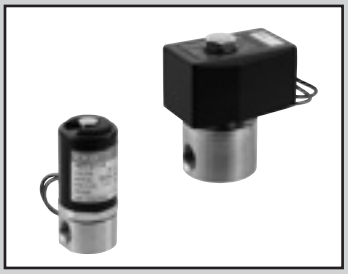


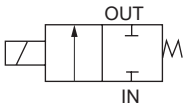
High corrosion resistant direct acting 2-port solenoid valve

HB Series

- NC (normally closed)
- Working fluid: Water/pure water/chemical liquids
- Port size: M5, Rc1/8, Rc1/4, Rc3/8

JIS symbol

● NC (normally closed)



Common specifications

Item	HB11/21/31/41
Working fluid	Water/pure water/chemical liquids (fluids that do not corrode wetted part materials)
Proof pressure MPa	1.5(HB11), 2(HB21/31/41)(water pressure)
Working pressure MPa	0 to 0.7 (refer to working pressure in individual specifications.)
Fluid temperature °C	-10 to 60 (no freezing)
Valve seat leakage cm^3/min	0 (water pressure), PTFE sealant: 300 or less (air)
Mounting orientation	Unrestricted
Treatment	Oil-prohibited
Electrical specifications	
Rated voltage	100 VAC (50/60 Hz), 200 VAC (50/60 Hz), 12 VDC, 24 VDC

*1: The AC rated voltage will be converted to DC by the diode integrated into the coil.
*2: Make sure to read the safety precautions on pages 3 to 8 before use.

Individual specifications

Item / Model No.	Connection Bore size	Orifice size (mm)	Cv	Working pressure (MPa)	Ambient temperature° (°C)	Power consumption (w)	Weight (kg)
HB11-M5-1	M5	1.0	0.03	0 to 0.7	−20 to 50	AC: 4 DC: 3	0.10
HB11-M5-2		1.5	0.06	0 to 0.3			
HB21-6-1	Rc1/8	1.6	0.09	0 to 0.7		4	0.16
HB21-6-2		2.3	0.18	0 to 0.3			
HB21-6-3		3.2	0.3	0 to 0.08			
HB31-6-3	Rc1/4	3.0	0.31	0 to 0.4	−20 to 60	11	0.52
HB31-8-3							
HB41-8-5		4.0	0.48				0.69
HB41-10-5	Rc3/8						
HB41-8-7	Rc1/4	7.0	0.82	0 to 0.08			
HB41-10-7	Rc3/8						

How to order

HB11
HB21
HB31 - **6** - **3** - **L** - **5A** - **AC100V**
HB41

Model No.

Ⓐ Port size

Ⓑ Orifice size

Ⓒ Seal

Ⓓ Coil system

Ⓔ Rated voltage *2

Code	Description	Model No. HB11	HB21	HB31	HB41
Ⓐ Port size					
M5	M5	●			
6	Rc1/8		●	●	
8	Rc1/4			●	●
10	Rc3/8				●
Ⓑ Orifice size					
	HB11 / HB21 / HB31 / HB41				
1	ø1 / ø1.6 / - / -	●	●		
2	ø1.5 / ø2.3 / - / -	●	●		
3	- / ø3.2 / ø3 / -		●	●	
5	- / - / - / ø4				●
7	- / - / - / ø7				●
Ⓒ Seal					
L	NBR	●	●	●	●
M	FKM	●	●	●	●
N	PTFE		●	●	●
Ⓓ Coil system					
Blank	Compact	●	●		
5 A	Open frame lead wire (diode integrated) for AC voltage			●	●
3 A	Open frame lead wire for DC voltage			●	●
Ⓔ Rated voltage					
AC100V	100 VAC (50/60 Hz)	●	●	●	●
AC200V	200 VAC (50/60 Hz)	●	●	●	●
DC12V	12 VDC	●	●	●	●
DC24V	24 VDC	●	●	●	●

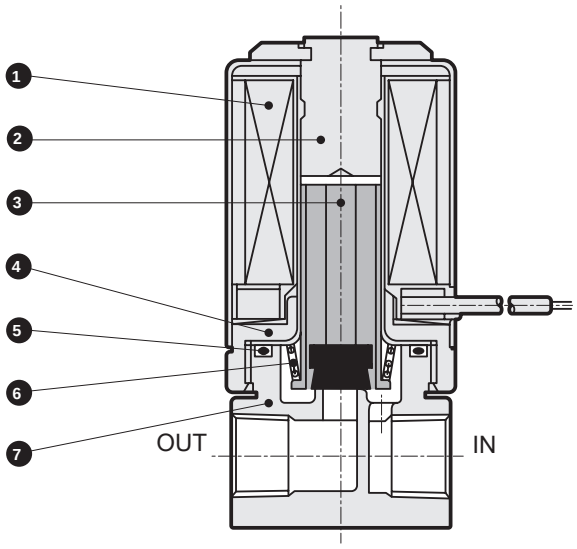
*1: The combinations indicated with ● above are available.
*2: If Item Ⓓ is 5A, it is 100 VAC or 200 VAC, and for 3A, it is 12 VDC or 24 VDC.

[Example of model No.]
HB41-8-5-L-3A-DC24V
Model: HB41

Ⓐ Port size : Rc1/4
Ⓑ Orifice size : ø4
Ⓒ Seal : NBR
Ⓓ Coil variation : Open frame lead wire
Ⓔ Rated voltage : 24 VDC

Internal structure and parts list

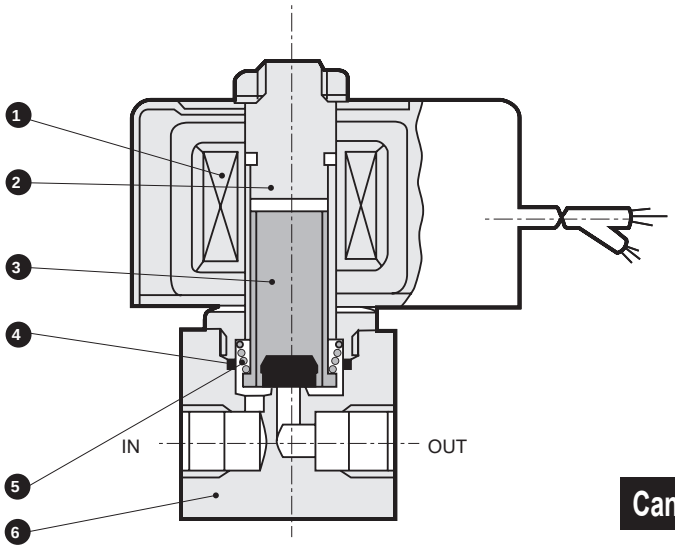
● HB11
● HB21



Cannot be disassembled

Part No.	Part name	Material	
1	Coil assembly	—	—
2	Core assembly	SUS316 or equiv.	Stainless steel
3	Plunger assembly	SUS316 or equivalent/NBR (FKM/PTFE)	Stainless steel, nitrile rubber (fluoro rubber/tetrafluoroethylene resin)
4	Core B	SUM22	Steel
5	O-ring	NBR (FKM/PTFE)	Nitrile rubber (fluoro rubber/tetrafluoroethylene resin)
6	Spring	SUS316	Stainless steel
7	Body	SUS316	Stainless steel

● HB31
● HB41

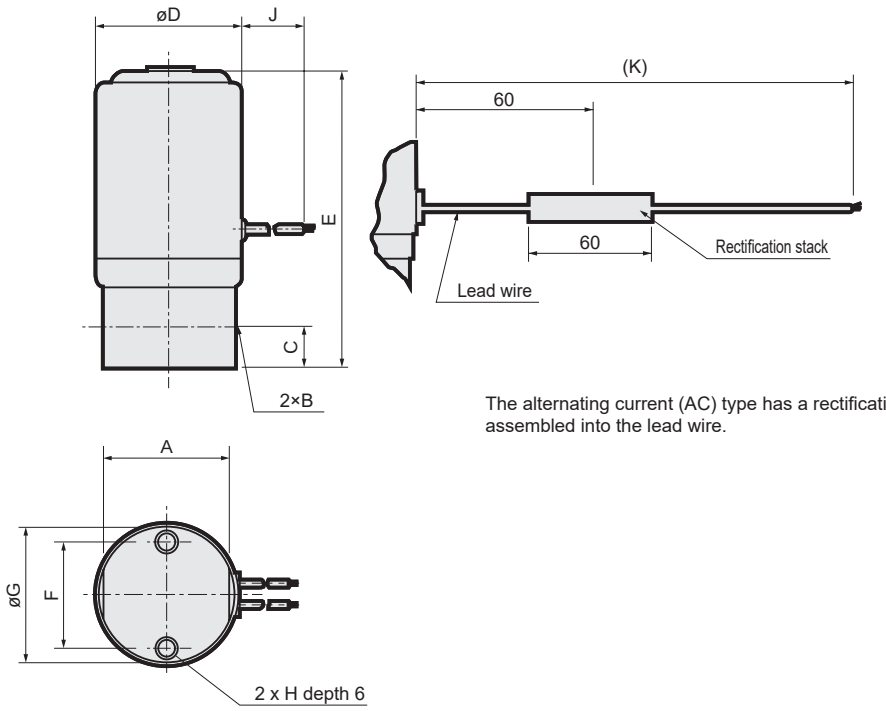


Cannot be disassembled

Part No.	Part name	Material	
1	Coil assembly	—	—
2	Core assembly	SUS316 or equiv.	Stainless steel
3	Plunger assembly	SUS316 or equivalent/NBR (FKM/PTFE)	Stainless steel, nitrile rubber (fluoro rubber/tetrafluoroethylene resin)
4	O-ring	NBR (FKM/PTFE)	Nitrile rubber (fluoro rubber/tetrafluoroethylene resin)
5	Spring	SUS316	Stainless steel
6	Body	SUS316	Stainless steel

Dimensions

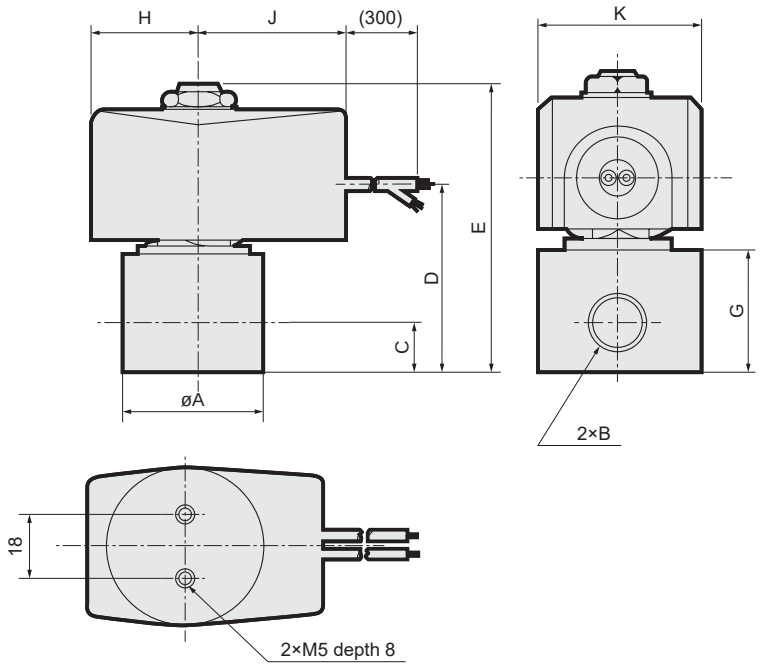
- HB11
- HB21



The alternating current (AC) type has a rectification stack assembled into the lead wire.

Model No.	A	B	C	D	E	F	G	H	J	K
HB11	18	M5 x 0.8	5	20.4	47	15	20	M3 x 0.5	200	250
HB21	23	Rc1/8	8	25	55	18	25	M4 x 0.7	300	300

- HB31
- HB41



Model No.	A	B	C	D	E	G	H	J	K
HB31- $^{6}_{8}$	37.5	Rc1/8 Rc1/4	11	50.5	75	31	24	38	38
HB41-8-5	37.5	Rc1/4	11	52	80.5	31	28	42	46
HB41 $^{-8-7}_{-10-5}$	45	Rc1/4 Rc3/8	12	55	83.5	34	28	42	46