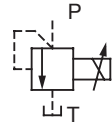


Electro-hydraulic Proportional Pilot Relief Valve

1.2ℓ/min
0.3 to 35MPa



Features

This DC solenoid relief valve matches the suction force of a DC solenoid with fluid pressure. When connected to a small-volume hydraulic system or the

poppet of a balanced piston type pressure control valve, this valve provides continual pressure control in proportion to input current.

Specifications

Item	Model No.	EPR-G01-*-*-*-12
Rated Current ℓ/min		1.2
Pressure Control Range MPa{kgf/cm ² }		B:0.3 to 2.5 { 3.1 to 25.5 } 1:0.7 to 7 { 7.1 to 71 } 2:1.0 to 14 { 10 to 143 } 3:1.5 to 21 { 15.3 to 214 } 4:1.5 to 28 { 15.3 to 286 } 5:2.0 to 35 { 20 to 357 }
Rated Current mA		800
Coil Resistance Ω		20 (20°C)
Hysteresis %		3 max. (Note)
Weight kg		1.6

Note) Value when a Nachi-Fujikoshi special amplifier is used (with dithering).

Explanation of model No.

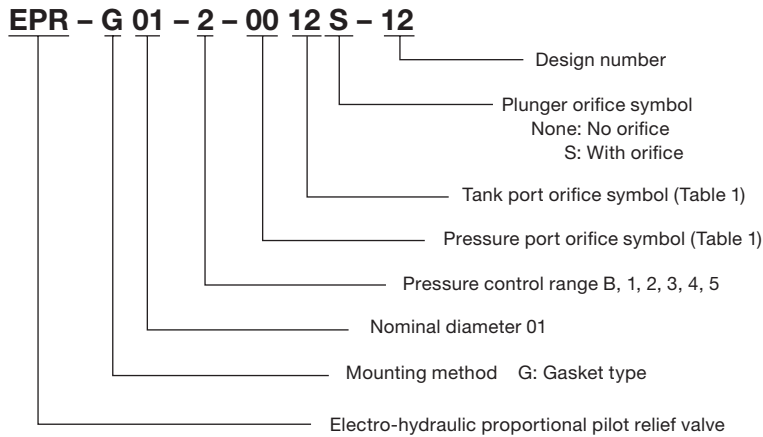


Table 1 Pressure Port and Tank Port Orifice Symbols

Orifice Symbol	00	08	09	10	11	12	13
Orifice Diameter	None	φ 0.8	φ 0.9	φ 1.0	φ 1.1	φ 1.2	φ 1.3

Note) The following are the standards for the orifice auxiliary symbols.

Pressure Control Range	Orifice Auxiliary Symbol
Type B, Type 1	0013S
Type 2, Type 3	0012S
Type 4	1212S
Type 5	1111S

● Handling

1 Air Bleeding

To enable proper pressure control, loosen the air vent when starting up the pump in order to bleed any air from the pump, and fill the inside of the solenoid with hydraulic operating fluid. The position of the air vent can change by loosening the M4 screw and rotating the cover.

2 Mounting Method

Mounting on a vertical surface causes minimum pressure to increase by 0.2MPa {2kgf/cm²}.

3 Manual Pressure Adjusting Screw

For the initial adjustment or when there is no input current to the valve due to an electrical problem or some other reason, valve pressure can be increased by rotating the manual adjustment screw clockwise (rightward). Normally, the manual adjusting screw should be rotated back fully to the left (counterclockwise) and secured with the lock nut.

4 Minimum Relief Flow Rate

A small flow rate can cause setting pressure to become unstable. Use a flow rate of at least 0.3ℓ/min.

5 Load Capacity

When using this valve to control direct circuit pressure, make sure the load volume (valve P port side volume) is at least 40cm³.

6 Bundled Accessories (Valve Mounting Bolts)

M5 x 45ℓ(four) Tightening torque: 5 to 7N·m {51 to 71kgf·cm}

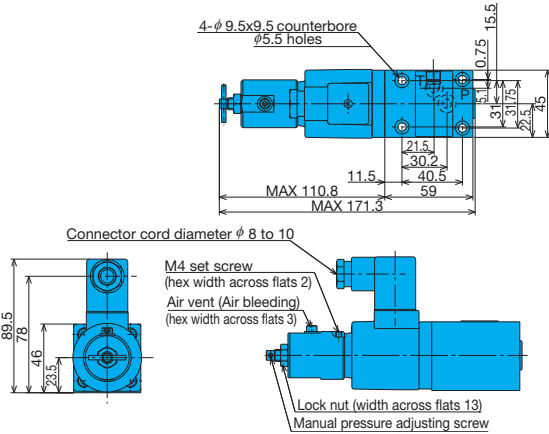
7 Sub Plate

When a sub plate is required, order using the following model number. MSA-01Y-10 (See the next page for dimensions.)

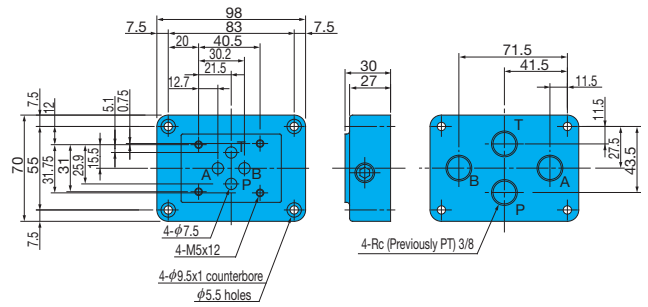
8 Use an operating fluid that conforms to the both of the following. Oil Temperature: -20 to 70°C Kinematic Viscosity: 12 to 400mm²/s. The recommended kinematic viscosity range is 15 to 60mm²/s.

Installation Dimension Drawings

EPR-G01



Sub Plate
MSA-01Y-10

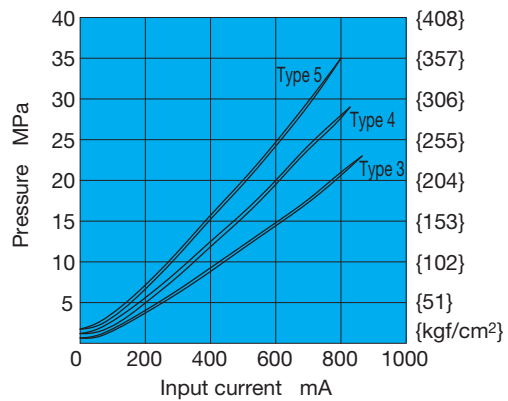
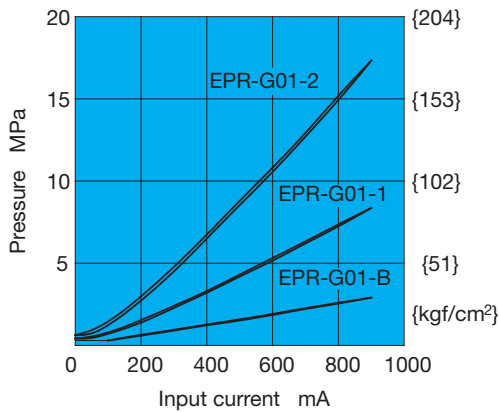


Note) Install the sub plate so the valve's P port is aligned with the sub plate's B port.
The gasket surface dimensions comply with the ISO standard shown below.
ISO 4401-03-02-0-05

Performance Curves

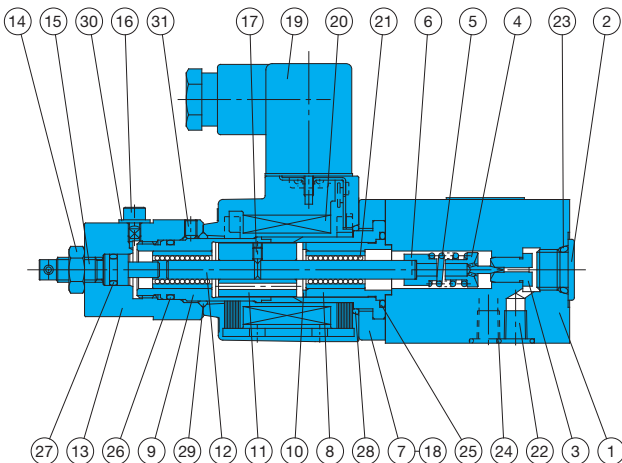
Hydraulic Operating Fluid Kinematic Viscosity 32mm²/s

Input Current – Pressure Characteristics



Cross-sectional Drawing

EPR-G01-*-*-*-12



Part No. Part Name

1	Body
2	Plug
3	Seat
4	Poppet
5	Spring
6	Retainer
7	Cover
8	Stopper
9	Guide
10	Shim
11	Plunger
12	Rod
13	Cover
14	Nut
15	Screw
16	Screw
17	Screw
18	Screw
19	Connector
20	Coil
21	Ball bush
22	Choke
23	O-ring
24	O-ring
25	O-ring
26	O-ring
27	O-ring
28	O-ring
29	O-ring
30	Seal
31	Screw

Seal Part List (Kit Model Number JPS-G01-1A)

Part No.	Part Name	Part Number	Q'ty
23	O-ring	NBR-90 P11	1
24	O-ring	NBR-90 P9	2
25	O-ring	NBR-90 P22	1
26	O-ring	AS 568-016 (NBR-90)	1
27	O-ring	NBR-90 P7	1
28	O-ring	S-25 (NBR-70-1)	1
29	O-ring	NBR-70-1 P20	1
30	Seal	WF-4-7.4-1.0	1

Note) Coil model number JD64-D2

Note) The materials and hardness of the O-ring conforms with JIS B2401.