



ACVATIX™

Electromotoric actuator for slipper valves

for ESBE slipper valves

SQK34.00S
SQK84.00S

- **SQK34.00S** operating voltage AC 230 V, 3-position control signal
- **SQK84.00S** operating voltage AC 24 V, 3-position control signal
- **Nominal angle of rotation 90°**
- **Nominal torque 5 Nm**
- **For direct assembly with no need of mounting kit**
- **1 auxiliary switch for extra functions**
- **Manual adjuster and position indicator**
- **Mode of operation «AUTO» or «MAN»**
- **Reversible electromotoric actuator**
- **For ESBE slipper valves up to DN 50**


Use

For use in heating, ventilation and air conditioning systems to operate 3-port and 4-port ESBE slipper valves up to DN 50 (refer to «Equipment combinations»).

Type summary

Product number	Operating voltage	Positioning signal	Positioning time for 90° at 50 Hz	Torque
SQK34.00S	AC 230 V	3-position	135 s	5 Nm
SQK84.00S	AC 24 V			

Accessories

Product number	Description
ASC9.7 	Auxiliary switch

Ordering


Example: The actuator and accessories must be ordered separately. When ordering please specify quantity, product name and type code.


Product number	Stock number	Designation	Quantity
SQK34.00S	SQK34.00S	Rotary actuator for EBSE slipper valves	1
ASC9.7	ASC9.7	Auxiliary switch	1

Delivery Slipper valves, actuators and accessories are packed and supplied separately.

Rev. no. Overview table, see page 7.

Equipment combinations

3-port slipper valve 	Slipper valves	Connections	PN class	DN	Material	Actuators
	G119 G125 G132 G138 G151 VRG131 ¹⁾ VRG132 ¹⁾ VRG133 ¹⁾ 3MG15 3MG20 3MG22 3MG25 3MG28 F120 F125 F132 F140 F150	Threaded	PN 6	DN 20 DN 25 DN 32 DN 40 DN 50	Cast iron	SQK34.00S SQK84.00S
				DN 15...50 DN 15...50 DN 20...25	Brass alloy (DZR)	
			PN 10	DN 15 DN 20 DN 20 DN 25 DN 25	Brass	
		Flanged	PN 6	DN 20 DN 25 DN 32 DN 40 DN 50	Cast iron	

	Slipper valves	Connections	PN class	DN	Material	Actuators
<div>4-port slipper valve</div> <div></div>	G419	Threaded	PN 6	DN 20	Cast iron	SQK34.00S SQK84.00S
	G425			DN 25		
	G432			DN 32		
	G438			DN 40		
	G451			DN 50		
	TM22			DN 20	Brass	
	T20			DN 20	Cast iron	
	T25			DN 25		
	T32			DN 32		
	VRG141 ¹⁾			PN 10	DN 15...50	
	VRG142 ¹⁾		DN 15...50			
	VRG143 ¹⁾		DN 20...25			
	4MG15		DN 15		brass	
	4MG20		DN 20			
	4MG25		DN 25			
	BIV25		DN 25		Cast iron	
	BIV20		DN 40			
	BIV50		DN 50			
	FRONT		Flanged	PN 6	DN 20...50	

Suitable mounting set enclosed

Technical / Mechanical design

These electromotoric actuators require no maintenance. They have a reversible synchronous motor.

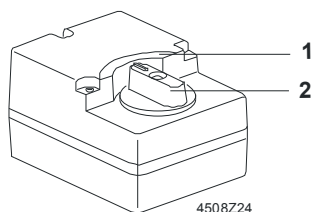
The actuator is driven by a 3-position signal from the controller and generates a rotary motion which is transferred via a pin in the slipper valve shaft to the 3-port or 4-port slipper valve.

The actuators are supplied with a 90° angle of rotation. During automatic operation, rotation is limited by two built-in end-switches.

The direction of operation of the actuator can be reversed (refer to «Commissioning»).

Direction of rotation of the actuator on delivery:

- Voltage at Y1 = Counter-clockwise rotation (ccw)
- Voltage at Y2 = Clockwise rotation (cw)
- No voltage = No rotation; actuator fixed in relevant position

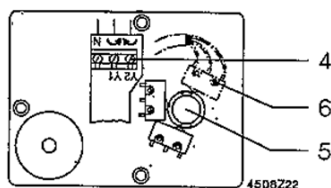


- 1 Position indicator, can be changed manually, depending on the required direction of rotation
- 2 Manual setting knob

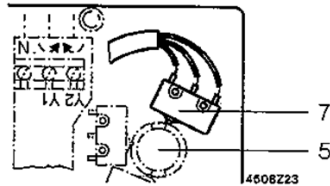
When the selector is set to «MAN», the valve can be operated with a manual knob.



- 3 Selector for automatic or manual operation



- 4 Connecting terminals
- 5 Coupling and cam shaft
- 6 Space for auxiliary switch



- 7 Auxiliary switch ASC9.7
For on / off changeover operation. The switching point is adjustable.
Factory-wired with a three-wire cable of 1.5 m.

Engineering notes

Electrical installation

The actuators must be electrically connected in accordance with local regulations and with the connection diagrams.



Regulations and requirements to ensure the safety of people and property must be observed at all times.

If additional functions are required, the actuator must be equipped with an auxiliary switch. The relevant switching point must be noted in the plant documentation

Mounting notes

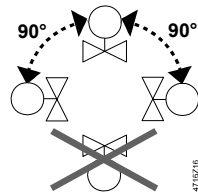
Overview of Mounting Instructions

Type	Mounting Instructions	
SQK34.00S, SQK84.00S	M4511.1	4 319 5587 0

The valve and actuator can be assembled straightforwardly on site. There is no need for special tools.

Type	Mounting Instructions	
ASC9.7	G4508.1	4 319 5579 0

Orientation



Commissioning notes

When commissioning the complete motorized valve consisting of actuator and slipper valve, always check the wiring and test the functions. This also applies to the additional auxiliary switch ASC9.7 fitted.

For automatic operation, the selector must be set to «AUTO»

Mode of operation



«**AUTO**» = automatic operation



«**MAN**» = manual operation

Position indication



Manual setting «**FULLY CLOSED**»
= no supply of heat *



Manual setting «**FULLY OPEN**»
= maximum supply of heat *

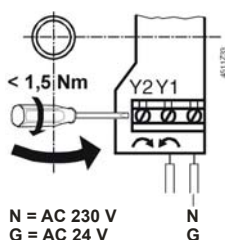
* If the hydraulic circuit is reverse, the removable scale for the position indication must be turned.

Direction of rotation

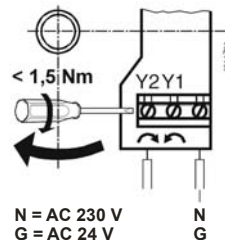
The actuators are factory-set to rotate in counter-clockwise (ccw) direction for opening. The direction of rotation of the actuator or the slipper valve is determined by the

- Boiler flow (from left or right)
- Position of the slipper valve (hydraulic circuit)

Reversing the direction of rotation



Control signal supplied to terminal **Y1**
= **counter-clockwise direction (ccw)**



Control signal supplied to terminal **Y2**
= **clockwise direction (cw)**

The wiring connecting terminals Y1 and Y2 must be interchanged if the direction of rotation is to be reversed. If an auxiliary switch is fitted, this aspect must also be taken into consideration when making the electrical connections.

Setting the angle of rotation Control

The angle of rotation is factory-set to 90° and cannot be adjusted.

Every actuator must be driven by a dedicated controller.

Maintenance

The actuators require no maintenance.

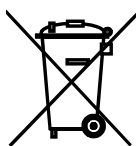
Caution 

Before performing any service work on the slipper valve or actuator:

- Switch off the pump and power supply
 - Close the main shut-off slipper valves in the pipework
 - Release pressure in the pipes and allow them to cool down completely
- If necessary, disconnect electrical connections from terminals.

The slipper valve must be re-commissioned only with the manual adjuster or the actuator correctly assembled.

• Disposal



The actuator contains electrical and electronic components and must not be disposed of together with domestic waste.

Legislation may demand special handling of certain components, or it may be sensible from an ecological point of view.

Current local legislation must be observed.

Warranty

The technical data given for these applications is valid only in conjunction with the Siemens butterfly and slipper valves as detailed under «Equipment combinations». The use of third-party slipper valves other than those recommended by Siemens invalidates the warranty.

Technical data

		SQK34.00S	SQK84.00S
Power supply	Operating voltage	AC 230 V, $\pm 15\%$	AC 24 V, $\pm 20\%$
	Frequency	50 / 60 Hz	
	Power consumption ¹⁾	3 VA	2 VA
Control	Positioning signal	3-position	
	Parallel operation	parallel operation of several actuators not possible	
Operating data	Positioning time for 90°	135 s	
	Angle of rotation	90° $\pm 3^\circ$ (factory setting)	
	Torque ¹⁾ Starting torque	10 Nm	
	Nominal torque	5 Nm	
Norms and standards	CE-conformity		
	EMC-directive	2004/108/EC	
	Immunity	EN 61000-6-2 Industrial ²⁾	
	Emission	EN 61000-6-3 Residential	
	Low voltage directive	2006/95/EC	
	Electrical safety	EN 60730-1	
	Product standards for automatic electric controls	EN 60730-2-14	
	Protection standard EN 60730	Class II	Class III
	Housing protection standard Upright to horizontal	IP42 to EN 60529	
	Environmental compatibility	ISO 14001 (Environment) ISO 9001 (Quality) SN 36350 (Environmentally compatible products) RL 2002/95/EG (RoHS)	
Dimensions / weight	Dimensions	see «Dimensions»	
	Cable glands	1 x $\varnothing 20.5$ mm (for M20)	
	Weight	0.5 kg	
Materials	Housing base, yoke	plastic	
	Cover	plastic	

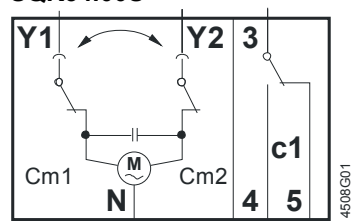
Accessories for SQK34.00S, SQK84.00S

Auxiliary switch ASC9.7	Switching capacity	AC 250 V, 10 A resistive, 3 A inductive
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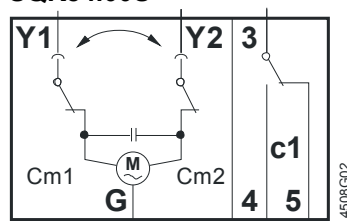
General ambient conditions	Operation	Transport	Storage	
	EN 60721-3-3	EN 60721-3-2	EN 60721-3-1	
	Environmental conditions	Class 3K5	Class 2K3	Class 1K3
	Temperature	-15...+50 °C	-30...+65 °C	-30...+65 °C
	Humidity	5...95 % r. h.	< 95 % r. h.	0...95 % r. h.

Internal diagrams

SQK34.00S



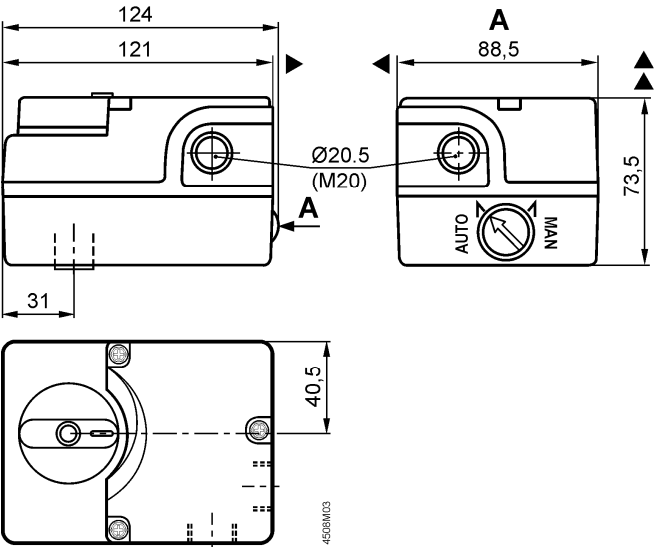
SQK84.00S



- Cm1 End switch
- Cm2 End switch
- c1 1 auxiliary switch **ASC9.7**
- N Neutral conductor
- G System potential
- Y1 Control signal counter-clockwise (ccw)
- Y2 Control signal clockwise (cw)

Dimensions

Dimensions in mm



Overall height of valve
and actuator

- = Installation height of slipper valve from the middle of the pipe
- + Installation height of the actuator
- + Minimum clearance from ceiling or wall for mounting, connection, operation, service etc.
 - ▶ > 100 mm
 - ▶▶ > 200 mm

Revision number

Type	Rev. No, valid from
SQK34.00S	..E
SQK84.00S	..F

