BM-9S, 9SR Type Ball Valve Type Motor Valve

Two-way valve for on/off control

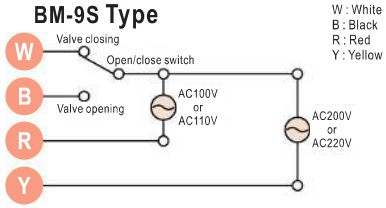
This series of ball-type motor-operated valves include BM-9S Type with electrical control for valve opening and closing performance and BM-9SR Type for valve closing performance realized through spring.
The BM-9SR Type, which is a two-wire type valve, can realize rapid closing of valve and is ideal for emergency shutoff of steam.

BM-9S Type

BM-9SR Type

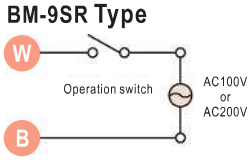
WIRING DIAGRAM

BM-9S Type



Unused wire must be insulated.

BM-9SR Type



FEATURES

- Wide range of applicable pressure for a variety of applications.
- No limitation on flow direction and installation direction (in the case of indoor application).

SPECIFICATIONS

Model name	BM-9S	BM-9SR
Code name	**BM9S-F**	**BM9SR-J**
Operation	ON/OFF control	Deenergized close, energized open.*1.
Applicable fluid	Steam & hot water	
Fluid temperature	Max. 180°C (For hot water: Max. 100°C)	
Size	15~25(½″~1″)	
Applicable pressure	0~1.0 MPa	
Ambient temperature	−10~50°C	
Leakage allowance	Nill (Confirm at pressure gauge)	
End connection	Screwd JIS Rc	
Valve body pressure test	Hydraulic 1.5 MPa	
Materials	Body(Brass), Ball(Stainless steel)	
Rated voltage	Common use AC100/110/200/220V (50/60Hz)*2.	AC100V(50/60)Hz or AC200V(50/60Hz)*3.
Allowable voltage fluctuation range	Rated voltage ± 5%	Rated voltage ± 10%
Rated capacity	AC110V: 20VA, AC220V: 40VA	12VA (AC100/200V)
Rated current	0.18A	AC100V: 0.12A, AC200V: 0.06A
Starting current	0.18A	AC100V: 0.2A, AC200V: 0.1A
Open/close time	10/8.5 sec (50/60Hz)	Open time: 15/12 sec (50/60 Hz). Close time: 6 sec.
Operating time interval	—	More than 1 min. between valve opening and closing*4.
Insulation	Class E	
Time rating	10 min	Continuous duty
Withstanding voltage test	AC 1500V/min	
Insulation resistance	≧50MΩ at DC500V	≧100MΩ at DC500V
Overload protection	Thermal protector is built in	
Protection	Dust & rain proof (IP-53 corresponding)*5.	Splash-proof (IP-54 corresponding)*5.
Manual control device	Equipped	Equipped (below the actuator)*6.

* 1. Energized close and de-energized open type such as BM-9SRC Type are available upon your request.
* 2. Rated voltage AC24V, DC12V, and DC24V are available upon your request.
* 3. Rated voltage AC24V are available upon your request.
* 4. High-frequency operation (with operating time interval less than 1 minute) may result in higher noise level and shorter service life of the product.
* 5. Avoid exposure to direct sunray in the case of outdoor installation.
* 6. All-open state can not be maintained.

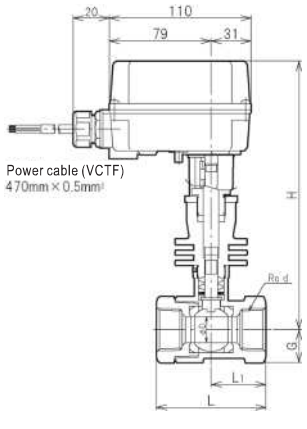
DIMENSIONS

(mm)

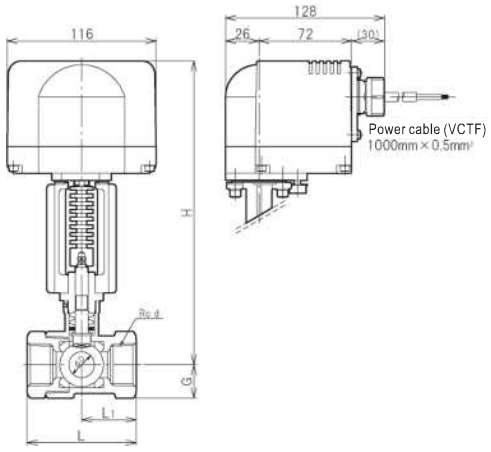
Size	d	D	L	L_1	G	Mass(kg)		Cv value	Mass(kg)	
						BM-9S Type	BM-9SR Type		BM-9S Type	BM-9SR Type
15(½″)	½″	11.5	62	31	20	203	228	6	2.3	2.4
20(¾″)	¾″	15	75	37.5	23	207	232	10	2.5	2.6
25(1″)	1″	20	85	42.5	26	211	237	18	2.8	3

CONSTRUCTION

BM-9S Type



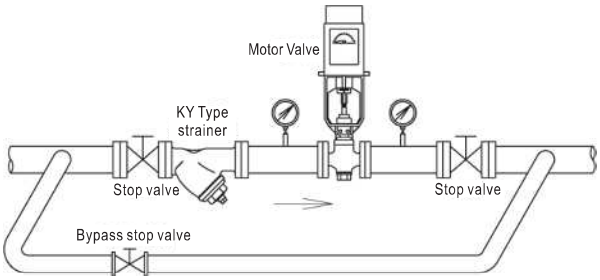
BM-9SR Type



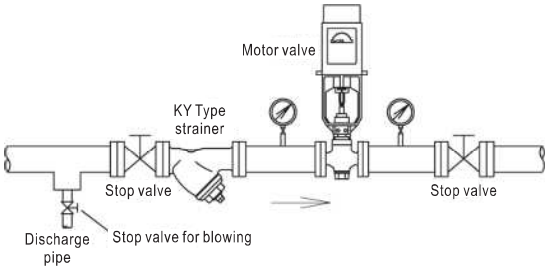
DATA/ML Type Motor Valve

Fig.1 Piping example

With bypass pipe



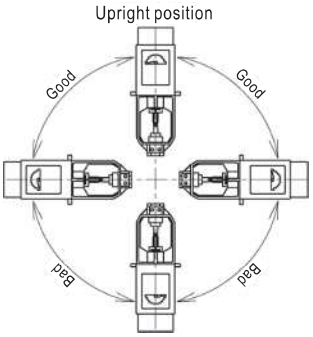
Without bypass pipe



■ 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 vale 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 dissembling 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



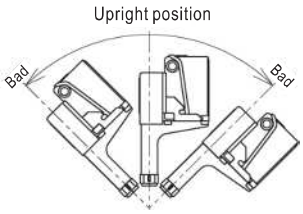
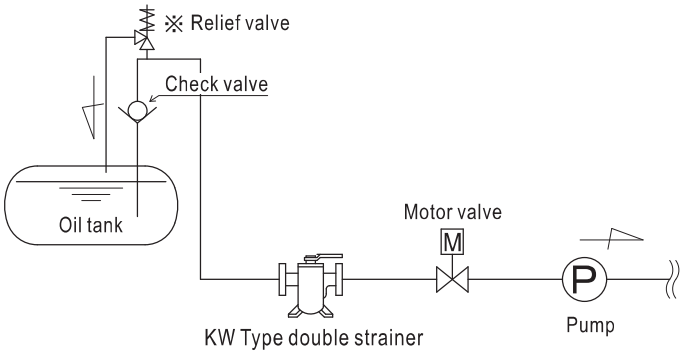


Fig.3 Relief valve installation



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