

CMPS320 Pressure Transmitter for Compressor (Diameter: $\Phi 23.5\text{mm}$)

Features

- Compact structure, exquisite appearance
- Digital circuit processing
- High precision, high stability
- Strong anti-interference, good long-term stability
- Small size, light weight, easy installation and use
- Wide measuring range, can measure absolute pressure, gauge pressure and sealed gauge pressure
- Multiple process connection and electrical connection options
- Suitable for mass production, economic and reliable

Applications

- Hydraulic and pneumatic equipment
- Chemicals and Chemical Industry
- Compressor
- Inkjet printer

Notes:

- 1 Do not touch the diaphragm with hard objects, which may cause damage to the diaphragm.
- 2 Please read the Instruction Manual of the product carefully before installation and check the relevant information of the product.
- 3 Strictly follow the wiring method for wiring, otherwise it may cause product damage or other potential faults.
- 4 Misuse of the product may cause danger or personal injury.



Product overview

CMPS320 pressure transmitter is designed with a compact integrated stainless steel structure with a built-in digital processing circuit that converts the millivolt signal of sensor into standard voltage or current signal output. The structures and output forms are various. CMPS320 is featured with small size, light weight, easy installation and use, and stable performance. It is widely used in industrial automation equipment and has good adaptability to various complicated environments.

Notes:

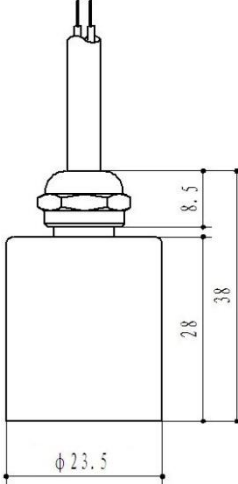
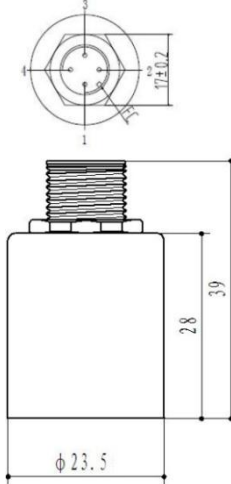
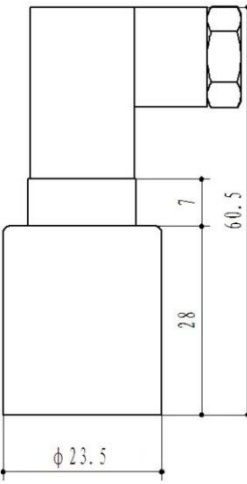
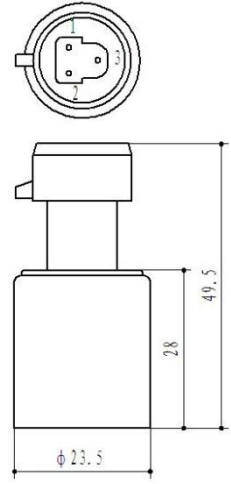
- 1 Do not misuse documentation.
- 2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 3 Complete installation, operation, and maintenance information is provided in the instructions of the product.
- 4 Misuse of the product may cause danger or personal injury.

Performance parameters

Pressure range	-100kPa...0~10kPa...100MPa
Pressure reference	Gauge pressure, Absolute pressure, Sealed gauge pressure
Supply & output	4~20mA, 0~5V, 0~10V(12~30VDC) 0.5~4.5V R/M(5VDC)
Accuracy	0.5%FS
Hysteresis & repeatability	0.1%FS
Temp. drift	1.5%FS(-20°C~85°C)

Performance parameters(cont.)	
Response time	≤1ms (Up to 90%FS)
Overpressure	150%FS(≤60MPa), 120%FS(60~100 MPa)
Service life	≥10×10 ⁶ pressure cycles
Ambient temp.	-20℃~85℃
Medium temp.	-30℃~105℃
Storage temp.	-40℃~125℃
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	≥100MΩ/2500VDC(200MΩ/500VDC)
Vibration resistance	Sine curve: 20g, 25Hz~2kHz; IEC 60068-2-6 Random: 7.5grms, 5Hz~1kHz; IEC 60068-2-64
Shock resistance	Shock: 200g/1ms; IEC 60068-2-27 Free fall: 1m; IEC 60068-2-32
Protection	IP65
Medium compatibility	All media compatible with stainless steel 304

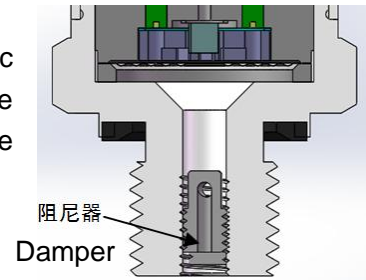
Electrical connection & wiring method

Connector code	J3: Cable outlet	J4: M12	J6: Mini 4 pin	J7: Round Packard
Dimension In mm				
Protection	IP65	IP65	IP65	IP65
Connection mode Current (2 wires)	Red: Supply+ Green: Current output	Pin 1: Supply+ Pin 2: Current output	Pin 1: Supply+ Pin 2: Current output	Pin 1: Supply+ Pin 2: Current output
Connection mode Voltage (3 wires)	Red: Supply+ Green: Ground Yellow: Voltage output	Pin 1: Supply+ Pin 2: Ground Pin 3: Voltage output	Pin 1: Supply+ Pin 2: Ground Pin 3: Voltage output	Pin 1: Supply+ Pin 2: Ground Pin 3: Voltage output

Application of damper

Application

Cavitation, liquid hammer and pressure peak may occur in air or hydraulic systems with varying flow rates, such as the rapid closing of valve or the start and stop of pump. Even at relatively low operating pressures, these problems may occur at the entrance and exit.



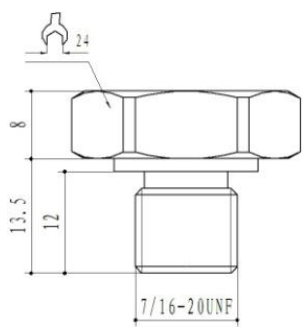
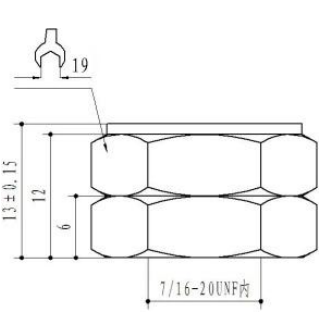
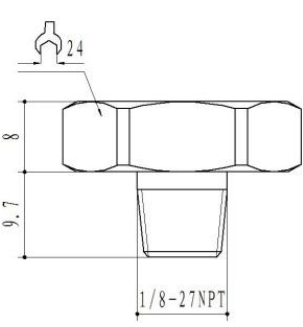
Media condition

In the liquid containing particles, nozzle clogging may occur. The vertical mounting of pressure transmitter minimizes the risk of clogging because the flow of fluid happens in initial start only, the volume of the rear of the nozzle is fixed and the nozzle has a relatively large aperture (1.2 mm). The effect of medium viscosity on response time is small. Even if the viscosity reaches 100 CST, the response time will not exceed 4 ms.

Pressure port

Thread code	C3: G1/4	C4: M14×1.5	C5: NPT1/4, Z1/4
Dimension In mm			
Recommended torque	15~25Nm	15~25Nm	15~25Nm
Thread code	C6: R1/4, PT1/4, ZG1/4	C8: M12×1.5-6g	C10: R1/2, PT1/2, ZG1/2
Dimension In mm			
Recommended torque	15~25Nm	15~25Nm	15~25Nm

Pressure port(cont.)

Thread code	C11: 7/16-20UNF Male	C12: 7/16-20UNF Female	C18: NPT1/8, Z1/8
Dimension In mm			
Recommended torque	15~25Nm	15~25Nm	15~25Nm

Note: Torque depends on various factors such as material of gasket, supporting materials, lubrication of thread and pressure.

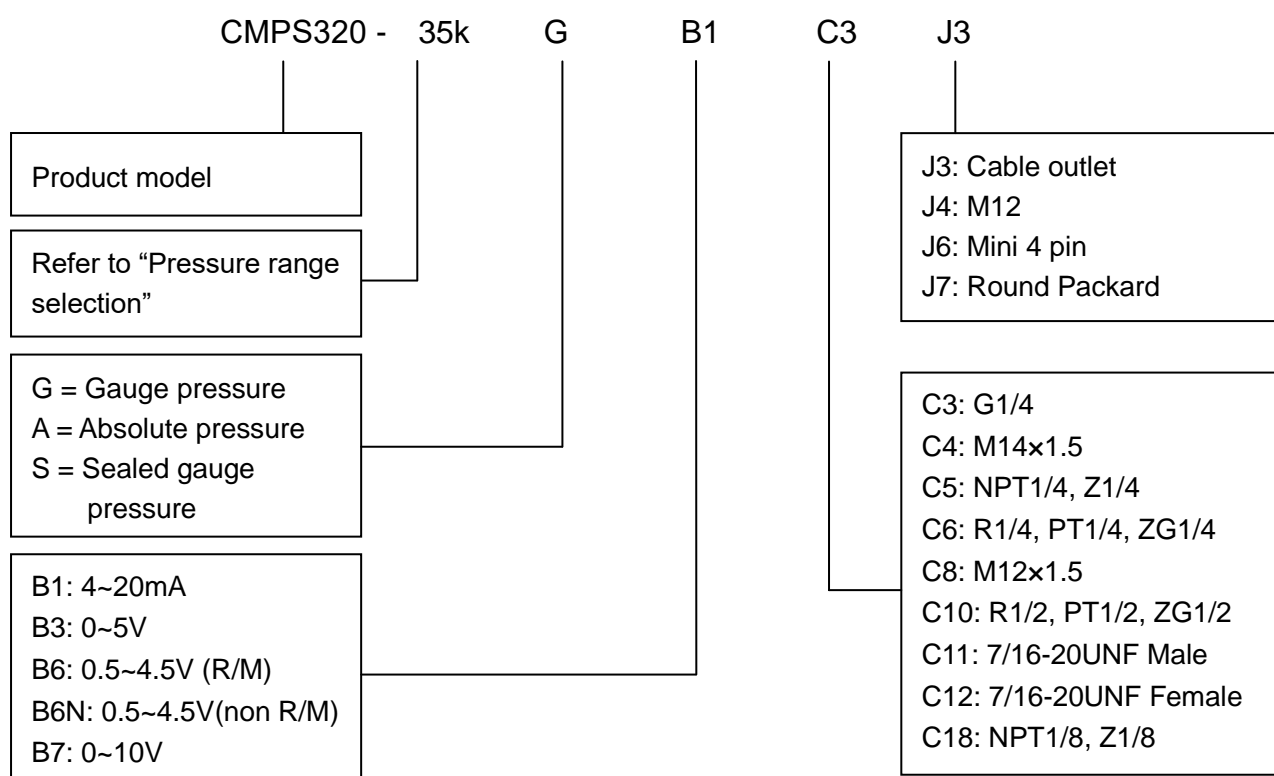
Pressure range selection

Pressure range code	Pressure reference	Pressure range	Overpressure	Burst pressure	Remark
35k	G	0~35kPa	200%FS	500%FS	
70k	G	0~70kPa	200%FS	500%FS	
100k	G	0~100kPa	150%FS	300%FS	
160k	G	0~160kPa	150%FS	300%FS	
250k	G	0~250kPa	150%FS	300%FS	
400k	G	0~400kPa	150%FS	300%FS	
600k	G	0~600kPa	150%FS	300%FS	
1M	G	0~1MPa	150%FS	300%FS	
100k	A	0~100kPa	150%FS	300%FS	
160k	A	0~160kPa	150%FS	300%FS	
250k	A	0~250kPa	150%FS	300%FS	
400k	A	0~400kPa	150%FS	300%FS	
600k	A	0~600kPa	150%FS	300%FS	
1M	A	0~1MPa	150%FS	300%FS	
1.6M	S	0~1.6MPa	150%FS	300%FS	
2.5M	S	0~2.5MPa	150%FS	300%FS	
6M	S	0~6MPa	150%FS	300%FS	
10M	S	0~10MPa	150%FS	300%FS	
16M	S	0~16MPa	150%FS	300%FS	
25M	S	0~25MPa	150%FS	300%FS	
40M	S	0~40MPa	150%FS	300%FS	
60M	S	0~60MPa	150%FS	200%FS	
100M	S	0~100MPa	120%FS	150%FS	

Note: G stands for gauge pressure, A, absolute pressure, S, sealed gauge pressure.

Accessory			
Name	Appearance	Description	Item number
M4 damper		Refer to "Application of damper"	100030100027
Mini 4 pin connector		Imported connector OMAL	100040301006
M12 connector		MB12FAAFF04ST	100040304001
Round Packard connector male		DuPont material	100040305002

How to order



Example: CMPS320-35kGB1C3J3

Refer to product model CMPS320, with pressure range 0~35kPa, pressure reference gauge pressure, output signal 4~20mA, pressure port G1/4, electrical connection cable outlet.

Ordering tips:

Ensure compatibility between measured media and contacting part of product when placing an order.

Cheemi reserves the right to make any change in this publication without notice. The information provided is believed to be accurate and reliable as of this product sheet.

