

Non-Indicating Pressure Transmitters



TPS30 Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- Robust build allows high or low pressure measurement in high and low temperature environments
 - : High pressure (0 to 60 MPa/0 to 600 bar) , low pressure (0 to 2 MPa/0 to 20bar)
 - : Sealed gauge pressure (-0.1 to 2 MPa / -1 to 20 bar), absolute pressure (0 to 2 MPa / 0 to 20 bar) , gauge pressure (0 to 60 MPa/0 to 600 bar)
 - : Temperature range (-40 to 125 °C) (may vary by model)
- Applicable in diverse settings including packaging machines, heavy machinery, factories, and shipbuilding
- Pressure measurement of any gas, liquid, or oil
- 316L, 630 stainless steel body for high corrosion resistance (except head component of head types)
- Compact size allows easy installation in tight or limited spaces
- 1 ms high-speed response rate
- Analog output: current (DC 4-20 mA) , voltage (1-5 VDC=)
- Built-in reverse polarity protection circuit
- Various connector types: cable type, DIN43650-A connector type, DT04-3P connector type, M12 connector type, head type
- Available thread sizes: G3/8, G1/4, R1/2
- IP67 protection structure (IEC standard)
- (DIN43650-A connector type: IP65)



Ordering Information

This is only for reference.

For selecting the specified model, follow the Autonics website .

TPS30 - ① ② ③ ④ ⑤ - ⑥ (⑦)

① Pressure type

G: Gauge pressure, Sealed gauge pressure⁰¹⁾

A: Absolute pressure

④ Output

V: Voltage (1 - 5 VDC=) output

A: Current (DC 4 - 20 mA) output

② Cable

1: Head type

2: DIN43650-A connector type

3: M12 connector type

4: DT04-3P connector type

5: cable type

⑤ Pressure port

G8: G3/8 (PF) (EN837)

G4: G1/4 (PF) (EN837)

R2: R1/2 (PT) (DIN3852)

N4: NPT1/4 (DIN3852)

ZZ: Others (Option)⁰³⁾

③ Rated Pressure range⁰²⁾

	Gauge pressure	Absolute pressure
3	0 to 0.1 MPa	0 to 0.1 MPa
4	0 to 0.2 MPa	0 to 0.2 MPa
5	0 to 0.7 MPa	0 to 0.7 MPa
6	0 to 1 MPa	0 to 1 MPa
7	0 to 2 MPa	0 to 2 MPa
8	0 to 3.5 MPa	-
9	0 to 5 MPa	
A	0 to 10 MPa	
B	0 to 20 MPa	
C	0 to 40 MPa	
D	0 to 50 MPa	
E	0 to 60 MPa	
	Sealed gauge pressure	
F	-0.1 to 0 MPa	
G	-0.1 to 0.1 MPa	
H	-0.1 to 0.7 MPa	
J	-0.1 to 1 MPa	
K	-0.1 to 2 MPa	
Z	Others	

⑥ M12 connector cable

00: none

2L: I type, 2 m

2L: L type, 2 m

5L: I type, 5 m

5L: L type, 5 m

⑦ User pressure range⁰⁴⁾

Customized pressure range and unit

01) The pressure is sealed gauge pressure. The unit is sealed structure. It is based on atmospheric pressure 101.3 kPa (1.013 bar).

02) G1/4 is the standard pressure port of part number 8 to 9, A to E. For the other pressure ranges, G3/8, R1/2 are standard pressure ports.

03) The option ports are sold separately. In case of large amount ordering, contact the Autonics for manufacturing the requested pressure port.

04) The pressure range is set to customized pressure range. (select 'Z' at ③ Rated pressure range)

Specifications

■ Gauge pressure, Absolute pressure (unit: MPa)

Rated pressure range	0 to 0.1	0 to 0.2	0 to 0.7	0 to 1	0 to 2
Expanded analog output range	0 to 0.11	0 to 0.22	0 to 0.77	0 to 1.1	0 to 2.2
Max. pressure	0.6	0.6	3	3	3
Burst pressure	0.6	0.6	3	3	3
Compensation temperature	-10 to 80 °C				
Vibration	10 g, 20 to 2,000 Hz				
Shock	100 g / 6 ms				

■ Gauge pressure (unit: MPa)

Rated pressure range	0 to 3.5	0 to 5	0 to 10	0 to 20	0 to 40	0 to 50	0 to 60
Expanded analog output range	0 to 3.85	0 to 5.5	0 to 11	0 to 22	0 to 44	0 to 55	0 to 66
Max. pressure	10	10	20	50	80	120	120
Burst pressure	15	30	75	120	160	160	160
Compensation temperature	0 to 80 °C						
Temperature characteristic	-25 to 100 °C: $\leq \pm 1.5\%F.S.$, -40 to 125 °C: $\leq \pm 2.5\%F.S.$						
Vibration	20 g, 20 to 2,000 Hz						
Shock	500 g / 1 ms						

■ Sealed gauge pressure (unit: MPa)

Rated pressure range	-0.1 to 0	-0.1 to 0.1	-0.1 to 0.7	-0.1 to 1	-0.1 to 2
Expanded analog output range	-0.1 to 0.01	-0.1 to 0.12	-0.1 to 0.78	-0.1 to 1.11	-0.1 to 2.21
Max. pressure	0.6	0.6	3	3	3
Burst pressure	0.6	0.6	3	3	3
Compensation temperature	-10 to 80 °C				
Vibration	10 g, 20 to 2,000 Hz				
Shock	100 g / 6 ms				

■ Common

Output	Voltage (1 - 5 VDC=) output	Current (DC 4 - 20 mA) output
Accuracy	$\leq \pm 0.5\%F.S.$ (including linearity, hysteresis, repeatability)	
linearity	$\leq \pm 0.2\%F.S.$	
Hysteresis	$\leq \pm 0.2\%F.S.$	
Temp. zero shift	$\leq \pm 0.1\%F.S./10^\circ C$ (standard), $\leq \pm 0.25\%F.S./10^\circ C$ (max.)	
Temp. span shift	$\leq \pm 0.1\%F.S./10^\circ C$ (standard), $\leq \pm 0.25\%F.S./10^\circ C$ (max.)	
Load resistance	-	$\leq 700 \Omega$ (supplying 24 VDC=)
Power supply	8 - 36 VDC= (ripple P-P: $\leq 10\%$)	11 - 36 VDC= (ripple P-P: $\leq 10\%$)
Allowable voltage range	90 to 110% of rated voltage	
Current consumption	$\leq 20 \text{ mA}$	$\leq 30 \text{ mA}$
Connection	+, -, Vout	+, -
Applicable medium	Gas, liquid, oil (except corrosive environment of SUS316)	
Pressure type	Gauge pressure, absolute pressure, sealed gauge pressure	
Rated pressure range	Different by model	
Response time	$\leq 1 \text{ ms}$	
Insulation resistance	$\geq 100 \text{ M}\Omega$ (500 VDC= megger)	
Dielectric strength	500VAC~ 50/60 Hz for 1 minute	
Tightening torque	$\leq 10 \text{ N}\cdot\text{m}$	
Ambient temperature ⁰¹⁾	-40 to 125 °C, storage: -40 to 125 °C (no freezing or condensation)	-40 to 85 °C, storage: -40 to 125 °C (no freezing or condensation)
Ambient humidity	35 to 85%RH, storage: 35 to 85%RH (no freezing or condensation)	
Medium temperature range	-40 to 125 °C	
Protection circuit	Reverse polarity protection circuit	
Material	SUS316L, SUS630 (Different by model), head part of head type: Aluminium diecasting, connector: Polybutylene terephthalate G30, water-proof rubber: Silicon	
Protection structure	IP67 (IEC standard) ⁰²⁾	
Approval	CE	
Unit weight (packaged)	Head type: $\approx 250 \text{ g}$ ($\approx 330 \text{ g}$) DIN43650-A / M12 / DT04-3P connector type: $\approx 50 \text{ g}$ ($\approx 130 \text{ g}$) cable type: $\approx 120 \text{ g}$ ($\approx 200 \text{ g}$)	

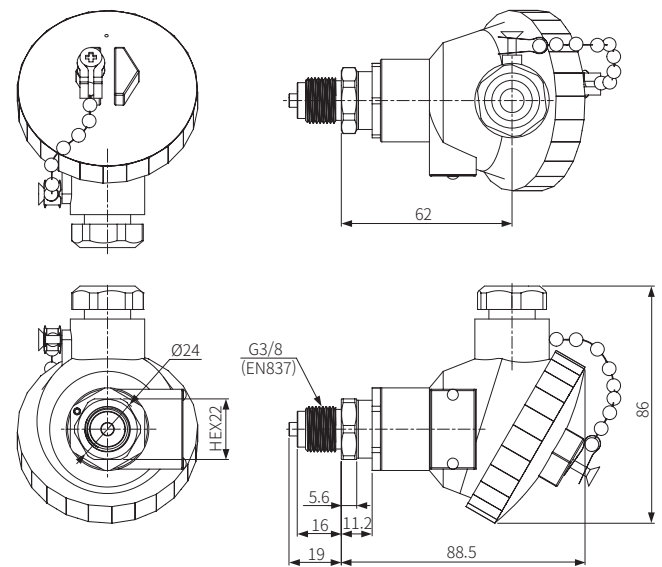
01) It is different by connection type. cable type: -40 to 80 °C, storage: -40 to 80 °C (no freezing or condensation)

02) DIN43650-A connector type: IP65 (IEC standard)

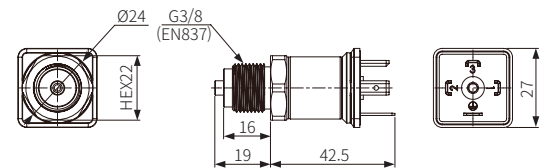
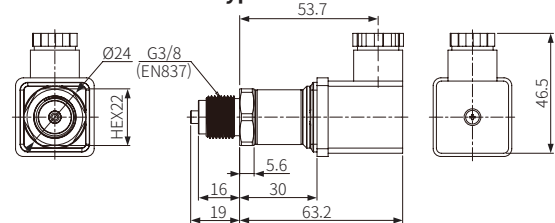
Dimensions

• Unit: mm, For the detailed drawings, follow the Autonics website.

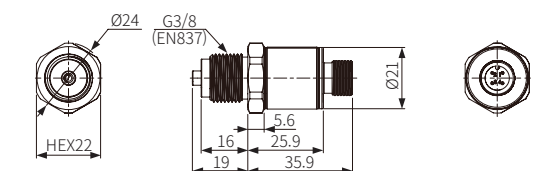
■ Head type



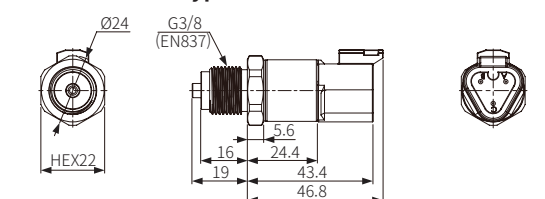
■ DIN43650-A connector type



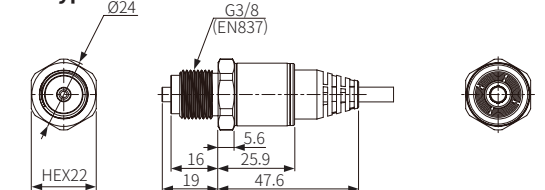
■ M12 connector type



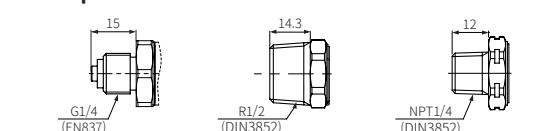
■ DT04-3P connector type



■ Cable type



■ Pressure port

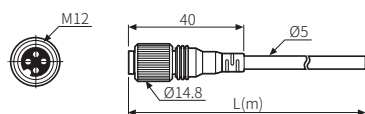


Sold Separately

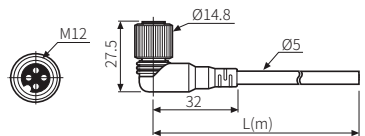
- DT04-3P connector: CS-DT3P
- Connection cable: C□D3-2 / C□D3-5

Sold Separately: Connection Cable

■ CID3-2 / CID3-5



■ CLD3-2 / CLD3-5



Model	L (m)	Material
C□D3-2	2	PVC
C□D3-5	5	