

BM-12S, 13S, 14S Type Ball Valve Type Motor Valve

Two-way valve for on/off control

Compact, light weight, general purpose ball type motor valve with rated voltage AC100/200V, wide range of applicable pressure, and can be handled as easily as solenoid valve.

BM-12S Type is a valve for general purpose, BM-13S Type has long neck, and BM-14S Type has stainless steel body. Both are for on/off control.

BM-12S Type
(Size 10~25mm)BM-12S Type
(Size 32~50mm)

BM-13S Type

BM-14S Type

FEATURES

- Rated voltage AC100/200V.
- Compact, light weight, easy to handle.
- Wide range of applicable pressure for a variety of applications.
- No limitation on flow direction and installation direction (in the case of indoor application).
- Durable stainless steel ball.

SPECIFICATIONS

Model name	BM-12S	BM-13S	BM-14S
Code name	BM12S-J	BM13S-J	BM14S-D
Type	Standard neck	Long neck	Standard neck
Size	10~50(⅜"~2")	15~25(½"~1")	
Applicable fluid	Water, oils* ¹ , air, gases, & liquids		
Fluid temperature	-10~80°C(Freezing is not allowed.)		
Applicable pressure	0~1.0MPa		
Ambient temperature	-10~50°C		
Operation	ON/OFF control		
Leakage allowance	Water & oils:Nil(Confirm at pressure gauge), Air & gases:50mL/min(Standard state) or less		
End connection	Screwed JIS Rc		
Valve body pressure test	Hydraulic 1.75MPa		
Materials	Body	Cast bronze(Brass for Size 32~50mm)	Stainless steel
	Ball	Stainless steel	
Rated voltage	Common use AC100/110/200/220V (50/60Hz)* ²		
Allowable voltage fluctuation range	Rated voltage ±5%		
Rated capacity	Size 10~25mm:13VA(AC110V), 26VA(AC220V), Size 32~50mm:20VA(AC110V), 40VA(AC220V)		
Rated/Starting current	Size 10~25mm:0.12A/0.12A, Size 32~50mm:0.18A/0.18A		
Open/close time	Size 10~25mm:4.6/3.8sec(50/60Hz), Size 32~50mm:10/8.5sec(50/60Hz)		
Insulation	Class E		
Time rating	Size 10~25mm:20min, Size 32~50mm:10min		
Withstanding voltage test	AC 1500V/min		
Insulation resistance	50MΩ or more		
Overload protection	Thermal protector is built in		
Protection	Rain proof type (IP-53 corresponding)* ⁵		
Manual control device	Equipped		

* 1. If there is any local regulation for fuel oils or diesel oil, confirm the body materials according to the regulation.

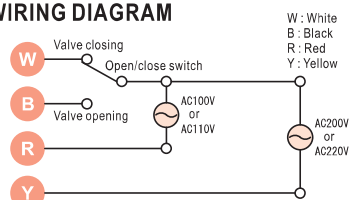
* 2. Other special voltage is available upon your request.

* 3. Space-heater is also available upon your request. (Pay attention to avoid rust caused by dew condensation inside the actuator.)

* 4. Inner relay and open/close signal contact are also available upon your request.

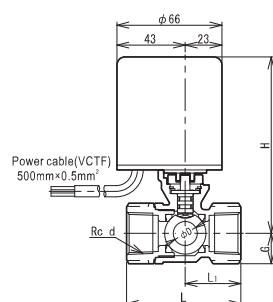
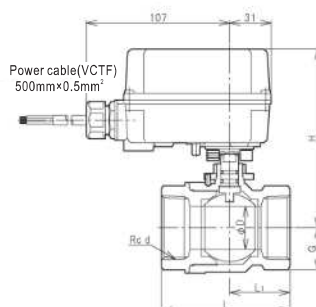
* 5. Avoid exposure to direct sunray in the case of outdoor installation.

WIRING DIAGRAM

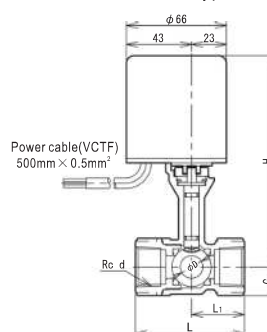


Unused wire (red or yellow) must be insulated.
Note: Install space heater if condensation is anticipated.

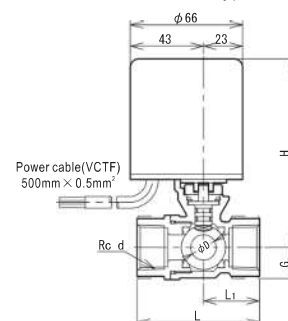
CONSTRUCTION

BM-12S Type
(Size 10~25mm)BM-12S Type
(Size 32~50mm)

BM-13S Type



BM-14S Type



* Figures in () are for BM-14S Type

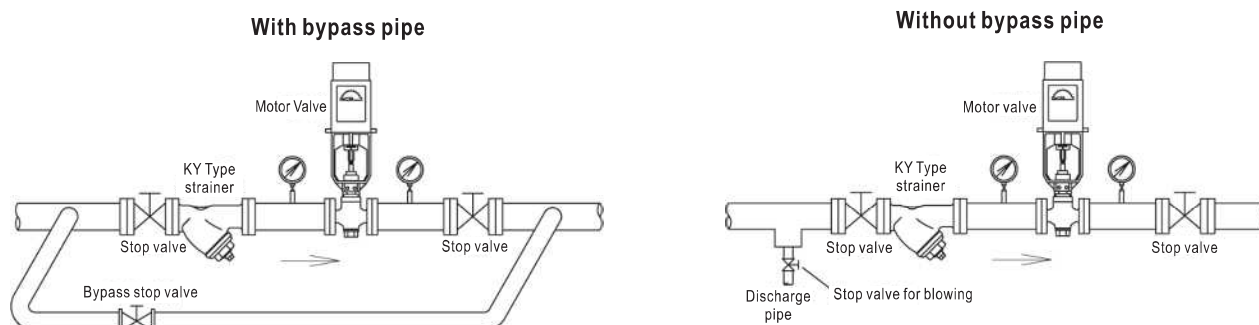
DIMENSIONS

(mm)

Size	d	D	L	L ₁	G	Cv value	BM-12S Type		BM-13S Type		BM-14S Type	
							H	Mass(kg)	H	Mass(kg)	H	Mass(kg)
10($\frac{3}{8}$ "	$\frac{3}{8}$ "	12.5	62	31	16	4.5	107	1.2	—	—	—	—
15($\frac{1}{2}$ "	$\frac{1}{2}$ "	12.5	62	31	16	7	107	1.2	138	1.2	107	1.1
20($\frac{3}{4}$ "	$\frac{3}{4}$ "	15	72	35(33)	19	10	111	1.3	140	1.3	111	1.2
25(1"	1"	21	81	40.5	23	20	115	1.5	145	1.5	115	1.4
32(1 $\frac{1}{4}$ "	1 $\frac{1}{4}$ "	24	82	41	29	25	128	2.3	—	—	—	—
40(1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	32	96	45	34	45	134	2.7	—	—	—	—
50(2"	2"	38	120	57	41	63	140	3.7	—	—	—	—

DATA/ML Type Motor Valve

Fig.1 Piping example



■ Selection and Installation

1. Install strainer on the primary side of motor valve (see Fig.1).
2. Install a bypass pipe (with stop valve) between the primary and secondary sides of motor valve if the operation of equipment cannot be stopped (see Fig.1).
If you do not intend to install bypass pipe, install blowing stop valve, which is branched from the main pipe, right before the stop valve on the primary side of motor valve, to allow flushing.
3. Install the valve upright to horizontal pipe or on vertical pipe (see Fig.2). For installation on vertical pipe and when the size is 80mm above, leave sufficient space for maintenance purpose.
4. As for application with 1 piece of operational switch, in the case 2 or more motor valves are connected through parallel connection, install external relay and the operation should be performed through the contact of relay.
5. The ambient temperature should be within the range of applicable temperature described in specifications.
In addition, avoid using motor valve in environment where there is excessive humidity, dust, corrosive gas or explosive gas.
6. Install steam trap on piping if the valve is used for steam.
7. When the fluid is liquid, the pressure in pipe may increase due to thermal expansion caused by ambient temperature when valve is closed. In such cases, it is recommended to install relief valve to protect machine (see Fig. 3).
8. Make sure the arrow mark on motor valve match with the direction of flow of fluid.
9. Leave some space for disassembling and maintenance.
10. Fix and support piping properly to prevent motor valve from being damaged due to weight of piping, excessively large stress, bending force or vibration.
11. Discharge drain or apply thermal insulation if there is risk of freezing.

Fig.2 Direction of installation of ML motor valve

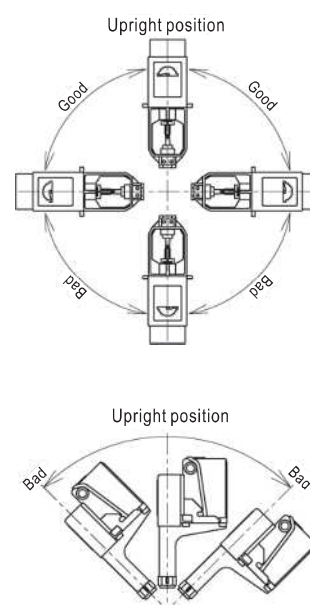
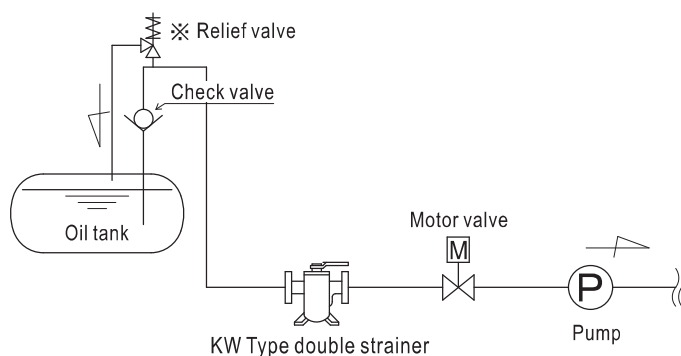


Fig.3 Relief valve installation



※Install relief valve if pressure rise due to thermal expansion or other factors is anticipated.