

TPS20 series

High-Reliability Pressure Transmitter

TPS20 Series(electric pressure transmitter) adopts stainless steel diaphragm for pressure part. It enables to measure up to 0.2~350 kgf/cm² with high accuracy and reliability.

Features

- For measuring pneumatic, hydraulic and oil pressure measuring
- A variety of model according to field application
 - Head type
 - Din connector type
 - Connector cable type (I type, L type)
- Stainless steel diaphragm adopted for the characteristics of temperature
- 4-20mA transmission output by 2-wire

Ordering Codes

① TPS20						Description	① Pressure Transmitter
② Pressure Type	G					Gauge Pressure	② Pressure Type
	A					Absolute Pressure	③ Connector Type
③ Type	1					Head Type	④ Pressure range
※ Cable selection	2					Din Connector Type	⑤ Process Connection
2M, 5M	3					Connector Cable Type	
(Separate goods)							
④ Range ※ mark is possible for absolute pressure	1	0 - 0.2 kgf/cm ²	C	0 - 200 kgf/cm ²			
	2	0 - 0.5 kgf/cm ²	F	0 - 300 kgf/cm ²			
	3	* 0 - 1 kgf/cm ²	H	0 - 350 kgf/cm ²			
	4	* 0 - 2 kgf/cm ²	M	-760mmHg - 0 kgf/cm ²			
	5	* 0 - 5 kgf/cm ²	O	-760mmHg - 1 kgf/cm ²			
	6	* 0 - 10 kgf/cm ²	Q	-760mmHg - 5 kgf/cm ²			
	7	* 0 - 20 kgf/cm ²	V	-760mmHg - 10 kgf/cm ²			
	8	* 0 - 30 kgf/cm ²	X	-760mmHg - 20 kgf/cm ²			
	9	0 - 50 kgf/cm ²	Y	-760mmHg - 30 kgf/cm ²			
	A	0 - 100 kgf/cm ²	Z	Others			
⑤ Process Connection	F8	PF 3/8" (Standard)	※ In case of ordering only cable, code shall be 'TPS2I', 'TPS2L', 'TPS5I', 'TPS5L', etc.				
	ZZ	Others					
Option (Connector cable)	00	None					
	2I	"I"Type 2M					
	2L	"L"Type 2M					
	5I	"I"Type 5M					
	5L	"L"Type 5M					



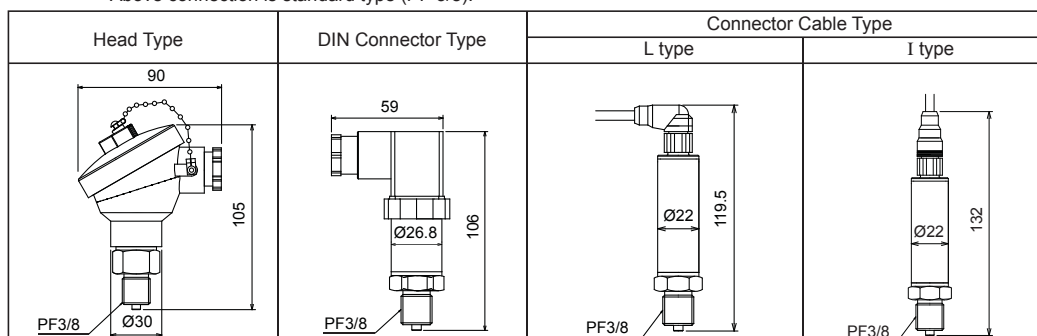
Specifications

Measuring range	-760mmHg ~ 0 to 30 Kg/cm ² A (Compound pressure) 0~0.2 to 350 Kg/cm ² G (Gauge pressure) 0~1.0 to 30 Kg/cm ² Abs (Absolute pressure)	
Allowable over pressure	300% of max. Span	
Electric characteristic	Power supply	15-35VDC
	Output	4-20mA DC
	Load resistance	600Ω Max
	Consumption power	0.5W
Accuracy	±0.3% F.S.(Linearity, Hysteresis, Repeatability)	
	Linearity	±0.3% F.S -10~50℃±0.3% F.S 50~70℃±0.5% F.S(except for -10~50℃)
	Hysteresis	±0.3% F.S
Using temp. / Humidity	-10~70℃, 5~95%RH	
Temperature Characteristic	Zero	±0.03%F.S
	Span	±0.03%F.S (25℃ STD.)
Response time	Less 100mS	
Connection	PF 3/8(STD.)	
Material	Element	Diaphragm : SUS 316 Sealing : SUS 316
	Case	O-ring : Fluorine rubber Connection : SUS316
Range	Refer to Range table	
Case protection	Weatherproof	
Weight	Approx. 320g (Head type STD.)	

Dimensions

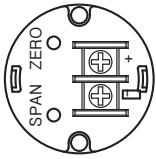
* Above connection is standard type (PF 3/8).

(Unit : mm)

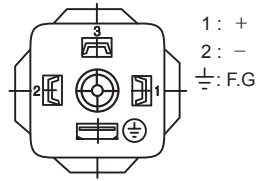


Connections

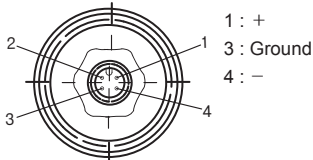
• Head Type



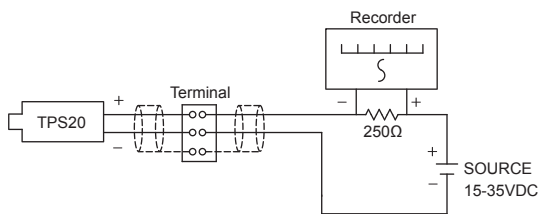
• DIN Connector Type



• Connector Cable Type



• External connections



4-20mA
Power 24VDC load 600Ω
output 4-20mA 2wire

Mounting / Transportation / Storage / Repair

- **Mounting** : When mounting this unit to pressure line, please use hexagon of connector instead of pipe wrench.
Please do not use it where sharp vibration occurs.
 - **Transportation** : As precision instrument, because drop or shock may cause mechanical trouble, please be careful during transportation.
 - **Storage** : Please store it in the place without moisture, dust, vibration.
 - **Repair** : This unit is unnecessary for repair because detector has not the operating parts.
Internal parts are usually clean but it shall need repair according to the using condition.
Regular repair cycle should be done every year. In this case, please check as following clause.
 - * Please check external connector damages.
 - * Please check pressure connector, internal cleanness, corrosion.
 - * After short circuit, please check isolated resistance between case and power supply.
 - * Please check Zero/Span and linearity by using standard pressure equipment.
- ※ In case of disconnecting sensor in order for repair / check, please operate as follows.
- Please replace the used O-Ring.
 - Please be care of sensor diaphragm element in order to avoid from damages.

Diagnosis defect

Error situation	Diagnosis Clause
It is not outputting.	Does it power on? Is wiring (+.-) correct? Is not connection defective?
Output is strangely fluctuating.	Is power normally supplied? Is pressure correctly supplied? Is there any problem in pressure line?
Output value of zero point is largely different.	Is power normally supplied? Is load resistance of receiving instrument in excess of 600Ω? How about the transmitting distance to measuring point? Is the line resistance large? (Max. 600Ω)

High-Reliability Pressure Transmitter

KONICS

A	Recorders
B	Indicators
C	Converters
D	Controllers
E	Thyristor Units
F	Pressure Transmitters
G	Temperature Transmitters

TPS20 Series

IDP

IGP-10 / IAP-10

KT - 302H

PTF30 Series