

## PT20SR-3783 Pressure Transmitter

### Features

- Aluminum-alloy electronic housing; protection IP65;
- Reversed signal polarity; moment over-current, overvoltage, interference protection;
- Optional signal output;
- 0~100% hand pointer, LCD and LED indicator optional;
- Stainless steel material contacting with the media; flush diaphragm and tantalum diaphragm optional;
- Intrinsic Safe Explosion-proof version conforms to Exia II CT6 of Standard GB3836.1 and GB3836.4; Explosion-proof Certificate is issued;
- EXD product conforms to Exd II CT6 Gb of standard GB3836.2; EXD Certificate is issued;
- Ship-use product conforms to CCS Rules of Classification of Sea-going Steel Ships (2015) ; ship-use certificate is approved.



### Introduction

The product uses piezo-resistive OEM pressure sensor as sensing element, which is accurate tested and laser trimmed to compensate zero and sensitivity in wider temperature range. The amplifier circuit transforms sensor signal into standard output signal. Through long-term aging and stability testing, the whole product's performance is stable and reliable. The product is suitable for rugged environment which needs zero elevation and range adjustment. It is widely used for process control and pressure measure of petroleum, chemi-industry, metallurgy, power station, textile industry, building material, food, medicine, hydrology and environment control, etc.

### Specification

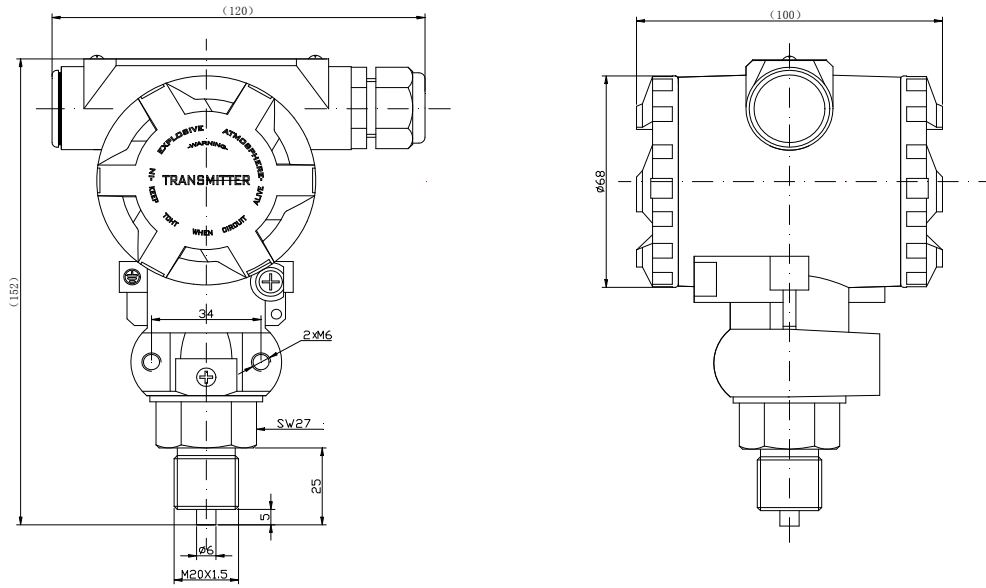
Code	0A	02	03	07	08	09	10	12	13	14	15	17	18	19	20
Unit	kPa						MPa								
Measure range	0-10 ~0-35	0-20 ~0-70	0-30 ~0-100	0-60 ~0-200	0-100 ~0-35	0-200 ~0-700	0-0.3 ~0-1	0-0.6 ~0-2	0-1 ~0-3.5	0-2 ~0-7	0-3 ~0-10	0-6 ~0-20	0-10 ~0-35	0-20 ~0-70	0-30 ~0-100
Upper limit	35	70	100	200	350	700	1.0	2.0	3.5	7.0	10.0	20.0	35.0	70.0	100.0
Overpressure	100	100	150	300	500	1000	1.5	3.0	5.0	10.0	15.0	30.0	52.0	100.0	110.0

Basic error		Min.	Typ.	Max.	Unit
Non-linearity	0A~03 code	/	0.25	0.5	±%FS
	07~20 code	0.1	0.25	0.5	±%FS
Hysteresis	0A~03 code	/	0.15	0.25	±%FS
	07~20 code	0.05	0.1	0.15	±%FS
Repeatability	0A~03 code	/	0.25	0.5	±%FS
	07~20 code	/	0.15	0.25	±%FS
Temp.effect	0A~03 code	0.5	1	2	±%FS, @25°C
	07~20 code	0.3	0.5	1	±%FS, @25°C
Stability	0.3				±%, one year
Media temp.	-30~80				°C
Operation temp.	Normal Version:-30~80				°C
	Intrinsic Safe Version:-10~60(only for 2-wire, 4~20mA)				
	EXD Version:-20~60				
	LCD Digital Indicator:-20~60				
	LED Digital Indicator:-30~70				
Power supply <sup>®</sup>	11~28	15~28		VDC	
Output signal	4~20	0/1~5/10		mADC/VDC	
Transmitting	2-wire		3-wire		
Load	$\leq (U-11) / 0.02$		$> 5k$		$\Omega$
Pressure port	Stainless Steel 1Cr18Ni9Ti				
Diaphragm	Stainless Steel 316L				
Sealing	Viton O-ring or Full-welded				
Electric housing	Aluminum-alloy				
Protection	IP65				

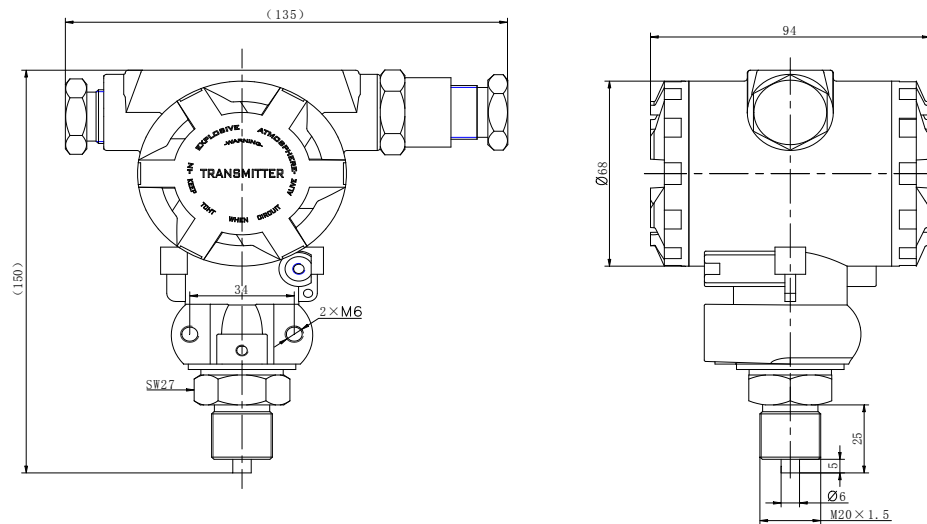
**Note<sup>®</sup>:** The power supply of 2-wire transmitter with LCD or LED Digital Indicator shall be not less than 20VDC, Load $\leq (U-12) / 0.02$ .

**Outline Construction**

Normal/Intrinsic Safe Version's Construction and Outline Dimension:Unit: mm

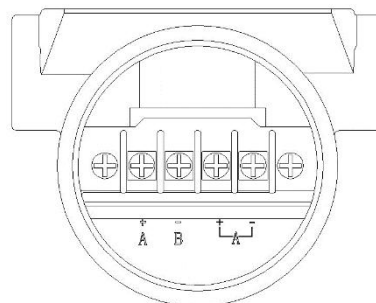


EXD Version's Construction and Outline Dimension(Unit: mm)

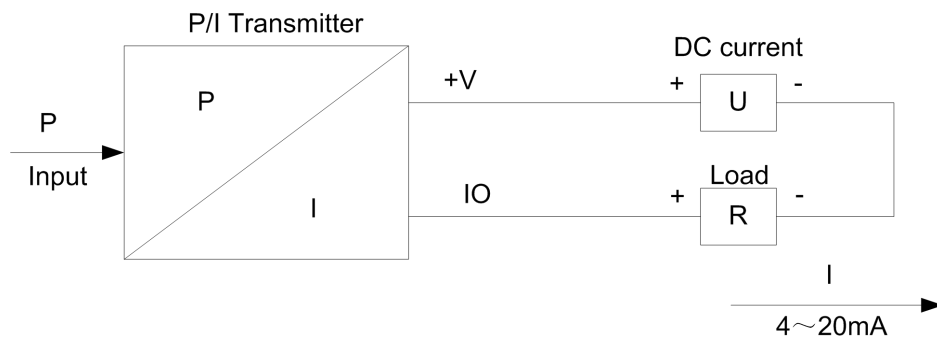


**Electric Connection**

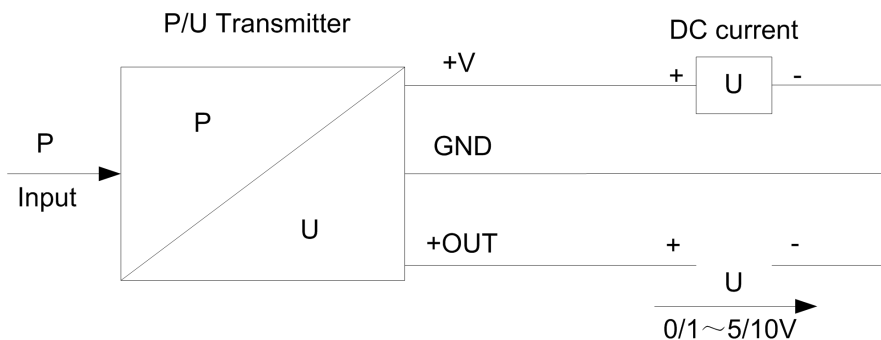
Current Version		Voltage Version	
Pin	Connection	Pin	Connection
+/A	V+	+/A	V+
-/B	IO	-/B	OUT
			GND



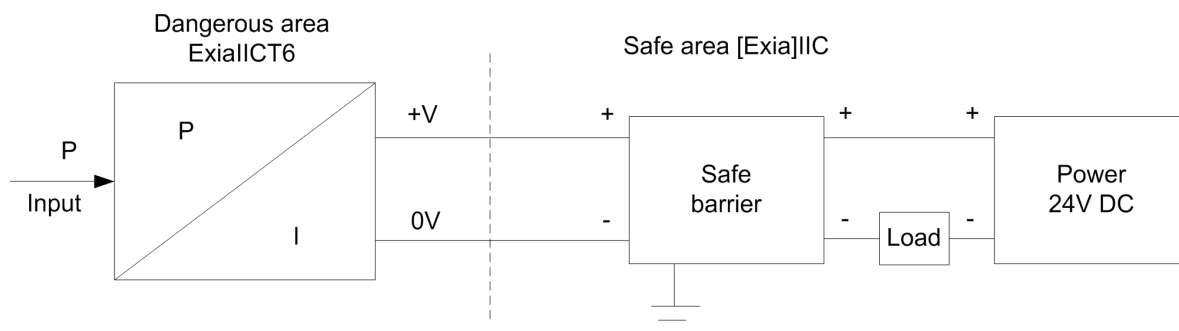
Electric Connection for 2-wire, 4~20mA Output



Electric Connection for 3-wire,0/1~5/10VDC Output



Electric Connection for Intrinsic Safe Version:



Transmitter ex-proof parameter:  
 Ui:28VDC li:93mADC  
 Li:0.1mH Ci:0.04uF  
 Pi:0.65W

Safe barrier output ex-proof parameter:  
 Uo:28VDC Io:93mADC

**Order Guide**

PT20SR-3783	Piezoresistive Pressure Transmitter	
	Range	-100kPa...0kPa~10kPa...100MPa
	[0~X]kPa or MPa	X:actual measurement range
	Code	Output Signal
	E	4~20mADC

F	1~5VDC			
J	0~5VDC			
V	0~10VDC			
Code	Construction Material			
	Diaphragm	Pressure Port	Housing	Electric Housing
22	SS316L	SS	SS.	Aluminum-alloy
24	SS316L	SS316L	SS.316L	Aluminum-alloy
25	Tantalum	SS	SS.	Aluminum-alloy
35	Tantalum	Hastelloy	SS.	Aluminum-alloy
Code	Others			only for 4~20mA
M <sub>1</sub>	0~100% hand pointer indicator			
M <sub>3</sub>	3 $\frac{1}{2}$ LCD digital indicato			
M <sub>6</sub>	4 LED digital indicator			
M <sub>7</sub>	4 LCD digital indicator			
PC <sub>1</sub>	Flush diaphragm, M20*1.5 male			
PC <sub>3</sub>	Flush diaphragm, G $\frac{1}{2}$ male			
i	Intrinsic safe version Exia II CT6 Ga			
d	Exd version Exd II CT6 Gb			
T	Ship-use			
C <sub>1</sub>	M20*1.5 male, face type seal			
C <sub>3</sub>	G $\frac{1}{2}$ male			
C <sub>5</sub>	M20*1.5 male, waterline seal			
G	Gauge			
S	Sealed gauge			
A	Absolute			

PT20SR-3783 [0~100]kPa E 22 C5G the whole spec.

**Notes**

1. Please note Lightning-protection in the order if the transmitter is installed in Lightning-thunder area; we suggest to install Lightning Protection Device to protect transmitter; please ensure to connect transmitter and power supply to the ground securely.
2. The transmitter should be installed to pressure port vertically, and indicator should be installed horizontal to operator;
3. Intrinsic safe ex-proof version is only for product with 0~100% hand pointer indicator(M<sub>1</sub>) and 3 $\frac{1}{2}$  LCD digital indicato(M<sub>3</sub>);
4. Flush diaphragm transmitter's pressure range: 0~70kPa...35Mpa;
5. If the customer has special requirement, please feel free to contact our company.