voltage Output 0~10V



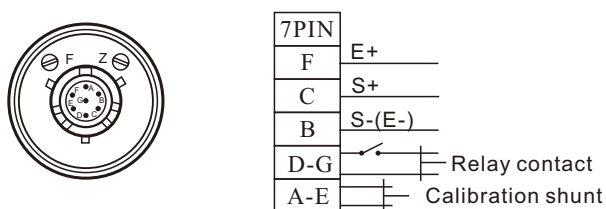
Auto-zero (4~20mA,two wires)



Auto-zero (0~10V)



Safe relay switch (4~20mA,0~10V)



ACCESSORIES

Connectors

- 5PIN mating connector
- 6PIN mating connector
- 8PIN mating connector

Accessories

- Mounting bracket
- Drill kit (1/2"-20UNF,M18X1.5 etc)
- Cleaning kit(1/2"-20UNF,M18X1.5 etc)
- Thread adaptors

Extension cables

- 5PIN/6PIN connector with 5m cable
- 5PIN/6PIN connector with 10m cable
- 5PIN/6PIN connector with 15m cable
- 5PIN/6PIN connector with 30m cable

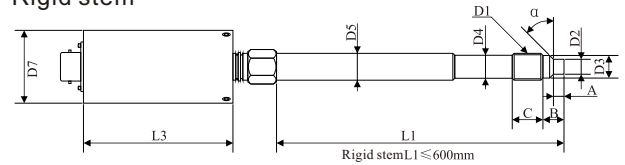
Recommended accessories

- Rupture disk
- Mini deadweight tester
- mV/V to mA or Voltage convertor
- mV/V signal simulator

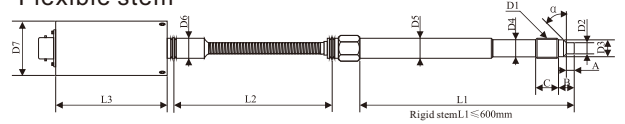
MECHANICAL DIMENSIONS

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			

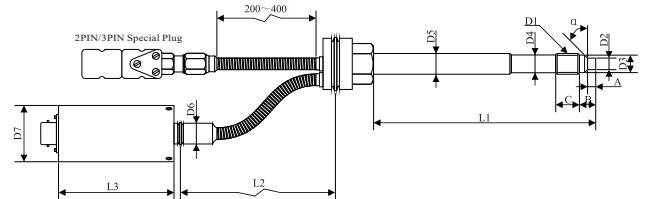
Rigid stem



Flexible stem



Flexible stem with thermocouple



ORDERING GUIDE

PT 4XXXXX-XXX-XXX-XXX/XXX-X-XXX-XXX

Version 51=Rigid stem 61=Rigid stem+Flexible 62=Flexible+Temperature	Additional function Output relay version (Activation threshold) None=No relay KXX=XX%FS e.g. K80=80%FS																																												
Electrical Connection 6=6PIN connector 7=7PIN connector 8=8PIN connector	Output Signal 4~20mA/0~10V																																												
Function code B=Pressure transmitter A=Auto-zero K= Safe relay switch	Thermocouple Null=No thermocouple J=J type K=K type E=E type Pt100=Pt100																																												
Coating Null= no coating C=TiN coating T=TiAlN coating D=DCN coating H=Hastelloy	Flexible stem length None=0 470=470mm(18") 760=760mm(30") Other size on request																																												
Pressure range <table border="1"> <thead> <tr> <th>MPa</th> <th>BAR</th> <th colspan="2">PSI</th> </tr> </thead> <tbody> <tr> <td>3.5MPa</td> <td>35B</td> <td>500</td> <td>500P</td> </tr> <tr> <td>5MPa</td> <td>50B</td> <td>750</td> <td>750P</td> </tr> <tr> <td>10MPa</td> <td>100B</td> <td>1500</td> <td>1M5</td> </tr> <tr> <td>20MPa</td> <td>200B</td> <td>300</td> <td>3M</td> </tr> <tr> <td>35MPa</td> <td>350B</td> <td>5000</td> <td>5M</td> </tr> <tr> <td>50MPa</td> <td>500B</td> <td>7500</td> <td>7M5</td> </tr> <tr> <td>70MPa</td> <td>700B</td> <td>10000</td> <td>10M</td> </tr> <tr> <td>100MPa</td> <td>1000B</td> <td>15000</td> <td>15M</td> </tr> <tr> <td>150MPa</td> <td>1500B</td> <td>20000</td> <td>20M</td> </tr> <tr> <td>200MPa</td> <td>2000B</td> <td>30000</td> <td>30M</td> </tr> </tbody> </table> Other ranges on request	MPa	BAR	PSI		3.5MPa	35B	500	500P	5MPa	50B	750	750P	10MPa	100B	1500	1M5	20MPa	200B	300	3M	35MPa	350B	5000	5M	50MPa	500B	7500	7M5	70MPa	700B	10000	10M	100MPa	1000B	15000	15M	150MPa	1500B	20000	20M	200MPa	2000B	30000	30M	Rigid stem length 150=150mm(6") 76=76mm(3") 100=100mm(4") 228=228mm(9") 305=305mm(12") Other sizes on request
MPa	BAR	PSI																																											
3.5MPa	35B	500	500P																																										
5MPa	50B	750	750P																																										
10MPa	100B	1500	1M5																																										
20MPa	200B	300	3M																																										
35MPa	350B	5000	5M																																										
50MPa	500B	7500	7M5																																										
70MPa	700B	10000	10M																																										
100MPa	1000B	15000	15M																																										
150MPa	1500B	20000	20M																																										
200MPa	2000B	30000	30M																																										
Process connection 1/2-20=1/2"-20UNF M10=M10X1.0 M12=M12X1.5 M14=M14 X 1.5 M18=M18 X 1.5 M22=M22X1.5 PF3/8=PF3/8" G3/4=G3/4" Other sizes on request																																													