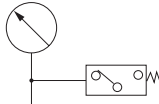


Pressure gauge with built-in switches

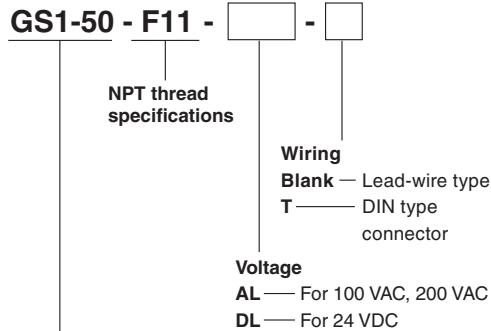
GS1-50-F11

- The set pressure and operating pressure are indicated on the same pressure gauge. Panel mounting offers convenient centralized control and management built into the control panel.
- An indicator is standard equipment, to check the switch operation state. Wiring connection methods offered include a standard grommet (lead wire) type, and a DIN connector type as an option.

Symbol



Order codes



Pressure gauge with built-in switch (outer diameter 1.969 in.)

Remarks: A model with built-in contact protection circuit (external surge absorption element) for AC is available. Contact your nearest Koganei sales office for details.

Specifications

Item	Model	GS1-50-F11-□-□	
Media		Air	
Maximum operating pressure	psi	120	
Pressure gauge specifications	Operating temperature range (atmosphere and media)	°F 41 to 140	
	Pressure indicator range	psi 0 to 145	
	Indicator accuracy	F.S. ±3%	
Switch specifications	Pressure adjusting range	psi 14.5 to 120	
	Regulating pressure indication error <small>Note 1 and Note 3</small>	psi ±7	
	Repeatability <small>Note 3</small>	psi ±7 (41 to 113°F)	
	Response differential	psi 10 or less	
	Contact type	Micro switch a-contact (NO)	
	Wiring	Standard	Lead wire Length: Approx. 19.7 in. (UL1007 AWG22)
		Options	DIN connector
Indicator	Standard equipment: LED for DC, neon lamp for AC		
Shock resistance	G	1	
Mounting direction	Any		
Mass	oz	6.00 (with DIN connector 6.70)	
Materials	Body	Aluminum die-casting	
	Case	SPCC	
	Connection port thread	Brass	
	Bourdon tube	Brass	

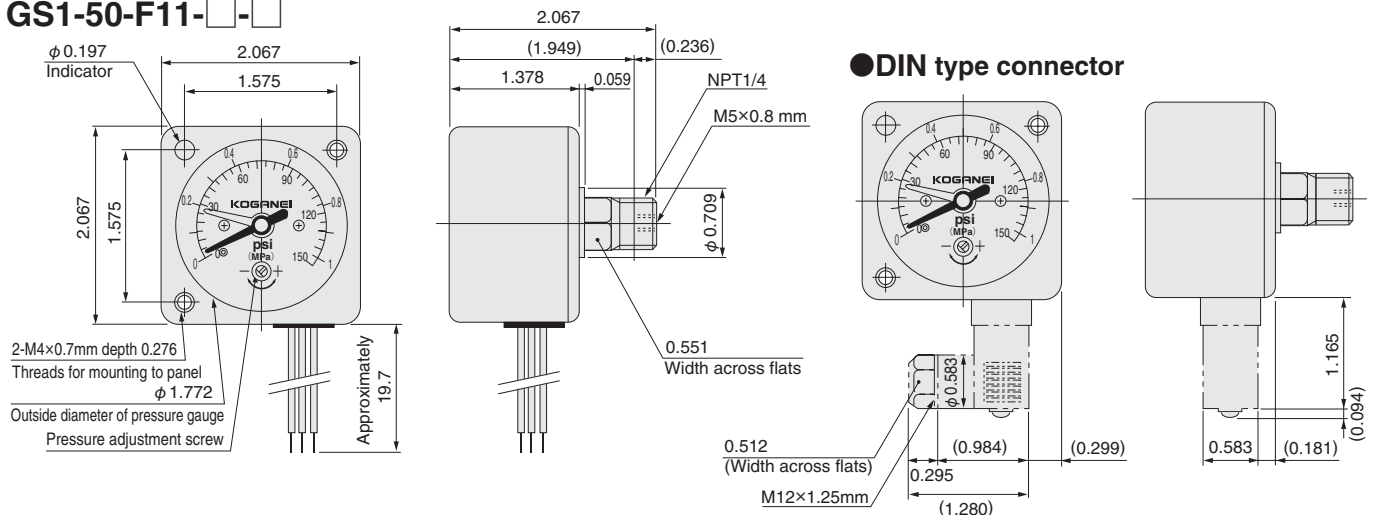
- Notes 1: Shows when the pressure is rising.
 2: Use a set pressure that has a differential of at least 14.5 psi with the supply pressure.
 3: Regulating pressure indicator errors and repeatability errors could be accumulated. (maximum ± 14.5 psi) Be careful during operations.

Micro switch rating

Rated voltage	A			
	DC30V	AC125V	AC250V	
Operating current range				
Inductive load	Continuous	0.05 to 0.1	0.01 to 0.1	0.01 to 0.05
	Inrush	0.5 MAX.	0.5 MAX.	0.2 MAX.
Non-inductive load	0.01 to 0.5	0.01 to 0.3	0.01 to 0.2	

Dimensions of pressure gauge with built-in switch in.

GS1-50-F11-□-□



Handling instructions and Precautions



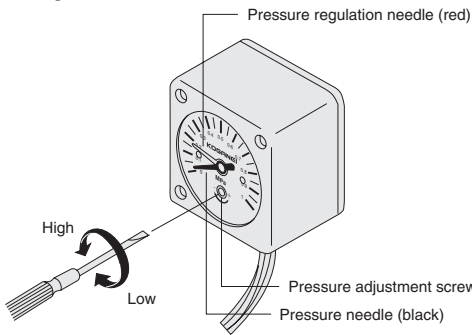
Pressure gauge with built-in switches

Mounting and piping

1. While any mounting direction is acceptable, install a throttle mechanism in cases where pressure pulsation is particularly severe, such as when mounted between a valve and an actuator. For mounting in locations subject to strong vibrations, consult us.
2. During mounting and piping operations, do not grab the pressure gauge body to tighten. For tightening, always use a wrench on the piping connection port hexagonal section. Use a tightening torque of 2.21 to 3.69 ft·lbf if the pressure gauges are mounted on the pressure port plate with NPT1/4.

Pressure regulation

Rotate the pressure adjustment screw, align the pressure regulation needle (red) to the set pressure, and set. Rotating the pressure adjustment screw to the left (counterclockwise) sets to a higher pressure, and rotating it to the right (clockwise) sets to a lower pressure. When the air pressure rises to the set pressure, the switch is activated, and when it falls to less than the setting pressure 10 psi (response differential), the switch is returned to the original state.



1. To regulate the pressure, do not remove the cap on the lens surface, but insert a small screwdriver into a slit in the cap instead, and directly rotate the pressure adjustment screw.
2. The pressure needle has an indication error of ± 7 psi. For fine-tuning adjustment, apply compressed air at the set pressure to check the switch triggering action.

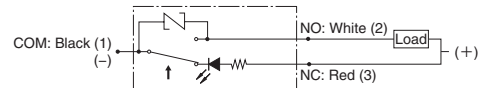
General precautions

1. Use this product to check the supply pressure. For use in precision control circuits, consult us.
2. Switch performance may be degraded in installation locations where the temperature is higher than 113°F or where the humidity is constantly 50% or less. For use in these kinds of places, consult us.
3. If there is silicon gas in the ambient atmosphere, it may cause a contact failure because the contact operation uses micro switches. If there is silicon oil or silicon products in the vicinity of the product, eliminate the source of the silicon gas or use a contact protection circuit (for AC).

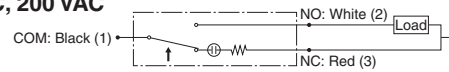
Wiring instructions

Pay attention to the NC and NO contacts and the colors of lead wires (in wires with connectors, the terminal numbers) for wiring. In the diagram below, the numbers in parentheses () represent the terminal numbers, while the \uparrow shows the direction of rising pressure. The indicator lamp switches off when the value is at the set pressure or higher, and lights up as a warning when the value falls below the set pressure.

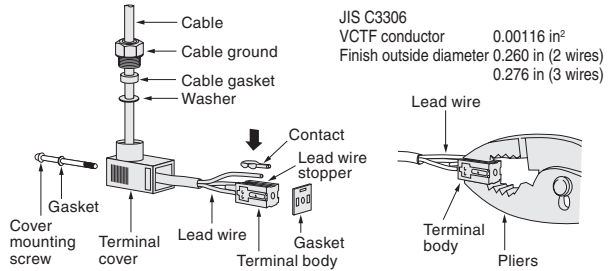
●24 VDC



●100 VAC, 200 VAC



●Wiring instructions with DIN connector



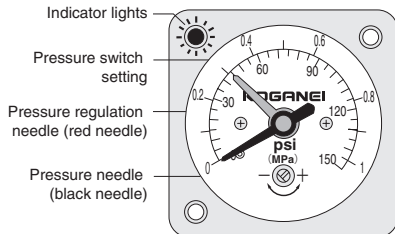
When peeling off the sheath (for cabtyre sheath only), pay attention to the lead wire bending direction. Setting the outer lead wires inside the terminal cover to be about 0.31 in longer than the inner wires can make it easier to mount the terminal body onto the terminal cover. Without peeling off their insulations, insert the lead wires into the terminal body until they bump up against the lead wire stopper, lower the contact from above to the lead wire, and use pliers to push them into firm contact, so that the contacts are touching the core wire.



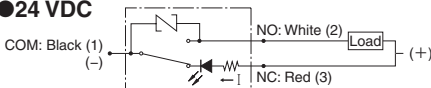
For the connector type, the connector wiring position at time of delivery is in the connecting thread side (back side).

Switch setting method and operations

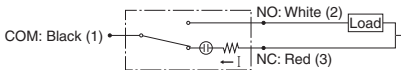
Setting example: Want the switch to activate when the pressure is at 43.5 psi or less.



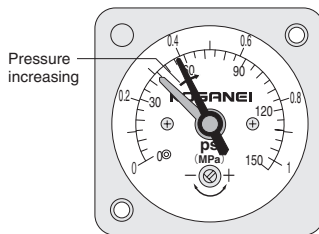
●24 VDC



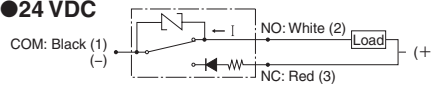
●100 VAC, 200 VAC



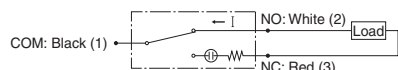
Set the pressure regulation needle (red needle) to 43.5 psi. When the pressure is in the range of 0 to 43.5 psi., the built-in switch remains at NC, as shown in the circuit diagram above, and the indicator lamp lights up.



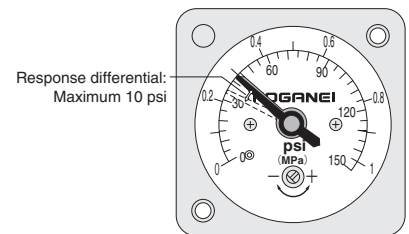
●24 VDC



●100 VAC, 200 VAC



When the pressure supply increases, close to the pressure regulation needle (red needle), the built-in switch flips to NO, as shown in the circuit diagram above, the load current flows, and the indicator lamp goes out. The position at this time is A. At this time switching position A has a maximum 14.5 psi differential in relation to the pressure needle (black needle) because of a pressure needle tolerance of ± 7 psi and repeatability accuracy of ± 7 psi have accumulated.



When the pressure falls, and the pressure needle (black needle) is higher than the pressure regulation needle (red needle), the internal switch changes to NC with a maximum response differential of 10 psi. When this happens, check the switching position and adjust the pressure regulation needle (red needle). Note that NC cannot be used as a load contact. Use the switching of NO to OFF by controlling a relay or other B-contact device.