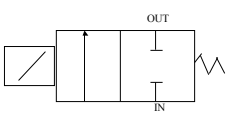
Series DW/DWS

2 Port Solenoid Valve

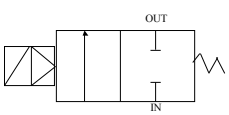
WIDER RANGE OF OPERATING PRESSURE
0 ~ 7kgf/㎠ (DW 03)
0 ~ 10kgf/㎠ (DW10,15)
0.3 ~ 10kgf/㎠ (DW20, 25)
HIGH FLOW CAPACITY
LOW VOLTAGE SOLENOID
CAN BE MOUNTED ANYWHERE

Symbol

Direct Acting Type (N.C)



Air Pilot Type (N.C)



How to Order DW / DWS

(U) DW 10 — 1 C — 01 ○ VC
1 2 3 4 5 6 7 8

① Series
Blank: Rc(PT)
U: NPT

② 2 Port Solenoid Valve
Applicable Fluid
DW : Water, Air, Oil (Highest temperature: 60°C)
DWS : Steam (Highest temperature: 180°C)

③ Body(Orifice Size)
03 : 2.5-Direct Type Solenoid
10 : 10
15 : 15
20 : 20
25 : 25
Pilot Type Solenoid

④ Voltage
1: AC110V, 60㎐ / AC100V, 50/60㎐
2: AC220V, 60㎐ / AC200V, 50/60㎐
5: DC24V
9: Others

⑤ Electrical Entry
G : Grommet (only Rc(PT) 1/8)
C : Connector

⑥ Port Size Rc(PT)
01 : 1/8 **04** : 1/2
02 : 1/4 **06** : 3/4
03 : 3/8 **10** : 1

⑦ Material
Blank: Standard
S : SUS Type

⑧ VC : Vacuum Type(-100kpa)
(AC Voltage)
Note: **All valves DWS can bear. max pressure 0~7kgf/cm²**

Standard Specifications

Applicable			Air, Water, Oil, Steam
Proof Pressure			1.5MPa(213.35psi)
Fluid Temperature			0~70°C(32°F~158°F)
Ambient and Fluid Temperature			Max. 60°C(140°F)
Electrical Entry			Grommet, Connector
Actuation Type			Direct or Pilot Solenoid
Valve Type			Normal Close
Seat Type			Poppet
Rated Voltage	AC (50/60Hz)		100V, 200V
	DC		24V
Allowance Voltage Range			Rated Voltage ±10%
Coil Insulation			Class B or Equivalent 110°C(230°F)
Power Consumption	AC	Inrush	17VA (60Hz)
		Holding	15VA (60Hz)
	DC		11W
Material	Body		BC 6
	Seal		NBR

Series DW

Applicable Specifications

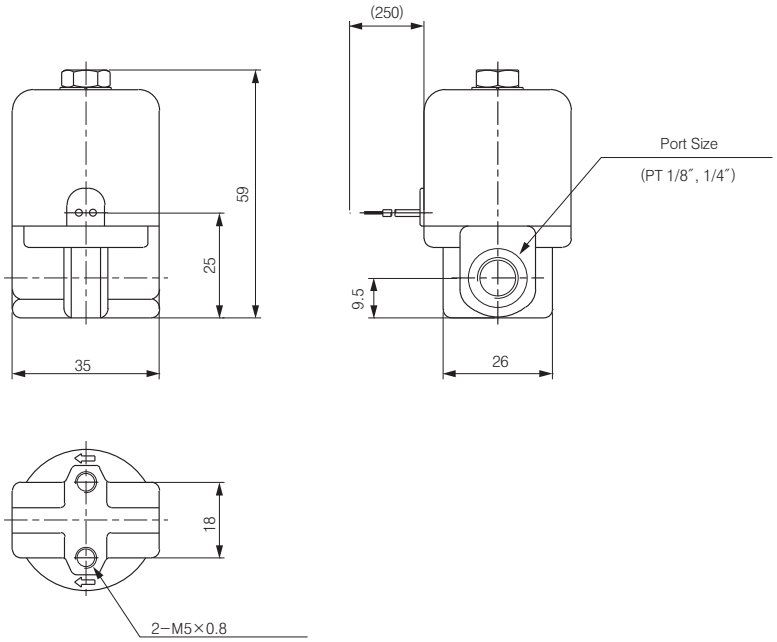
Coil Apparent Power	AC110, 220V(50/60㎐)
	DC 6, 12V
Body Material	Stainless steel(SCS13)
Coil Insulation	H Class(180°C)(356°F)
	AC100, 110, 200, 220V Only

Model

Type	Port (Size)	Pressure		Orifice Size (mm)	Effective Orifice (mm^2)	Weight (kg)
DW03- G-0`1	1/8(6A)	0~0.7MPa (0~99.5psi)		2.5	6	0.3
DW03- G-0`2	1/4(8A)			2.5	6	0.3
DW10- C-0`2	1/4(8A)	AC : 0~1MPa (0~140.2psi)	DC: 0.03~0.7MPa (4.27~99.5psi)	10	34	0.5
DW10- C-0`3	3/8(10A)			10	43	0.5
DW15- C-0`4	1/2(15A)			15	160	0.7
DW20- C-0`6	3/4(20A)	0.03~1MPa (4.27~140.2psi)		20	170	0.9
DW25- C-10	1(25A)			25	225	1.2

Direct Type

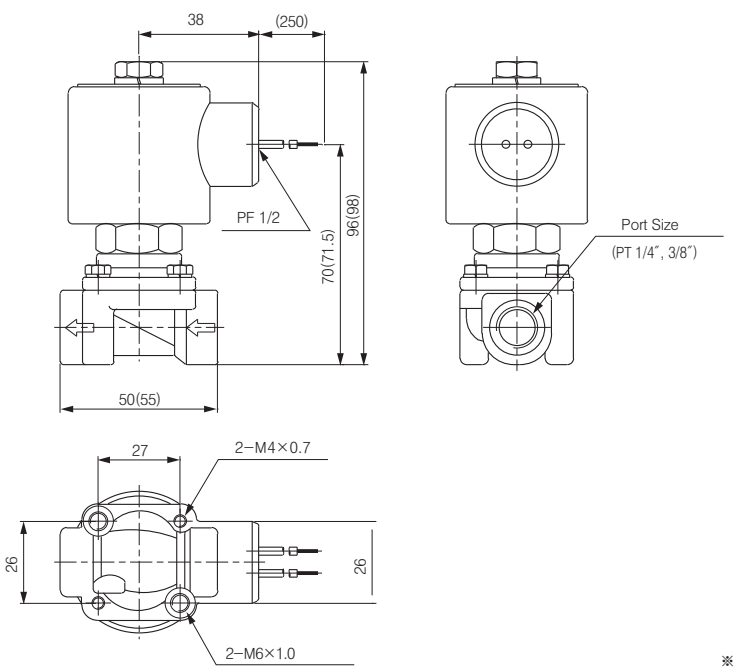
DW ○ 03 - ○ - 01 / 02



※ ( ) is for DC24V

Pilot Type

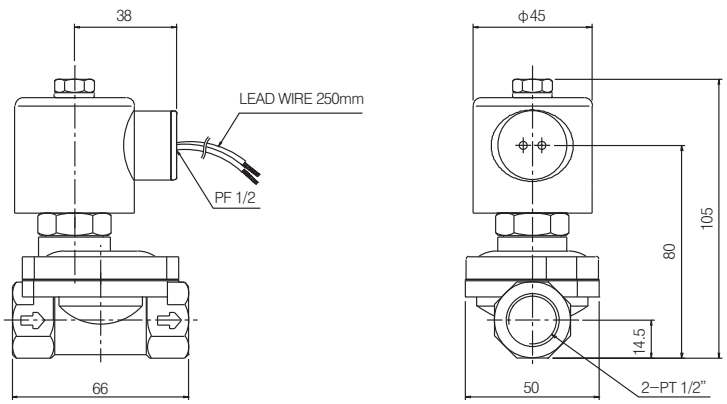
DW ○ 10 - ○ - 02 / 03



※ ( ) is for DC24V

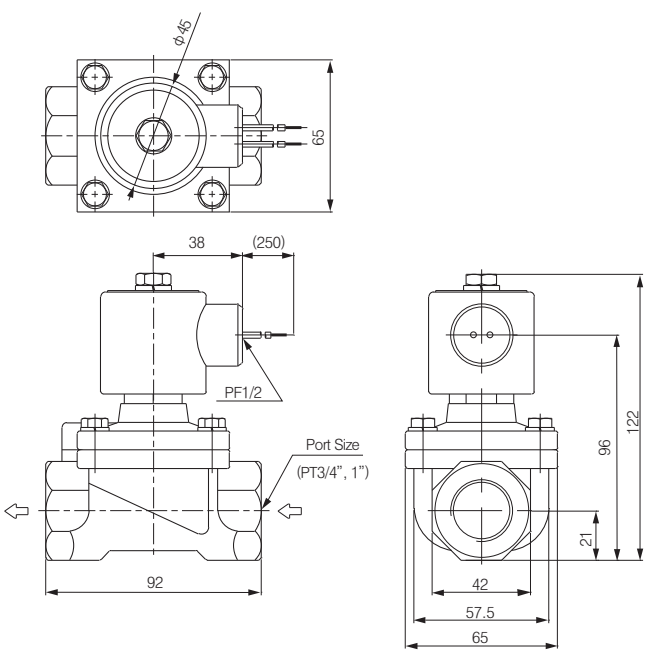
Pilot Type

DW ○ 15 - ○ - 04



Pilot Type

DW ○ 20 - ○ - 06
DW ○ 25 - ○ - 10



⚠ Precautions

Piping

❶ The piping should be thoroughly flushed to remove sludge, cutting oil and dust.
❷ During piping and coupling connection, care should be taken so as to prevent contamination by cut thread chips or sealing materials.(one screw thread should extend beyond the tape when applying sealing tape to threads)
❸ Be sure to pay attention to the piping direction(IN, OUT). IN or other marks are indicated on the inlet side.
❹ It is preferred that the coil should not be subjected to an extended force. Be sure to apply a wrench to the outside of the pipe mounting area only when tightening.
❺ Grounding the piping system should be avoided. Otherwise electrolytic corrosion may occur.
❻ It is preferred to install a relief valve within the circuit so as to prevent collection of fluid within the piping circuit.

Mounting

❶ It is preferred that the solenoid valve can be installed in any orientation. Foreign material in the fluid is liable to adhere to the core when mounted upside down. Avoid installation. Be sure to mount the valve with its coil facing up.
❷ Coil assemblie warm with insulating material etc should be avoided. The coil may burn out. Anti-freezing tape, heater, etc. Should be applied to piping and body areas only.
❸ Placing the valve in areas of severe vibration is avoided. Otherwise, the arm to a minimum to avoid resonance may be shortened.

Storage

It is preferred that in other to prevent corrosion and deterioration of rubber parts, long time storage after using the valve for water will require complete removal of moisture.

Long Period Energization or De-energization

The valve switching period is determined based on the type and quality of the fluid. The valve should be switched at least once every 10 days when pure water is taken as a standard. A system check mechanism should be installed if the cycle is greater than 10 days. The valve should not be used as an emergency circuit breaker. Be sure to specify operational conditions for use under conditions similar to that.

Fluid Temperature

Be sure to check the temperature range for each model. The temperature range changes according to the sealing material, coil insulation, power, supply, etc. Contact our representative for use other than standard use.

Wiring

❶ Be sure to check that the minimum diameter for 0.5mm².
❷ It is preferred to use an electric circuit which prevents chattering at the point of contact.
❸ It is preferred to place a surge suppressor in parallel with the solenoid voltage suppressor (option) when the electric is apt to be damaged by surge voltage.
❹ Be sure to check that the allowable voltage range is −10%~+10% of the rated voltage. In event that great response is desired for DC power, it is needed to adjust the voltage range to within ±5% of the rated voltage. Voltage drop is measured at a part of the lead wire connected to the coil.
❺ Be sure to check that the voltage found on both ends of the coil is AC:20% or less of the rated voltage DC:2% or less of the rated voltage when it de-energizes.
Here, the DC value is for a temperature of 20±5℃.
At lower temperatures, the DC value will be lower.

Applicable Fluid

❶ Fluid Classification
When selecting a valve for your application, ensure the compatibility of the fluid and valve materials. Generally, the recommended viscosity of fluid is 50cSt max.
For futher details, contact our representative.
〈Reference〉 Standard materials
Body:Brass or BC6 Seal:NBR, Coil:Insulation Type B.
These are for water, air, and oil use. For materials other than standard, refer to the "Option list" and "Applicable fluid check list." The specifications may be slightly different.

❷ Fluid Quality
Wearing of the valve seat and iron core. may be promoted by fluid mixed with foreign material. Function of the valve or sealing trouble may be on adhesion of foreign particles to the iron core and sliding section. So as to prevent this, it is preferred to place a filter(strainer)immediately in front of the solenoid valve. In general, a mesh of 80~100 is recommended.
❸ Lubricant
Lubricant is not needed in our solenoid valves. However, be sure to check that lubricated air will increase their life.
❹ When flammable oil and gas is supposed to be used, prevention of leakage both inside and outside of the valve should be exercised.
❺ When oil and other impurities are not allowed in the fluid, be sure to use nonlube treated parts.
❻ The option and fluid may not be applicable as they are since only general applications are shown. It is needed to check actual conditions on your own for appropriate selection under conditions near the limit of valve operation.