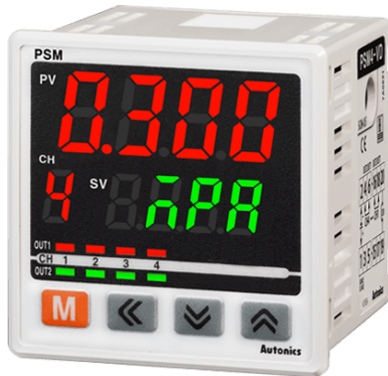


Pressure Sensor Indicators



PSM 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

- Display 8 (PSM8) or 4 (PSM4) channels of pressure value from pressure sensors
- Input range: 1 - 5 VDC \equiv , DC 4 - 20 mA (by model)
- Pressure sensor model auto recognition (Autonics PSS Series pressure sensors)
- Set PV display color by control output type (red/green)
- Individual output indicators for each channel
- RS485 (Modbus RTU) communication support
- Refrigeration pressure control mode
- Easy wiring and connection with sensor connectors (CNE)
- Power supply: 12 - 24 VDC \equiv \pm 10%

Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

P **S** **M** **①** - **②** **③** **④**

① No. of channels

4: 4 channels
8: 8 channels

② Sensor input

V: 1 - 5 VDC \equiv
A: DC 4 - 20 mA

③ Control output

No mark: NPN open collector output
P: PNP open collector output

④ Option input/output

D: Digital input
R: RS485 communication

Product Components

- Product
- Bracket
- Instruction manual

Specifications

Model	PSM4-□□□	PSM8-□□□
Display pressure range	Refer to 'Rated Pressure and Max. Pressure Display Range'.	
Max. inputs	4	8
Sensor input	<ul style="list-style-type: none"> • 1 - 5 VDC\equiv (Input impedance: \approx 300 kΩ) • DC 4 - 20 mA model (Input impedance: \approx 100 Ω) 	
Sensor supply power	12 - 24 VDC \equiv , 40 mA per channel (1 - 4 ch max. current: \leq 100 mA, 5 - 8 ch max. current: \leq 100 mA)	
Display type	7 Segment LED 4 digit	
Display accuracy	\pm 0.1% F.S. \pm 2 digit (at 23 \pm 5 $^{\circ}$ C)	
Control output and display temp. characteristic	-10 to 0 $^{\circ}$ C: \pm 0.3% F.S. \pm 2 digit 0 to 50 $^{\circ}$ C: \pm 0.2% F.S. \pm 2 digit (at 25 $^{\circ}$ C)	
Option input	Digital input 1	
Contact input	[L]: \leq 0.2 V	
Solid state input	Residual voltage \leq 1.0 V, Leakage current \leq 0.1 mA	
Protection structure	Front: IP65, the others: IP30 (IEC standard)	
Approval	CE ENEC	
Unit weight (packaged)	\approx 65 g (\approx 108 g)	
Power supply	12 - 24 VDC \equiv \pm 10% (ripple P-P: \leq 10%)	
Power consumption	\leq 3 W	
Current consumption	\leq 100 mA ⁰¹⁾	
Control output	NPN open collector output / PNP open collector output model	
Load voltage	\leq 30 VDC \equiv	
Load current	\leq 100 mA	
Residual voltage	NPN: \leq 1 VDC \equiv , PNP: \leq 2 VDC \equiv	
Hysteresis	Different by output operation mode ⁰²⁾	
Repeat error	\pm 0.1% F.S. \pm Min display interval	
Response time	<ul style="list-style-type: none"> • 4 CH model: 2.5, 100, 500, 1000 ms • 8 CH model: 5, 100, 500, 1000 ms 	
RS485 comm.	Modbus RTU	
Protection circuit	Output short over-current protection circuit, power supply reverse connection protection circuit	
Insulation resistance	\geq 100 M Ω (500 VDC \equiv megger)	
Dielectric strength	Between power terminal and case: 1,000 VAC \sim 50 / 60 Hz for 1 min Between power terminal and RS485 terminal: 500 VAC \sim 50 / 60 Hz for 1 min	
Vibration	1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours	
Ambient temperature	-10 to 50 $^{\circ}$ C, storage: -20 to 60 $^{\circ}$ C (rated at no freezing or condensation)	
Ambient humidity	30 to 85%RH, storage: 30 to 85%RH (rated at no freezing or condensation)	

01) Except sensor consumption current.
All output indicators ON: \leq 120 mA / RS485 communication connection: 120 mA

02) Refer to output operation mode.

Communication Interface

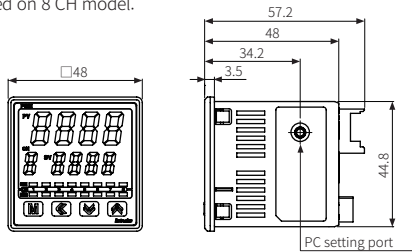
■ RS485

Communication protocol	Modbus RTU
Application standard	Compliance with EIA RS485
Max. connections	31 units (address: 01 to 127)
Synchronous method	Asynchronous
Communication method	Two-wire half duplex
Communication distance	< 800 m
Baud rate	2400, 4800, 9600 (default), 19200, 38400 bps
Communication response time	5 to 99 ms (default: 20 ms)
Start bit	1 bit (fixed)
Data bit	8 bit (fixed)
Parity bit	None (default), Even, Odd
Stop bit	1 bit, 2 bit (default)

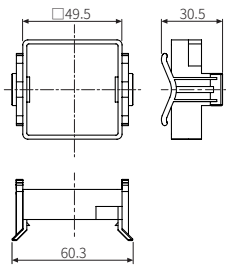
- Do not change parameter by front keys of the product during communication connection. It may cause malfunction.
- Do not set duplicated address on the same communication line.
- When setting the parameter using SCM-US, match the communication speed to the PSM. Settable communication speed: 2400 ~ 19200 bps (recommendation: 9600 bps)
- SCM-US is for setting parameter, unsuitable for monitoring.
- The communication via RS485 and the SCM-US can not be used simultaneously because when the SCM-US is connected, communication through the power / communication connection terminal is blocked.

Dimensions

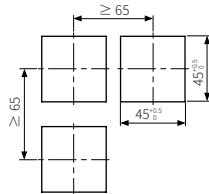
- Unit: mm, For the detailed drawings, follow the Autonics website.
- Below is based on 8 CH model.



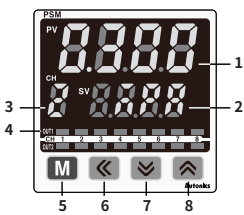
■ Bracket



■ Panel cut-out



Unit Descriptions



- PV display part (green, red)**
Run mode: Displays PV (present value)
Setting mode: Displays parameter
- SV display part (green)**
Run mode: Displays pressure unit
Setting mode: Displays parameter setting value
- Channel display part (red)**
Run mode: Displays channel
Setting mode: Displays parameter setting channel

4. Output (OUT1: red, OUT2: green) indicator

Turns ON when the corresponding control output is ON.

5. [M] key

Enters parameter group, selects item and returns run mode

6. [◀] key

Run mode: Changes channels

Setting mode: Changes parameter setting channel or digit

7. [▼], [▲] key

Sets preset of output operation mode, runs the mode or changes parameter

Sold Separately

- Pressure sensor: PSS Series
- Sensor connector plug: CNE-P04-□
- Connector socket: HIF3BA-20D-2.54R, Hirose Electric (contact the manufacturer)
- Communication converter: SCM-US
- IO cable: CO Series