

Digital pressure sensor MPS-2 / 3

Features

Every pressure control zone is digitized irrespective of pneumatic or hydraulic pressure.

- ◆ Easy-to-use with resolution of 1/1000
- ◆ Reliable CE marks
- ◆ 2High-speed response at 2.0msec. (with variable and averaging functions)
- ◆ Integrated energy-saving functions help reduce power consumption greatly.
 - High durability-more than 10 million times
 - Wide variation: negative pressure, low pressure, standard, compound pressure
 - Variable display time (0.1~3.0sec.)
 - Two point output standard, analog output and digital input (option)
 - Peak, bottom, difference hold
 - Switching between normally open and normally closed
 - IP65
 - Easy mode function




SQUARE-TYPE



RECTANGULAR-TYPE

How to order (rectangular, silicone diaphragm) For single unit

MPS— **①** V 2 **②** M5 — **③** P **④** G **⑤** R **⑥** A



① Pressure range	
V	Negative pressure(-101~0kPa)
R	Compound pressure(-101~500kPa)

② Pressure port	
R	R1/8 male
M5	M5 port

③ Output type	
No mark	NPN open collector
P	PNP open collector

④ Cable	
G	Grommet:4-core 2m lead wire (Analog:5-core 2m lead wire)
C	M8 (4P) connector 2m lead wire

⑤ DIN rail mount	
No mark	None
R	With DIN mounting rails (M5 port only)

⑥ option	
No mark	None
A	Analog output 1-5V

When M8 and analog output are selected, OUT2 is not attached.

For mounting on CONVUM

① MC2 — **②** V 2 **③** G

① Applicable CONVUM / series	
MC2	

② Pressure range	
V	Negative pressure
R	Compound pressure

③ Cable	
G	Grommet 4-core 2m lead wire
C	M8 (4P) connector 2m lead wire



① CVK — **②** V 2 **③** G

① Applicable CONVUM / series	
MC7	
CVR2	
MPV3	
MPV6	

② Pressure range	
V	Negative pressure
R	Compound pressure

③ Cable	
G	Grommet 4-core 2m lead wire
C	M8 (4P) connector 2m lead wire

Specifications

Diaphragm	Silicone	
Applicable fluid	Non-corrosive gas ※	
Type	MPS-V2②-③④⑤⑥	MPS-R2②-③④⑤⑥
Gauge pressure 1MPa		
500kPa		
101kPa		
0		
-101kPa		
Pressure Range (kPa)	-101~0	-101~500
Proof pressure (MPa)	0.5	0.8
Panel surface color	Gray	Black
Indicator resolution (kPa)	0.1	1
Pressure port : material	R1/8 male : zinc die casting, M5 port : aluminum	
Mass (g)	Approx. 35 (not including cable)	
Accessory	M5 port : L2, F2 mounting parts and screw	
Common accessory	Barb connector, "O"-ring	

※Silicone diaphragm cannot be used for detection of non-corrosive gas and fluid pressure.

Common specifications of MPS2, 3 series

Power supply voltage	10.8~30 V, ripple (Vp-p) 5% or less
Power consumption	45mA or less
Output	NPN (N) or PNP (P) open collector, max.125mA output 2 points
Analog output (OPTION)	DC 1~5 V (1±0.1V, 5V±0.1V) output impedance 1kΩ Linearity 0.5%F.S., response time 1msec or less, resolution∞
Digital input (OPTION)	Non-contact input 1 point (1msec or more) Digital set/reset function or outside display function (selection of software)
Repeatability	±0.2% of F.S. ±1digit or less
Response time	2msec (variable 32msec, 128msec, 1024msec) with averaging function
Protection circuit	Reverse connection protection circuit, surge absorption, output excess current protection circuit
Display time	Display renewal time:with variable function 0.1~3 sec. (unit of 0.1 sec.)
Ambient pressure inlet port	M3
Operating ambient temperature(°C)	0~+50
Operating humidity	35~85%RH (no dewing allowed)
Noise resistance	Vp-p400V, 10ms, 0.5 μs by noise simulator
CE marking	EMC order EN55011ClassB,EN50082-1
Vibration resistance	Endurance 10~150Hz, double amplitude 1.5mm, 2 hours/ each direction of XYZ
Shock resistance	Endurance 100m/S ² (about 10G) , 3 times/each direction of XYZ (at time of power off)
Material	PC
Cable	φ4 4-cores×0.15mm ² 2m, φ4 5-cores×0.14mm ² 2m for with analog Specs of M8 connector φ4 4-cores×0.3mm ² UL20276 approved KVV AWG26

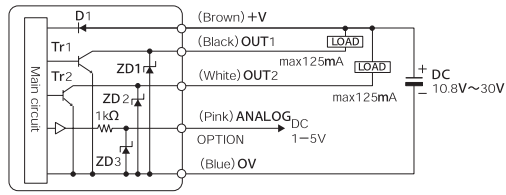
OPTION : M8 connector, surface mounting panel, analog output

The units of pressure sensors for domestic market are fixed with kPa and MPa.

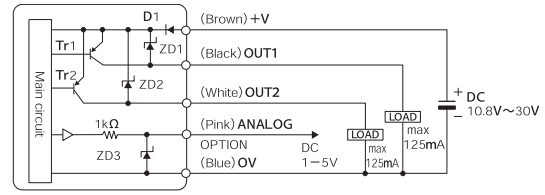
In the case of order from overseas for pressure sensors with pressure unit switching function, specify "M Option". (MPS-□□□□□-M)

Internal circuit diagram and examples of connection

NPN output (with analog output)

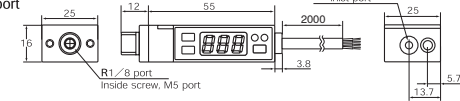


PNP output (with analog output)

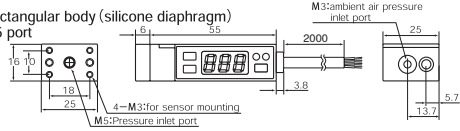


Dimensions

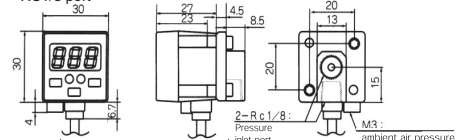
Rectangular body (silicone diaphragm) R port



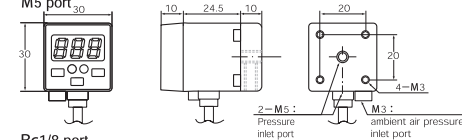
Rectangular body (silicone diaphragm) M5 port



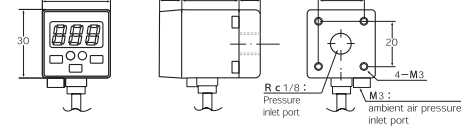
Body (silicone diaphragm) RC1/8 port



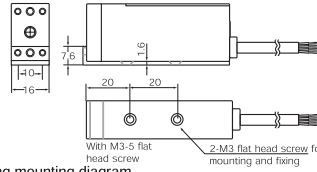
Body (stainless steel diaphragm) M5 port



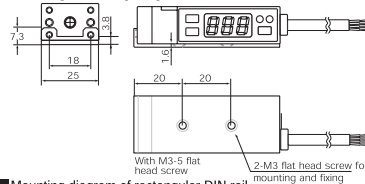
Body (stainless steel diaphragm) Rc1/8 port



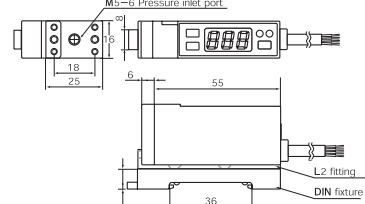
L2 fitting mounting diagram



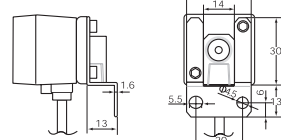
F2 fitting mounting diagram



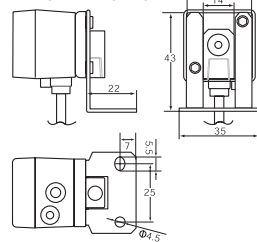
Mounting diagram of rectangular DIN rail



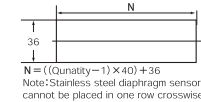
F3 fitting mounting diagram



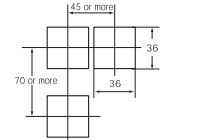
L3 fitting mounting diagram



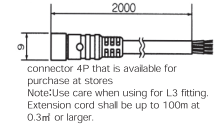
Panel cutting dimensions, crosswise 1 row



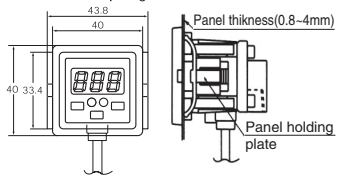
Panel cutting dimensions 45 or more



Dimensions of connector



Panel mount installation drawing (silicone diaphragm)



Panel mount installation drawing (Stainless steel diaphragm)

