

## ■ Actuator for ball valves, 5 Nm

# S5..V

### ■ Description

The electric actuator series S5..V for ball valves are used in heating, refrigeration and air conditioning systems.

- For valves from DN15 to DN32
- Power supply 24 VAC / DC and 230 VAC
- Function: open / closed or 3 point and proportional action
- Shaft dimension □ 9 mm square (fixed)
- Direction of rotation selectable by switch
- Actuator with 1 m connection cable
- Optional 1 adjustable SPDT auxiliary switch



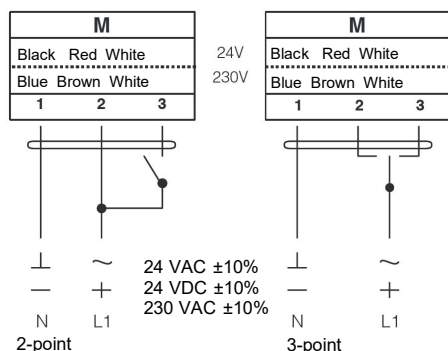
### ■ Technical specifications

Models		S5AV	S5BV	S5AMV
Nominal torque	Nm		5	
Power supply	V	24 AC/DC ±10%	230 AC	24 AC/DC ±10%
Frequency	Hz		50/60	
Power consumption				
- in operation	W		4.0	
- end position	W		2.0	
Rated power	VA		14	
Running time	s		60...80	
Electrical connection			1 m PVC cable	
Auxiliary switch rating			3 (1.5) A / 250 VAC	
Sound power level	max. db (A)		40	
Control signal (input)		2-3 point	2-3 point	0(2)...10 VDC
Position signal (output)				0...10 VDC
Life Cycle	rotations		60.000	
Angle of rotation			90° (95° mechanical limitation)	
Direction of rotation			CW / CCW	
Protection class		III	II	III
Protection degree			IP54	
Working range °C			-20...+50°C	
Working range RH			5...95% RH, non-condensing	
Storage temperature			-30...+60°C	
Maintenance			free	
Weight	g		800	
Standards			CE-conformity, RoHs	
Option			suffix S for models with 1 SPDT auxiliary switch	



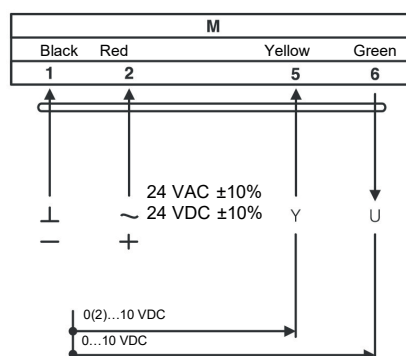
## Electrical wirings

Wiring diagram S5AV / S5BV

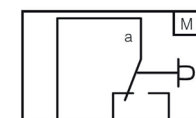


Connect via safety isolating transformer!

Wiring diagram S5AMV



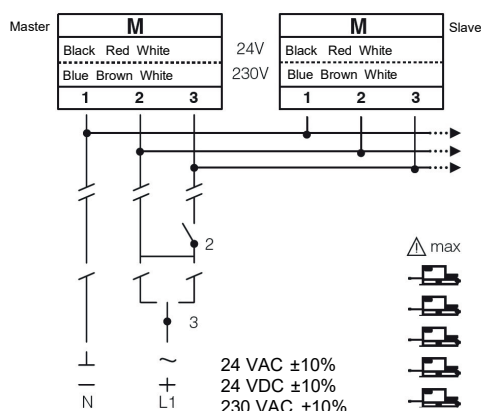
Wiring diagram S5AV / S5BV  
Auxiliary switch



Yellow Green Blue  
S1 S2 S3

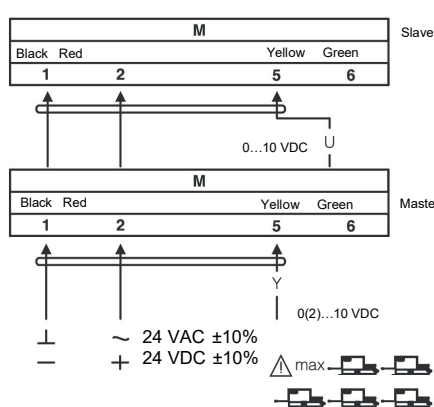
3 (1.5) A / 250 VAC  
Actuator at 0° position

Wiring diagram S5AV / S5BV  
Parallel connection



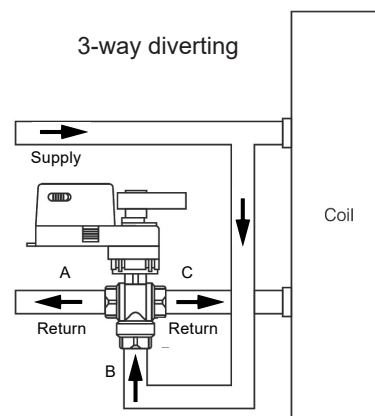
Parallel connection of maximum 5 S5..V (S1) actuators is possible. Power consumption must be observed!

Wiring diagram S5AMV  
Parallel connection



During parallel operation, the output signal (terminal 6, 0...10 VDC) of the master actuator must be connected to terminal 5 of the next slave actuator.

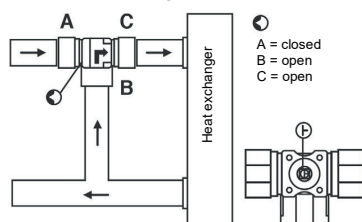
3-way diverting



Diverting application:  
Fluid enters through one inlet  
(B) and exits through two outlets  
(A & C).

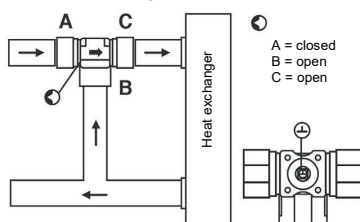
## Installation

Mixing closed

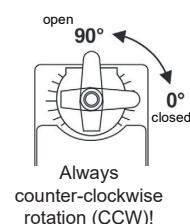


Ball valve actuators must operate CCW!

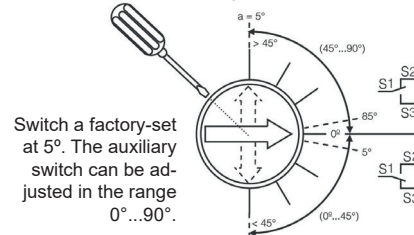
Mixing open



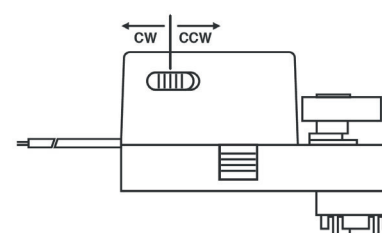
Actuator position



Auxiliary switch



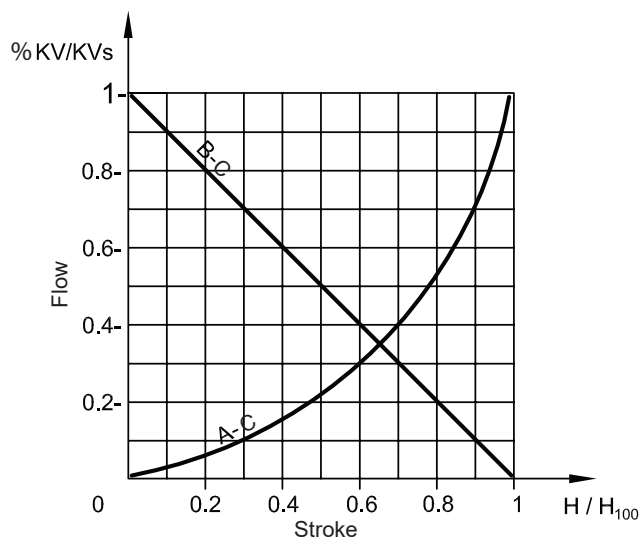
Change of rotation direction



Factory setting: clockwise (CW). Direction of rotation can be changed by toggling between CW/CCW switch on the actuator housing.



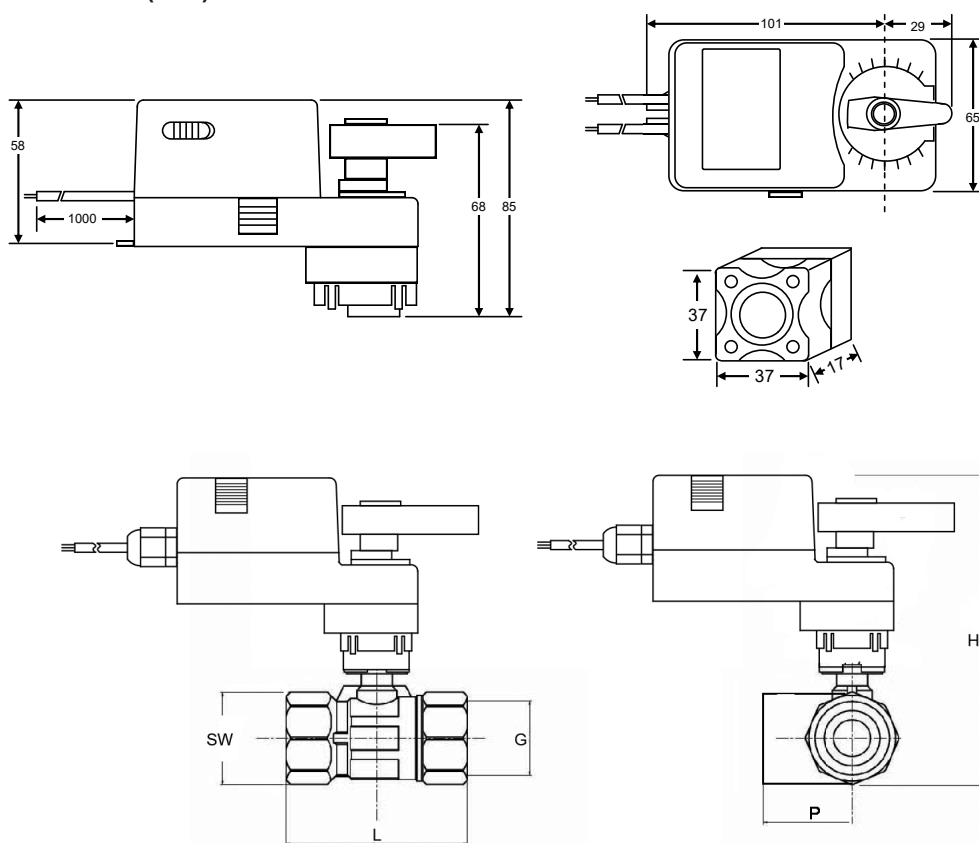
## Control flow characteristics



A-C equal-percentage way  
 B-C bypass lineare way  
 3-way used as mixing inlet in A and B, outlet C  
 3-way used as diverting inlet in C, outlet from A and B

**C way** constant flow  
**A way** variable flow  
**B (bypass) way** variable flow

## Dimensions (mm)



DN mm	G	L	H	SW	P	weight 2 way (kg)	weight 3 way (kg)
15	G 1/2	60	137	26	31	0,2	0,25
20	G 3/4	67	142	32	32	0,35	0,4
25	G 1"	89	148	39	46	0,55	0,7
32	G 1" 1/4	99	159	48	49	0,85	1,1