

Digital Pressure Sensor Series GS40



Pressure sensor with LCD
Readout, Push-button calibration
and open collector output

Multiple features

Pressure sensor and switch in one compact body;
Economical use of space; Simplified operation;
Combined functions.

Pressure switch with digital display and self-contained solid state sensor

Minimum allowable pressure indicator on digital display

●SET Button

Normally, the LCD displays line pressure. When the SET button is pressed the set pressure is displayed. At this time, the user is capable of determining the difference between the line and set pressure.

Pressure can be displayed in five different units

P = PSI, k = kPa, kgf = kgf/cm², M = MPa, b = bar

Double alarm display

When LINE pressure is within 10% of the current minimum allowable setting, the ARROW at the lower left corner of the LCD flashes.

Fault alarm indicator light

●ALM is the alarm light. When pressure drops below the current minimum allowable, this red LED lights.

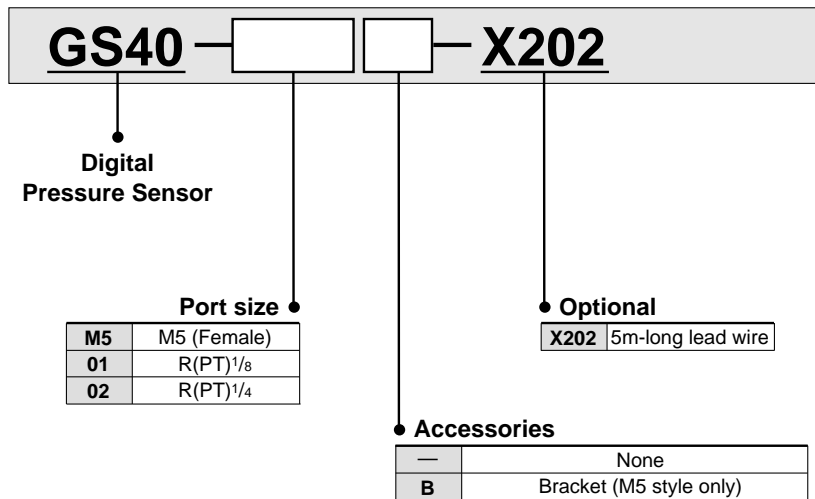
Simplified pressure setting

●Press the SET button and read the current setting in the upper left corner of the LCD. While pressing SET, turn the P. SET slotted screw (counterclockwise to decrease, and clockwise to increase setting).

A variety of installation options

Screw included M5, R(PT) 1/8, R(PT) 1/4
Mounting bracketM5 style only

How to Order



Specifications

Model	GS40-M5	GS40-01	GS40-02		
Fluid	Air or inert gas				
Hysteresis	3% F.S. or less				
Repeatability	±3% F.S. (5 to 40° C), ±5% F.S. (0 to 60° C)				
Supply voltage	12 to 24V DC (Ripple ±10% or less)				
Output	NPN Open collector 30V, 80mA				
Operating display	Light comes ON when pressure drops below the set minimum.				
Current consumption	15mA or less at 24V DC (ON)				
Max. pressure	0.98MPa				
Operating temperature range	-5 to 60° C (No freezing)				
Sampling frequency	4Hz				
Port size	M5 X 0.8 (Female thread)	R(PT) 1/8	R(PT) 1/4		
Weight (g)	42	54	57		
Pressure units	PSI	kPa	kgf/cm ²	MPa	bar
Operating pressure range	0 to 142	0 to 975	0 to 9.9	0 to 0.98	0 to 9.8

PSE

ZSE4
ISE4

ZSE5
ISE5

ZSE6
ISE6

ZSE3
ISE3

GS

PS

ISA

ZSE1
ISE1

ZSE2
ISE2

ZSP

IS□

ZSM

PF□

IF□

⚠ Precautions

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.3.0-7 to 3.0-9 for precautions on every series.

Wiring

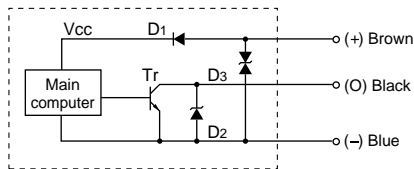
⚠ Warning

- ① Remove energy source from the switch while wiring, or it may cause a short and damage the switch.
- ② If the black wire (output wire) comes in contact with the power supply or is shorted, the built-in output transistors will burn out, leading to malfunction.

⚠ Caution

① Internal circuit

Circuit



Brown wire: Connect to DC source (+) (positive) to enable switch operation.

Black wire: Connect (Switch output) to PLC Input Terminal or DC relay, or other lead.

Blue wire: Connect to DC source (-) (minus) to enable switch operation.

D1: Protection diode

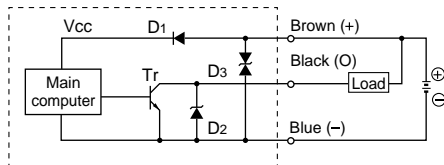
D2: Surge suppressor (Surge absorbing diode)

D3: Surge suppressor (Surge absorbing diode)

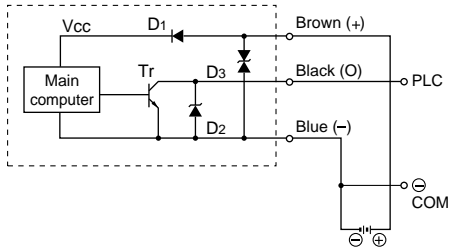
Tr: Output transistor

Example of Wiring

(For relay, resistance load, etc.)



PLC Sequence Controller Wiring COM terminal MINUS in this case



Installation, Piping

⚠ Caution

- ① ② types of piping are available in perpendicular and in-line directions.

Pressure Setting

⚠ Caution

① Setting the pressure switch

While pressing SET, turn pressure-setting slotted screw "P.SET" (counterclockwise to decrease, clockwise to increase) and watch the LCD. When the LCD shows the correct figure, stop turning "P.SET" and release the SET button.

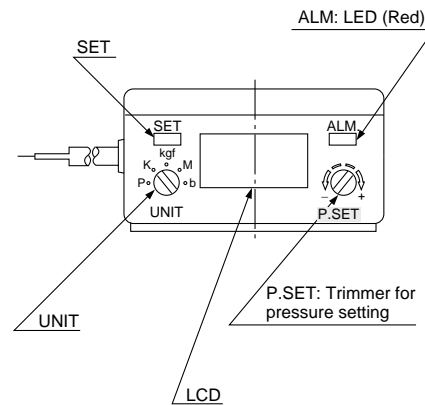
② Changing pressure units

To change units, use slot screw "UNIT".

P = PSI, k = kPa, kgf = kgf/cm², M = MPa, b = bar

③ Alarm display

When line pressure drops to within 10% of established minimum allowable pressure, the LCD arrow indicator (on the front side) flashes to indicate the condition. When line pressure drops below the established minimum pressure the red alarm LED labeled ALM (on the front side) comes ON and is continuously illuminated while the low pressure condition exists.

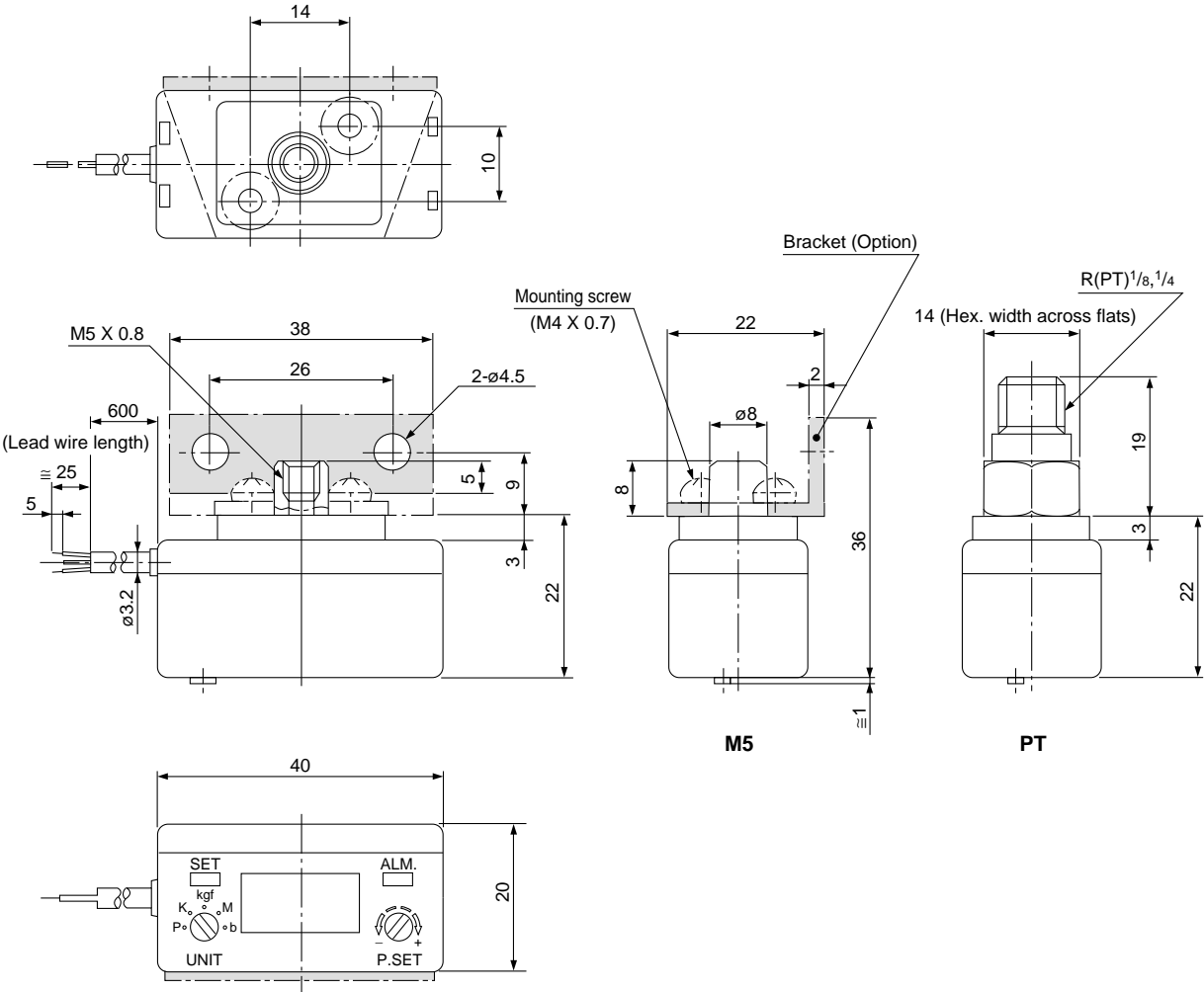


Environment

⚠ Warning

- ① The sensor case is not water-proof; Do not immerse it in any liquid, or spill any liquid on the case.
- ② Ground the piping when induction noise is expected to be generated from piping.
When the noise is expected to be generated from power wire or high pressure wire, set the switch apart from the noise.

Dimensions



PSE

ZSE4
ISE4

ZSE5
ISE5

ZSE6
ISE6

ZSE3
ISE3

GS

PS

ISA

ZSE1
ISE1

ZSE2
ISE2

ZSP

IS

ZSM

PF

IF