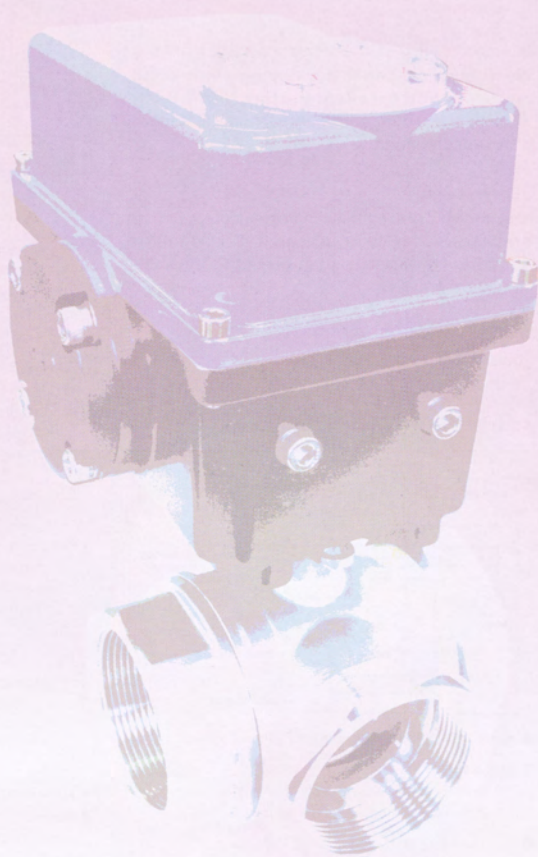


# Electrically actuated compact ball valves



# Electrically actuated compact ball valves



Type of valve	Threaded 2-way Ball valves					Threaded 3-way Ball valves				
Class	10K					10K				
Valve material										
Body	SCS14A					SCS14A				
Insert/Cap	SUS316					SUS316				
Ball seat	R-PTFE					R-PTFE				
Fig	UB-MK / MH					UB3L-MK / MH				
Valve size	d	L	H	L1		d	L	H	L1	
10 A 3/8 B	7	44	110	100	MK-1 MH-1	13	67	120.5	100	MK-1 MH-1
15 1/2	9.2	56.5	108	100		16	70	120.5	100	
20 3/4	12.5	59	110	100		20	79	125.5	100	
25 1	16	71	114	100		25	89	130	100	
32 1 1/4	20	78	183	154	MK-2 MH-2	32	100	187	154	MK-2 MH-2
40 1 1/2	25	83	187	154		38	119	192.5	154	
50 2	32	100	193	154						
1.0MPa WOG non-shock (Pipe•inside•fluid•average speed 3m/s following) ⚠ Don't use for Flammable gas or Toxic gas										

## Features

### Compact, high-performance electric actuator

We have succeeded in developing a very small motor with an excellent performance which instantly opens/closes. It is very economical in terms of power consumption.

### Simple structure, manual operation available

It's composed of a minimum number of parts, so that breakdowns rarely occur and it's excellent in durability. In case of power blackout, it can be operated manually.

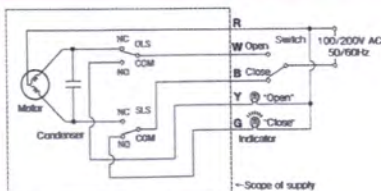
### Adaptable for many different uses

Power supply: 100 - 200VAC

### Adaptable for both indoor/outdoor uses

It can be used with outdoor piping line.

## Actuator circuit diagrams



● wire color: R:red W:white B:black Y:yellow G:green

● Actuator rotates

R-W: counter-clockwise to fully open the valve  
R-B: clockwise to fully close the valve

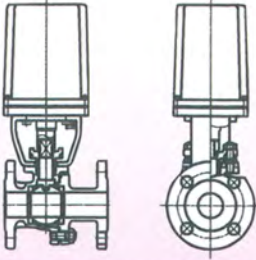
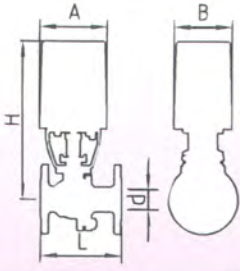
● Limit switches activation

OLS: on fully opening the valve (R-W: off W-Y: on)  
SIS: on fully closing the valve (R-B: off B-G: on)

## Actuator design specifications

Specifications	Type	MK1	MK1.5	MK2	MH1	MH1.5	MH2
Power source		AC100V ±10%			AC200V ±10%		
Valve closing time		12/10s	20/18s	19/16s	12/10s	20/18s	19/16s
Overload protection		Impedance protection					
Rated current		80	100	240	50	60	120
Max. power consumption		8	10	24	10	12	24
Max. output torque		2.94	5	12	2.94	5	12
Protection		Weatherproof, IP54 or equivalent					
Insulation Class		JIS Class E					
Insulation resistance		10MΩ Min./DC500V					
Ambient temperature		-10°C~50°C					
Mounting position		Vertical to horizontal					
Operating Angle		Forward/reverse rotation (90°)					
Wiring		Vinyl cable cord with 5 cores, 650min length					
Manual operation mechanism		MK1 MK1.5 Manual operation shaft MK2 Manual operation hex hole on actuator side					
Opening display		Opening display panel					
Space heater(option)		○	○	—	○	○	—

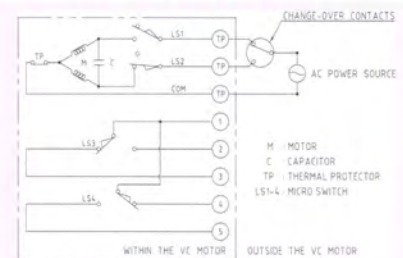
# Electrically actuated compact ball valves

Type of valve		Flanged Ball Valves							
Class		10K							
Valve									
Body		SCS13A			SCS14A				
Cap		SCS13A			SCS14A				
Ball seat		R-PTFE							
Fig		FUF-W/M			FUFN-W/M				
Valve size		d	L	H	A	B	Type of Actuator		
15 A	1/2 B	15	108	300	151	131		PMK-300YS	
20	3/4	20	117	308					
25	1	25	127	320					
32	1 1/4	32	140	333					
40	1 1/2	40	165	338					
50	2	50	178	349					
65	2 1/2	65	190	380	175	140		PMK-600YS	
80	3	80	203	415				PMK-600YSP	
100	4	100	229	470				197	152
125	5	125	356	560			PMK-030SS		
150	6	150	394	585	272	200	PMK-060SS		
1.0MPa WOG non-shock (Pipe•inside•fluid•average speed 3m/s following) ⚠ Don't use for Flammable gas or Toxic gas									

## Actuator Design Specification

Specifications	Type	PMK-300YS	PMK-600YS	PMK-600YSP	PMK-010SS	PMK-030SS	PMK-060SS
Power source		AC200V ±10%					
Valve closing time		8.5/7	8.5/7	12/10	24.5/20	38.5/31.5	57.5/49
Overload protection		Thermal Protection(115°C ±5°C)					
Performance		On-Off(Quarter turn)					
Continuous Rating		30Minutes(Continuation)					
Max output torque(N-m)		29.4	58.8	68.6	147.1	313.8	588.4
Drip-proof protection system		Equivalent to IP 54					
Insulation class		JIS Class E (120°C)					
Ambient temperature		-10°C~50°C					
Installation posture range		From vertical position to horizontal position (No downward position)					
Location (Indoor / Outdoor)		Indoor or Outdoor (No condensation)					
Ambient Humidity		90% or less (No condensation)					

## Actuator circuit diagrams



### OPERATION DETAILS (VIEW FROM TOP OF VC MOTOR)

TURN TO LEFT WITH T1-T3 ENERGIZED AND STOP AT THE FULLY-OPENED POSITION OF VALVE.

TURN TO THE RIGHT WITH T2-T2 ENERGIZED AND STOP AT THE FULLY-CLOSED POSITION OF VALVE.

CONTACT POINT ON BETWEEN 1-3 JUST BEFORE THE FULLY-OPENED POSITION OF VALVE.

CONTACT POINT ON BETWEEN 1-5 JUST BEFORE THE FULLY-CLOSED POSITION OF VALVE.

### CAUTION

⚠ IN CASE YOU STOP THE MOTOR-DRIVEN VALVE AS SIGNALLED BY MICRO SWITCH (LS4), FLUID LEAKS EVENT AT THE CLOSED POSITION OF THE VALVE. AVOID SUCH A WAY OF USE.