Pressure Switch Modular Valve

50ℓ/min
25MPa

D

Modular Valve

Features

① This modular valve detects pressure changes inside the hydraulic circuit and opens and closes an electrical circuit accordingly.

② High precision detection, high precision circuit control, outstanding reliability.

③ Maximum operating pressure: 25MPa {255kgf/cm²}

④ Indicator light built into the DIN connector shows operational status at a glance.

⑤ A double type is also available for control of both port A and port B in a compact configuration.

Specifications

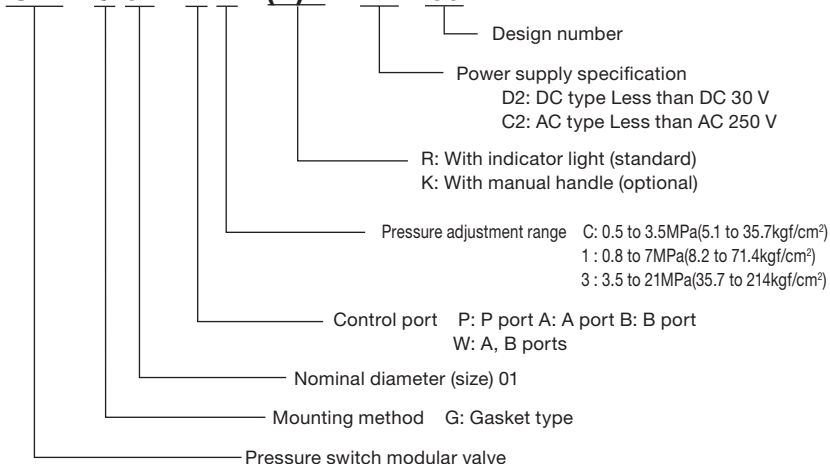| Model No.	Nominal Diameter (Size)	Maximum Working Pressure MPa{kgf/cm²}	Maximum Flow Rate ℓ/min	Pressure Adjustment Range MPa{kgf/cm²}	Weight kg	Gasket Surface Dimensions
OW-G01-PC-R-**-30 P1 P3	1/8	25{255}	50	0.5 to 3.5{ 5.1 to 35.7} 0.8 to 7{ 8.2 to 71.4} 3.5 to 21{35.7 to 214}	1.8	ISO 4401-03-02-0-05
OW-G01-AC-R-**-30 A1 A3				0.5 to 3.5{ 5.1 to 35.7} 0.8 to 7{ 8.2 to 71.4} 3.5 to 21{35.7 to 214}	1.8	
OW-G01-BC-R-**-30 B1 B3				0.5 to 3.5{ 5.1 to 35.7} 0.8 to 7{ 8.2 to 71.4} 3.5 to 21{35.7 to 214}	1.8	
OW-G01-WC-R-**-30 W1 W3				0.5 to 3.5{ 5.1 to 35.7} 0.8 to 7{ 8.2 to 71.4} 3.5 to 21{35.7 to 214}	2.6	

Electrical Specifications Micro Switch Manufacturer: Omron Model No. SS-5	Contact Capacitance (Resistive Load)	AC	125V	5A
			250V	3A
		DC	14V	5A
			30V	4A
	Mechanical Life	At least 1×10^7		
	Electrical Life	At least 3×10^6 (AC,0.1A,cosϕ =1)		
	Contact Resistance	30MΩ maximum (initial value)		
	Insulation Resistance	At least 100MΩ		
	Allowable Operating Frequency	60 times/minute (electrical)		
Operating Environment	Dust Resistance/Water Resistance Rank	JIS C0920 IP64		
	Ambient Temperature	-20°C to 70°C (non-condensation)		
Operating Fluid	Oil Temperature	-20°C to 70°C	Use a fluid that is within both ranges.	
	Allowable kinematic viscosity Range	15 to 300mm²/s{cSt}		
	Filtration	25μm maximum		

● Handling

1 See the detailed explanation on the next page for information about wiring inside connectors.

2 Contacts are normally open type only, not normally closed type.

3 In addition to load wiring, power supply wiring is also required to illuminate the indicator light. See the wiring diagram for more information.

4 If the DIN connector interferes with other valves, remove the two switch installation bolts and change the installation orientation.
If interference is caused in all orientations, install an interference blanker plate on top of the connector.
Contact your agent if an interference blanker plate is required.

5 Note that a special type of DIN connector is required. The DIN connector is not interchangeable with the one for the SA type solenoid valve.

6 If you cannot remove the DIN connector when wiring, remove the switch installation bolts and then remove the DIN connector. The tightening torque for the installation bolts is 5 to 7Nm {51 to 71kgf/cm}.

7 This valve has drain volume the same as the OG-GO1 (decompression valve) the port for detecting structural pressure.

8 Do not include inductive components or capacitive components in the loaded circuit that connects to the valves because they significantly reduce the life of the micro-switches. Contact us for details.

Explanation of model No.

**OW – G 01 – P 1 – (K)R – D2 – 30**

- Design number
- Power supply specification
  - D2: DC type Less than DC 30 V
  - C2: AC type Less than AC 250 V
- R: With indicator light (standard)
- K: With manual handle (optional)
- Pressure adjustment range C: 0.5 to 3.5MPa(5.1 to 35.7kgf/cm²)
  - 1 : 0.8 to 7MPa(8.2 to 71.4kgf/cm²)
  - 3 : 3.5 to 21MPa(35.7 to 214kgf/cm²)
- Control port P: P port A: A port B: B port
  - W: A, B ports
- Nominal diameter (size) 01
- Mounting method G: Gasket type
- Pressure switch modular valve

● Connectors

Model No.	Power supply specification	Wiring	Electrical Circuit Diagram
BRC41-01WD2	D2	◎When signal input device (load) remote common is plus OW Terminal 1 is connected to load, while Terminals 2 and 3 are connected to power (Terminal 2 to +). OW, 1 INPUT-1, Load (LOAD), INPUT-2, Load (LOAD), C, LED, NO, 2, 3, Signal input device (+) common mode, (−) (+), DC12 to 24(V) ◎When signal input device (load) common is minus OW Terminal 1 is connected to load, while Terminals 2 and 3 are connected to power (Terminal 2 to –). OW, 1 INPUT-1, Load (LOAD), INPUT-2, Load (LOAD), C, LED, NO, 2, 3, Signal input device (−) common mode, (+) (−), DC12 to 24(V)	Normal open type with indicator DIN connector, 1, 2, 3, LED, C, NO, Switch inside of valve Pressure increase causes indicator to light. Circuit closed (ON) Pressure decrease causes indicator to go out. Circuit open (OFF)
BRC41-01WC2	C2	◎When signal input device (load) is AC OW Terminal 1 is connected to load, while Terminals 2 and 3 are connected to power (Terminal 2 is nonpolar). OW, 1 INPUT-1, Load (LOAD), INPUT-2, Load (LOAD), C, NO, 2, 3, Signal input device (AC spec), AC100 to 200(V)	Normal open type with indicator DIN connector, 1, 2, 3, Neon lamp, C, NO, Switch inside of valve Pressure increase causes indicator to light. Circuit closed (ON) Pressure decrease causes indicator to go out. Circuit open (OFF)

Note) 1. The DIN connector wiring connector port size is PG11.
    2. The compatible cable diameter for the DIN connector is ϕ8 to ϕ10. Dust resistance and water resistance is lost for any cable outside this range.
    3. The connector can be installed in different orientations are 90-degree increments by changing the orientation of the terminal block.
    4. The connector is designed so the cover cannot be removed unless the installation screws are removed.
    5. Use M3 for round type and Y type solderless terminals.
    6. The tightening torque of M3 screws used for securing connectors and for terminals is 0.3 to 0.5Nm.
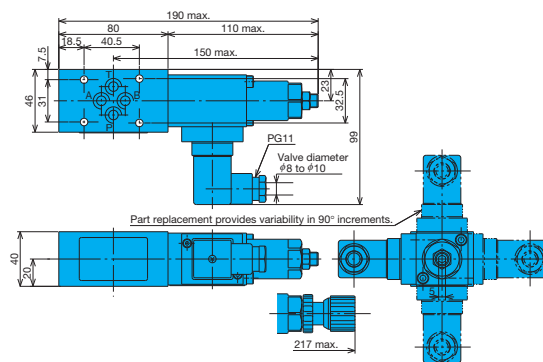
Installation Dimension Drawings

Note) Pressure is increased by clockwise (rightward) rotation of the adjusting screw, and decreased by counterclockwise (leftward) rotation.
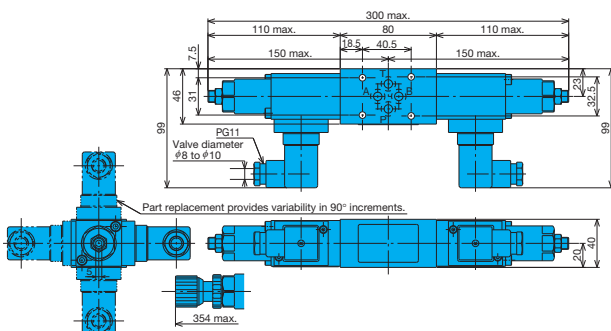
OW-G01-$\frac{P}{A}$*-R-*2-30
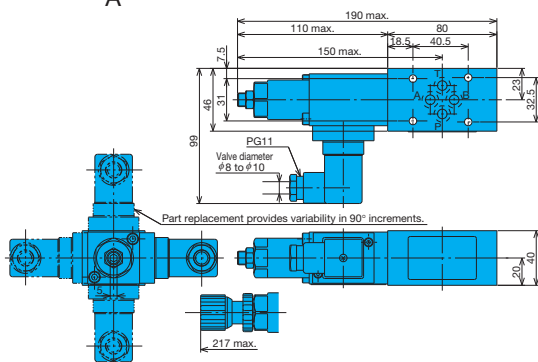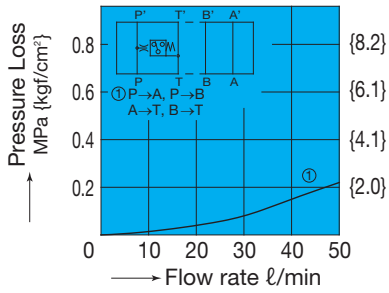

OW-G01-B*-R-*2-30

OW-G01-W*-R-*2-30

Performance Curves
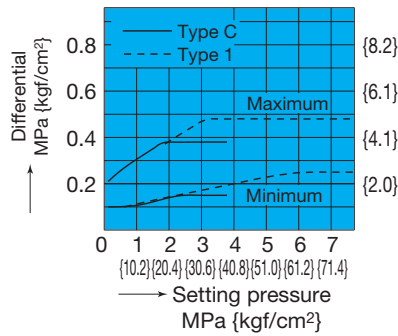
Hydraulic Operating Fluid Kinematic Viscosity 32mm²/s
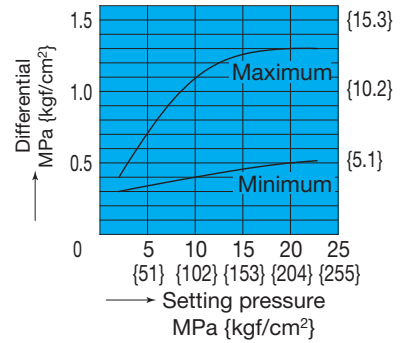
Pressure Loss Characteristics
OW-G01-**-R-**-30

- Pressure Loss MPa {kgf/cm²}
- ① P→A, P→B / A→T, B→T
- Flow rate ℓ/min

Setting Pressure — Differential Characteristics
OW-G01-*$^C_1$-R-**-30

- Differential MPa {kgf/cm²}
- Type C / Type 1
- Maximum / Minimum
- Setting pressure MPa {kgf/cm²}

OW-G01-*3-R-**-30

- Differential MPa {kgf/cm²}
- Maximum / Minimum
- Setting pressure MPa {kgf/cm²}

Number of Adjusting Screw Rotations — Pressure Characteristics
OW-G01-**-R-**-30

- Pressure MPa {kgf/cm²}
- Type 3 / Type 1 / Type C
- Number of adjusting screw rotations
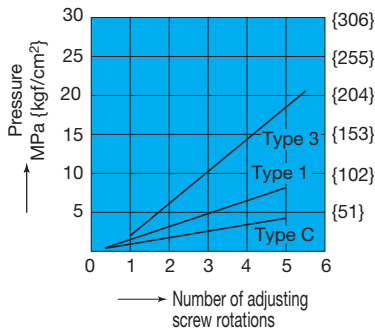
Cross-sectional Drawing

OW-G01-P*-R-*2-30
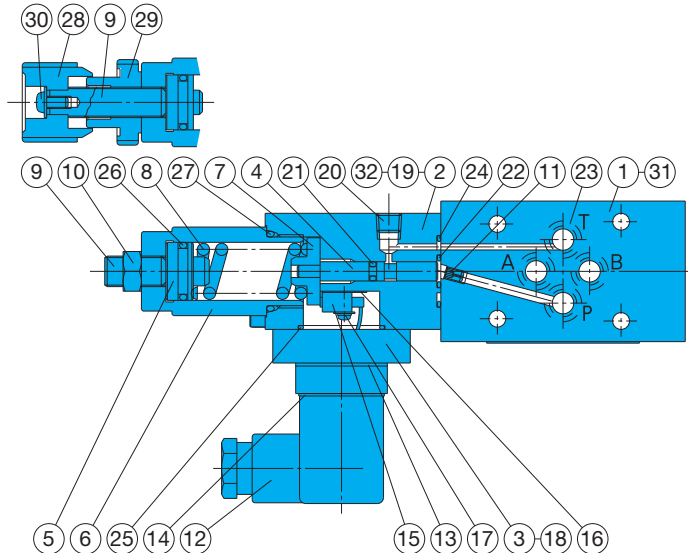
Part No.	Part Name	Part No.	Part Name
1	Body	17	Screw
2	Cover	18	Screw
3	Cover	19	Screw
4	Piston	20	Plug
5	Push rod	21	O-ring
6	Retainer	22	O-ring
7	Guide	23	O-ring
8	Spring	24	O-ring
9	Screw	25	O-ring
10	Nut	26	O-ring
11	Choke	27	O-ring
12	Connector	28	Knob
13	Gasket	29	Nut
14	Gasket	30	Screw
15	Micro switch assy	31	Plate
16	Separator	32	Plate

Seal Part List (Kit Model Number BRCS-01W*-0A)

Part No.	Part Name	Part Number	Q'ty P	W	A	B
21	O-ring	NBR-70-1 P3	1	2	1	1
22	O-ring	AS568-011(NBR-90)	1	2	1	1
23	O-ring	AS568-012(NBR-90)	4	4	4	4
24	O-ring	AS568-019(NBR-70-1)	1	2	1	1
25	O-ring	AS568-022(NBR-70-1)	1	2	1	1
26	O-ring	NBR-70-1 P15	1	2	1	1
27	O-ring	NBR-90 P22	1	2	1	1

Note) Specify P, W, A, or B for the asterisk (*) in the kit model number.

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