



# PZP312 Strain Gauge Pressure Transmitter

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## Introduction

The PZP312 pressure transmitter uses metal foil strain gauge pressure sensor. PZP312 is a general-purpose pressure transmitter featuring a mono-structure pressure port. The PZP312 is based on the high-quality metal foil strain gauge, it has outstanding thermal stability and high accuracy. The transmitter is suitable for applications of especially involving temperature variation. It can fit most industrial pressure measurement systems. The transmitter doesn't need to have an O-ring sealing internally. The transmitter is specially designed to measure pressures of dilute fluids with gauge pressure reference.

By selecting proper electrical interface, the PZP312 is able to reach the environmental protection rating up to IP67.

## Features

- Pressure range : 0~20bar, 0~40bar, ... , 0~600bar
- Pressure types: gauge
- Accuracy up to 0.25%fs
- Optional output signal
- Reliable metal foil strain gauge technology
- Full welded or one-piece structure
- Optional pressure port

## Applications

- Automatic detection
- Process control
- Hydraulic and pneumatic equipment
- Industrial machinery manufacturing industry
- Environmental control
- Compressors

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# PZP312 Strain Gauge Pressure Transmitter

## Specifications

Parameter	Units	Data	Notes
Pressure ranges and type	bar	Gauge(G): 0~20, ~40,...,~600	
Overload pressure	%fs	150	[1]
Accuracy	%fs	$\leq \pm 0.25$ , $\leq \pm 0.5$ (standard)	[2]
Long-term stability	%fs/year	$\leq \pm 0.2$	
Compensated temperature range	°C	0 ~ +80	
Operating temperature range	°C	-20 ~ +100	
Storage temperature range	°C	-40 ~ +125	
Temperature coefficient of zero	%fso/°C	$\leq \pm 0.01$	
Temperature coefficient of span	%fso/°C	$\leq \pm 0.01$	
Output signal	mA	4~20 (standard)	
	Vdc	0.5~4.5 (ratiometric), 0~5, 1~5	
Power supply (Us)	Vdc	12 < Us < 36; 5 (for output = 0.5~4.5 V)	
Load resistance for voltage output	kΩ	> 5	
Load resistance for current loop	Ω	$\leq (Us - 12V) / 0.02A$	
Insulation resistance	MΩ	500 @100Vdc	
Environment protection	/	IP65 (standard), IP67 (only for cable connection)	
Electrical connection	/	plug connection or cable connection	
Pressure connection	/	G1/2 or other	
Pressure diaphragm	/	17-4PH	
Wetted parts material	/	316 or 17-4PH SS	
Electronics housing material	/	304 SS	
Media compatibility	/	liquids and gases compatible with stainless steel	
Vibration resistance (20, ..., 5000 Hz)	g	20	
Response time	ms	$\leq 1$	
Life time	cycles	$10 \times 10^6$	
Net weight	gram	~200	

### Notes:

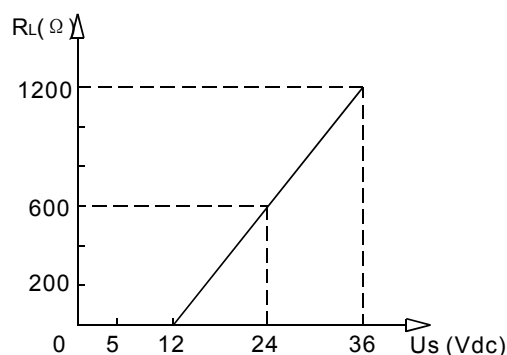
[1]. "fs" refers to full scale pressure or rated pressure.

[2]. Accuracy =  $\sqrt{\text{non-linearity}^2 + \text{hysteresis}^2 + \text{repeatability}^2}$

## Load Characteristic

load resistance for current loop:

$$R_L \leq (U_s - 12V) / 0.02A (\Omega)$$

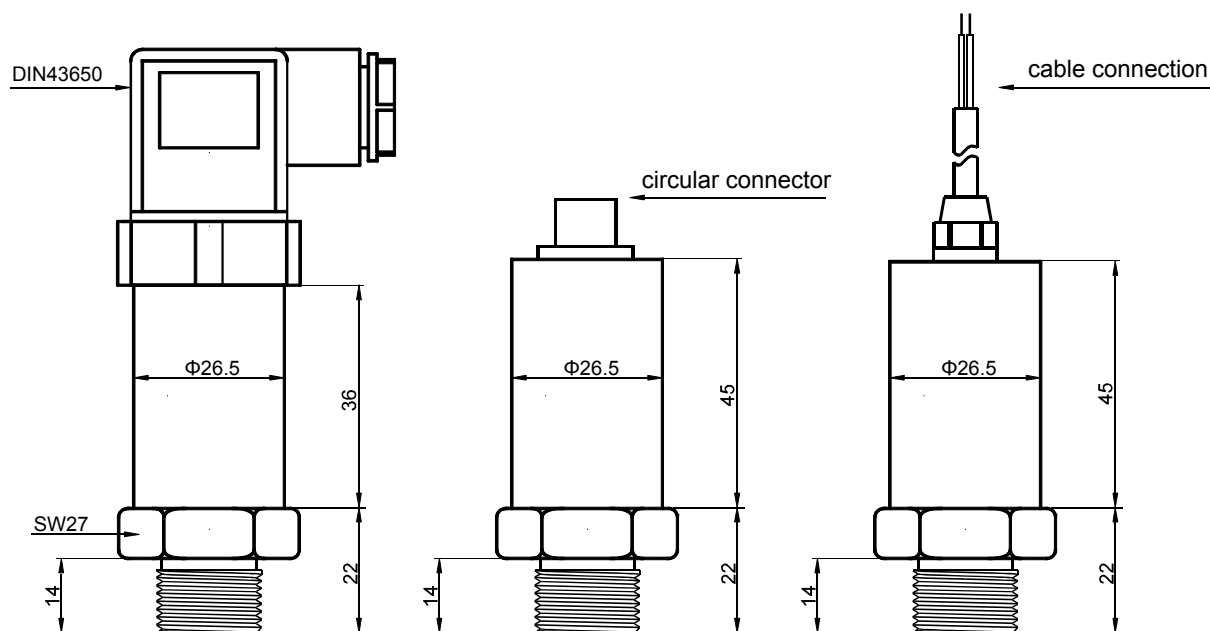


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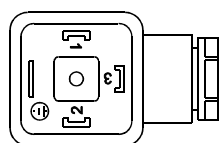


# PZP312 Strain Gauge Pressure Transmitter

## Dimensions



## Electrical Connection



DIN43650  
(standard)



circular connector

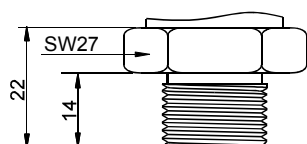
### Connector Connection Wiring

pin	2-wires	3-wires
1	power+	power+
2	signal+	power-
3	null	signal+

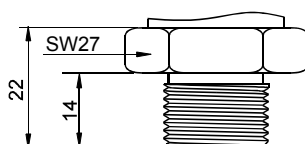
### Cable Connection Wiring

color	2-wires	3-wires
red	power+	power+
black	signal+	power-
yellow	null	signal+

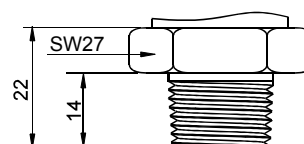
## Pressure Connection



M20x1.5



G1/2 or G1/4



NPT1/2 or NPT1/4

Notes: - All dimensions are in mm.

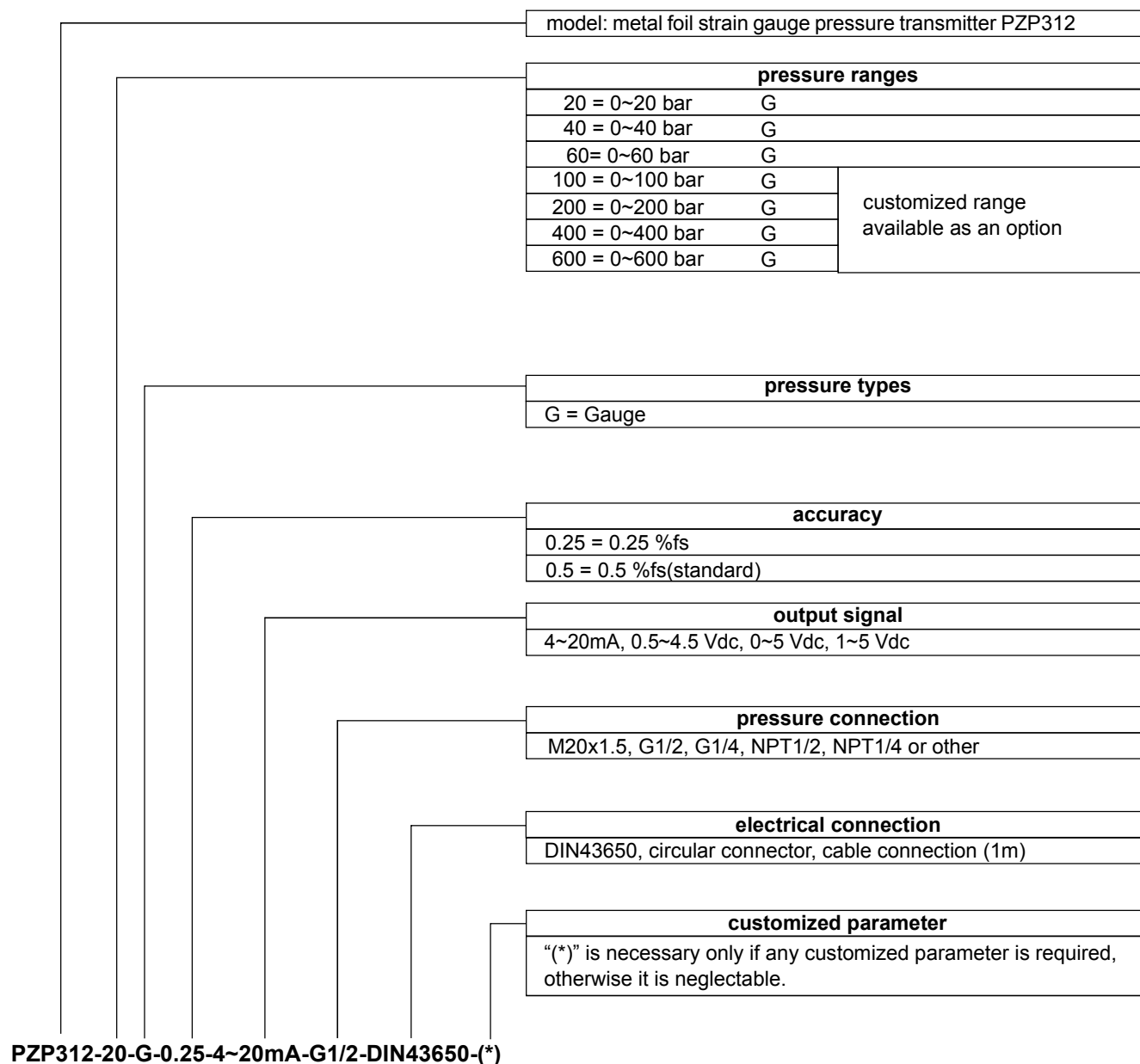
- If other types of interfaces are on request, consult us.

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# PZP312 Strain Gauge Pressure Transmitter

## Ordering Guide



### Examples of Ordering Code

**PZP312-30-G-0.25-4~20mA-G1/2-DIN43650-(\*)**

(\*): Customized range = 30 bar.

### Order Note

Please pay attention to protect the diaphragm. Do not touch the diaphragm by finger and other hard objects, or it may be damaged.

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