

Contact Details

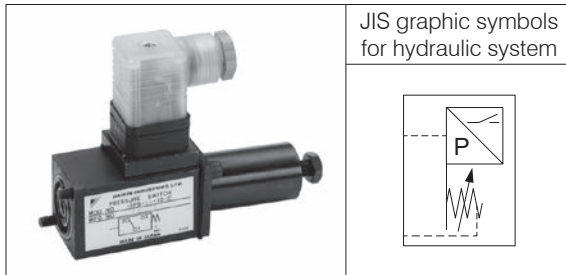
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Pressure Switch



JIS graphic symbols for hydraulic system

Features

- Detects the pressure in the hydraulic circuit and turns the electric circuit on and off.

Nomenclature

JPS - **※** **※** - **10** - **※**
1 2 3 4 5

1 Model No.
 (Applicable fluids: petroleum-based hydraulic oil)
 JPS: J series pressure switch

2 Pressure adjustment range
 1: 0.5 to 7 MPa {5 to 70 kgf/cm²}
 2: 0.5 to 16 MPa {5 to 160 kgf/cm²}
 3: 0.8 to 25 MPa {8 to 250 kgf/cm²}

3 Voltage code
 (Applicable only to the option code CL (with lamp))
 A: AC 100 V (50/60 Hz), AC 110 V (50/60 Hz)
 B: AC 200 V (50/60 Hz), AC 220 V (50/60 Hz)
 P: DC 24 V

4 Design No.
 (The design No. is subject to change)

5 Option code
 No designation: Lead wire type
 C: DIN connector type (without lamp) - Wiring port PG11
 CL: DIN connector type (with lamp) - Wiring port PG11
 CG04: DIN connector type (without lamp) - Wiring port G½

Specifications

Model code	Maximum operating pressure MPa {kgf/cm ² }	Permissible back pressure MPa {kgf/cm ² }	Pressure adjustment range MPa {kgf/cm ² }	Maximum switching frequency Times per minute	Hysteresis MPa {kgf/cm ² }	Repeatability MPa {kgf/cm ² }	Mass kg
JPS-1※-10	25 {250}	2 {20}	0.5 to 7 {5 to 70}	60	0.3 {3} maximum	0.1 {1} maximum	0.72
JPS-2※-10			0.5 to 16 {5 to 160}		0.4 {4} maximum		
JPS-3※-10			0.8 to 25 {8 to 250}		0.5 {5} maximum		

Operating ambient temperature	Operating ambient humidity	Dust-/water-proof property* ²
-15 to 50°C (no freezing)	0 to 85% RH (no condensation)	IEC 529 IP65

Note: *² Only DIN connector types

Model code	Pressure change MPa {kgf/cm ² } per handle revolution
JPS-1※	1.2 {12}/revolution
JPS-2※	2.1 {21}/revolution
JPS-3※	3.1 {31}/revolution

Microswitch specifications

Manufacturer: OMRON Corporation

Model: SS-5-L (DA)

Insulation resistance	Withstand voltage *	Contact resistance (Initial value)	Vibration resistance	Impact resistance	Permissible operation frequency Times per minute		Service life	
					Mechanical	Electrical	Mechanical	Electrical
100 MΩ minimum	(1) AC 1000 V, 1 minute (2) AC 1500 V, 1 minute	(3) 30 mΩ maximum	(4) Contact opening gap 1 ms maximum	(5) Contact opening gap 1 ms maximum	400 (maximum)	30 (maximum)	10 million times	100 thousand times

Note: * Withstand voltage: (1) Between terminals of the same pole
 (2) Between each terminal and ground, between each terminal and non-charged metal section
 (3) DC 6 to 8V, 1 A applied
 (4) Double amplitude: 1.5 mm, vibration frequency: 10 to 55 Hz
 (5) Maximum of 100 m/s² applied in a drop impact test conforming to JIS C 0912.

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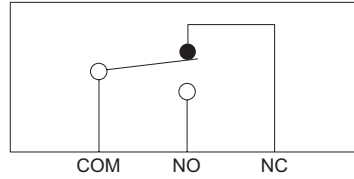
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Microswitch specifications

Rated voltage	Steady current
AC 125 V	5 A
AC 250 V	3 A
DC 30 V	4 A
DC 125 V	0.4 A

Note: ○ The current values indicated are the values with the resistance load applied.
○ Minimum applicable load: DC 5 V, 160 mA

● Contact type (single pole double throw type)



Microswitch terminals
COM: COMMON
NO: NOMALLY OPEN
NC: NOMALLY CLOSED

Handling

- When directly switching the DC solenoid valve, use a solenoid valve with surge killer.

Wiring guide and operation description

	Lead wire type	DIN connector type (without lamp)	DIN connector type (with lamp)
Wiring diagram			
Operation description	<p>▼ When the circuit pressure is lower than the set pressure</p> <p>▲ When the circuit pressure is higher than the set pressure</p>	<p>▼ When the circuit pressure is lower than the set pressure</p> <p>▲ When the circuit pressure is higher than the set pressure</p>	<p>▼ When the circuit pressure is lower than the set pressure</p> <p>▲ When the circuit pressure is higher than the set pressure</p>
	<p>With connection between black and red</p> <p>▼ When the circuit pressure is lower than the set pressure, the electric circuit is turned off (open)</p> <p>▲ When the circuit pressure is higher than the set pressure, the electric circuit is turned on (closed)</p>	<p>With connection between 1 and 3</p> <p>▼ When the circuit pressure is lower than the set pressure, the electric circuit is turned off (open)</p> <p>▲ When the circuit pressure is higher than the set pressure, the electric circuit is turned on (closed)</p>	<p>Between 2 and 3: Connect the power supply</p> <p>Between 1 and 2: Connect the load</p>
	<p>With connection between black and white</p> <p>▼ When the circuit pressure is lower than the set pressure, the electric circuit is turned on (closed)</p> <p>▲ When the circuit pressure is higher than the set pressure, the electric circuit is turned off (open)</p>	<p>With connection between 1 and 2</p> <p>▼ When the circuit pressure is lower than the set pressure, the electric circuit is turned on (closed)</p> <p>▲ When the circuit pressure is higher than the set pressure, the electric circuit is turned off (open)</p>	<p>▼ When the circuit pressure is lower than the set pressure, the electric circuit is turned off (open) Lamp off</p> <p>▲ When the circuit pressure is higher than the set pressure, the electric circuit is turned on (closed) Lamp lit</p> <p>Note: Do not connect the load between 1 and 3.</p>

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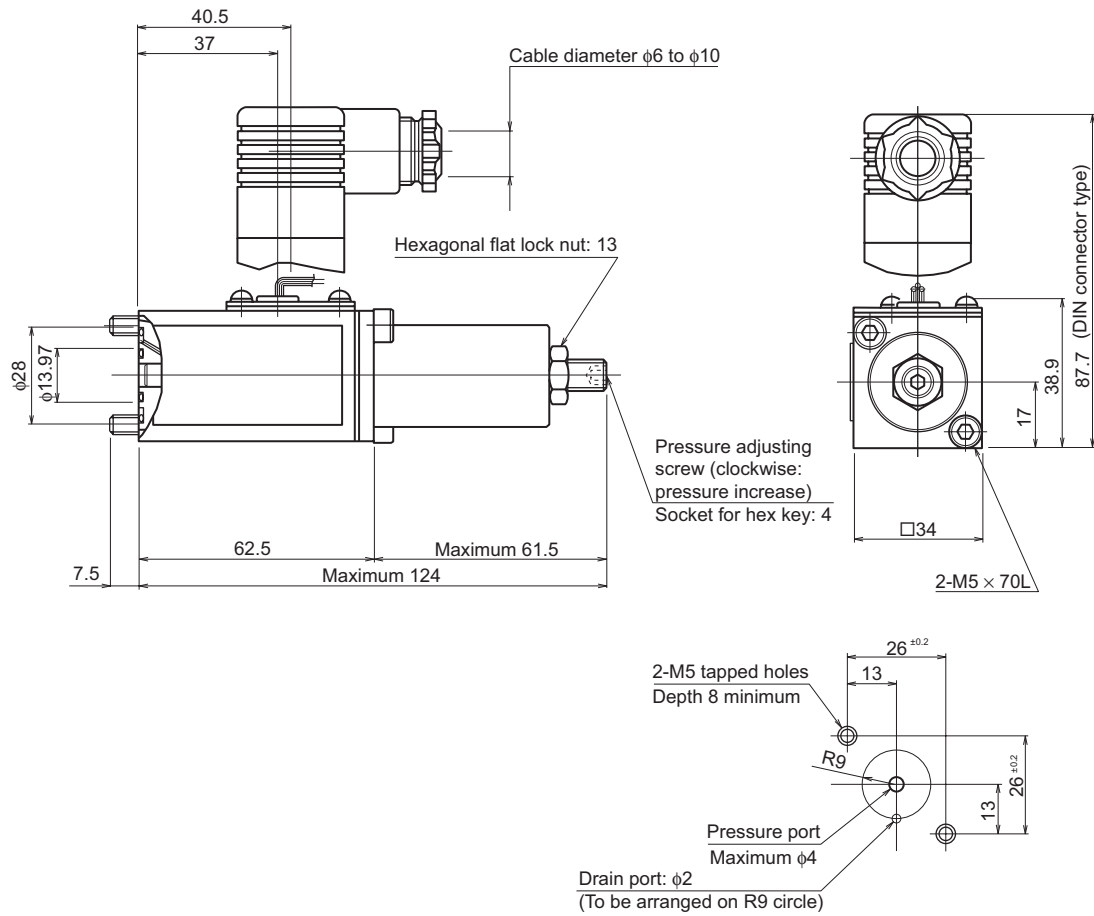
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External dimension diagram

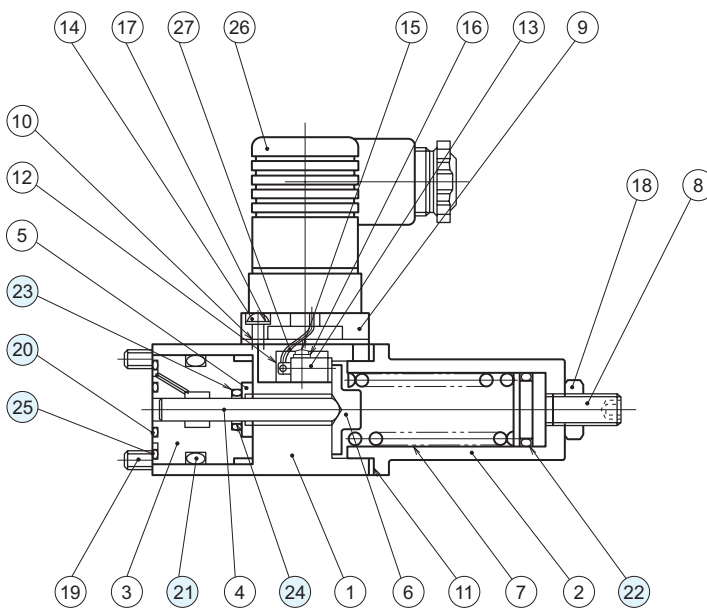
JPS-※※-10 (C)



Detail of installation dimensions

Sectional structural diagram

JPS-※※-10-C



Sealing part table

Part No.	Name	Adjustment range	Quantity	Part No.
24	Sealing ring	Type 1	1	HP12776
		Type 2	1	HP12777
		Type 3	1	HP12778

Part No.	Name	Quantity	Part specifications
20	O-ring	1	AS568-013 (NBR, Hs90)
21	O-ring	1	JIS B 2401 1A P22A
22	O-ring	1	JIS B 2401 1A P15
23	O-ring	1	Type 1: JIS B 2401 1A P8
		1	Type 2: JIS B 2401 1A P7
		1	Type 3: JIS B 2401 1A P6
25	O-ring	1	JIS B2401 1B P21