

# Controller

# Series PSE300

## How to Order



### Input/Output specifications

0	NPN2 output + 1-5 V output
1	NPN2 output + 4-20 mA output
2	NPN2 output + Auto shift input
3	PNP2 output + 1-5 V output
4	PNP2 output + 4-20 mA output
5	PNP2 output + Auto shift input

### Unit specifications

Nil	With unit display switching function
M	Fixed SI unit <small>Note 1)</small>

Note 1) Fixed unit  
 For vacuum & low pressure & low differential pressure & compound pressure: kPa  
 Positive pressure: MPa (For 1 MPa)  
 kPa (For 500 kPa)

**PSE30 0 M** [ ] [ ] [ ]

### Option 1

Nil	Without cable
L	Power supply/Output connection cable

Power supply/Output connection cable ZS-28-A

Note) The cable is unassembled in the factory, but is included with the shipment.

### Option 3

Nil	Without connector
C	Sensor connector

Sensor connector (e-con connector) ZS-28-C

Note) The connector is unassembled in the factory, but is included with the shipment.

### Option 2

Nil	Without bracket/panel mount adapter/front protective cover
A	Bracket
B	Panel mount adapter
D	Panel mount adapter + Front protective cover

M3 x 5L  
Bracket

Panel  
Panel mount adapter  
Mounting screw (M3 x 8L) (Accessory)

Panel  
Front protective cover  
Panel mount adapter  
Mounting screw (M3 x 8L) (Accessory)

Note) These options are unassembled in the factory, but are included with the shipment.

### Option/Part No.

Description	Part no.	Note
Power supply/Output connection cable	ZS-28-A	
Bracket	ZS-28-B	With M3 x 5L (2 pcs.)
Sensor connector	ZS-28-C	1 pc.
Panel mount adapter	ZS-27-C	With M3 x 8L (2 pcs.)
Panel mount adapter + Front protective cover	ZS-27-D	With M3 x 8L (2 pcs.)

## Specifications

Conforms to CE marking and UL (CSA) standards.

Model		PSE30□					
Set (differential) pressure range		-101 to 101 kPa	10 to -101 kPa	-10 to 100 kPa	-0.1 to 1 MPa	-50 to 500 kPa	-0.2 to 2 kPa
Pressure range <sup>Note 1)</sup>		For compound pressure	For vacuum	For low pressure	For positive pressure		For low difference pressure
Rated (differential) pressure range		-100 to 100 kPa	0 to -101 kPa	0 to 100 kPa	0 to 1 MPa	0 to 500 kPa	0 to 2 kPa
Power supply voltage		12 to 24 VDC, Ripple (p-p) 10% or less (With power supply polarity protection)					
Current consumption		50 mA or less (Current consumption for sensor is not included.)					
Sensor input		1 to 5 VDC (Input impedance: 1 MΩ)					
No. of inputs		1 input					
Input protection		With excess voltage protection (Up to 26.4 V)					
Hysteresis		Hysteresis mode: Variable, Window comparator mode: Variable					
Switch output		NPN or PNP open collector output: 2 outputs					
Maximum load current		80 mA					
Maximum load voltage		30 VDC (at NPN output)					
Residual voltage		1 V or less (With load current of 80 mA)					
Output protection		With short circuit protection					
Response time		1 ms or less					
Anti-chattering function		Response time settings for anti-chattering function: 20 ms, 160 ms, 640 ms, 1280 ms					
Repeatability		±0.1% F.S. or less					
Analog output	Voltage output <sup>Note 2)</sup>	Output voltage: 1 to 5 V (Within rated pressure range (Differential pressure)), Output impedance: Approx. 1 kΩ Linearity: ±0.2% F.S. (Not including sensor accuracy), Response speed: 150 ms or less					
	Accuracy (To display value) (25°C)	±0.6% F.S. or less		±1.0% F.S. or less		±1.5% F.S. or less	
	Current output <sup>Note 2)</sup>	Output current: 4 to 20 mA (Within rated pressure range) Maximum load impedance: 300 Ω (at 12 VDC), 600 Ω (at 24 VDC), Minimum load impedance: 50 Ω Linearity: ±0.2% F.S. (Not including sensor accuracy), Response time: 150 ms or less					
	Accuracy (To display value) (25°C)	±1.0% F.S. or less		±1.5% F.S. or less		±2.0% F.S. or less	
Display accuracy (Ambient temperature of 25°C)		±0.5% F.S. ±2 digits or less	±0.5% F.S. ±1 digit or less				
Display		3 + 1/2 digit, 7 segment indicator, 2-color display (Red/Green), Sampling frequency: 5 times/sec					
Indicator light		OUT1: Lights up when ON (Green), OUT2: Lights up when ON (Red)					
Auto shift input <sup>Note 2)</sup>		Non-voltage input (Reed or Solid state), Low level input: 5 ms or more, Low level: 0.4 V or less					
Resistance	Enclosure	IP40					
	Operating temperature range	Operating: 0 to 50°C, Stored: -10 to 60°C (No freezing or condensation)					
	Operating humidity range	Operating/Stored: 35 to 85% RH (No condensation)					
	Withstand voltage	1000 VAC for 1 minute between live parts and case					
	Insulation resistance	50 MΩ or more between live parts and case (at 500 VDC Mega)					
	Vibration resistance	10 to 150 Hz at whichever is smaller of 1.5 mm amplitude or 98 m/s <sup>2</sup> acceleration, in X, Y, Z directions, for 2 hours each (De-energized)					
	Impact resistance	100 m/s <sup>2</sup> in X, Y, Z directions, 3 times each (De-energized)					
Temperature characteristics		±0.5% F.S. or less (Based on 25°C)					
Connection		Power supply/Output connection: 5P connector, Sensor connection: 4P connector					
Material		Front case: PBT, Rear case: PBT					
Weight	With power supply/output connection cable	85 g					
	Without power supply/output connection cable	30 g					

Note 1) Pressure range can be selected during initial setting.

Note 2) Auto shift function is not available when analog output option is selected.

Also, analog output option is not available when auto shift function is selected.

Note 3) The following units can be selected with unit conversion function:

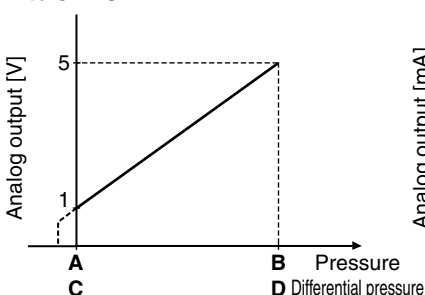
For vacuum & compound pressure: kPa·kgf/cm<sup>2</sup>·bar·psi·mmHg·inHg

For positive pressure & low pressure: MPa·kPa·kgf/cm<sup>2</sup>·bar·psi

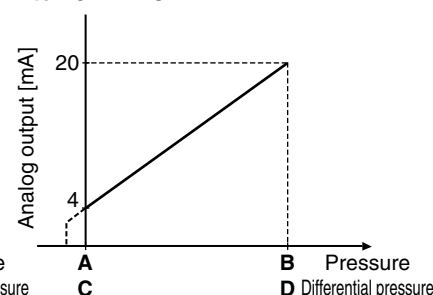
For low differential pressure: kPa·mmH<sub>2</sub>O

## Analog Output

1 to 5VDC



4 to 20 mADC



Range	Rated pressure range	A	B
For vacuum	0 to -101 kPa	0	-101 kPa
For compound pressure	-100kPa to 100 kPa	-100 kPa	100 kPa
For positive pressure	0 to 1 MPa	0	1 MPa
	0 to 500 kPa	0	500 kPa

Range	Rated differential pressure range	C	D
For low differential pressure	0 to 2 kPa	0	2 kPa