



ACVATIX™

Electromotoric actuator for slipper valves

SQK349.00

for slipper valves with 90° angle of rotation

-
- Operating voltage AC 230 V, 3-position control signal
 - Nominal angular rotation 90°
 - Nominal torque 5 Nm
 - For direct assembly with no need for a mounting set
 - 1 auxiliary switch for extra functions
 - With manual adjuster and position indicator
 - Mode of operation «AUTO» or «MAN»
 - Reversible electromotoric actuator
 - For slipper valves up to DN50


Use

In heating, ventilating and air conditioning plants to operate type VBF21..., VBG31..., VBI31..., VCI31.. 3-port and 4-port slipper valves up to DN50 (refer to «Equipment combinations»).

Type summary

Type	Operating voltage	Positioning signal	Positioning time	Torque
SQK349.00	AC 230 V	3-position	135 s	5 Nm

Accessory

Type	Description
ASC9.7 	Auxiliary switch

Ordering

The actuator and accessories must be ordered separately.

When ordering please specify the quantity, product name and type code.

Example: **25 pcs electromotoric actuators SQK349.00 (packing of 25 pieces)**
10 pcs Auxiliary switches ASC9.7

Delivery

The actuators are supplied in collective packing of 25 pieces which also contain the installation instructions.

Equipment combinations

	Slipper valves	Actuator SQK349.00		Data sheet
3-port slipper valves	VBF21.. , series 02	PN 6	DN 40...50	N4241
	VBI31.. , series 02	PN 10	DN 20...40 (¾...1½")	N4232
	VBG31.. , series 02			N4233
4-port slipper valves	VCI31.. , series 02			N4252

The actuator can directly be mounted onto the slipper valves.

Functions

When the actuator receives a control signal from the respective controller, it produces a rotational movement which is transferred to the valve via the coupling mechanism.

Control signal: Y1 = anticlockwise rotation
 0 = no rotation, the respective position is maintained
 Y2 = clockwise rotation

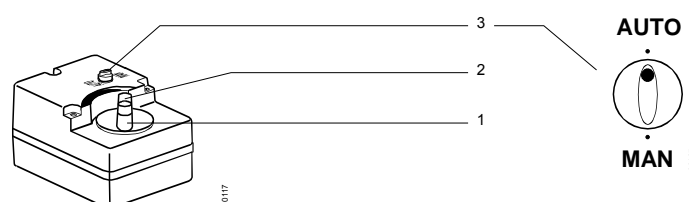
The direction of rotation resulting from a certain control signal can be reversed, if required, depending on the hydraulic circuit used. For details, refer to «Commissioning notes» and to the instructions given under the cover of the actuator.

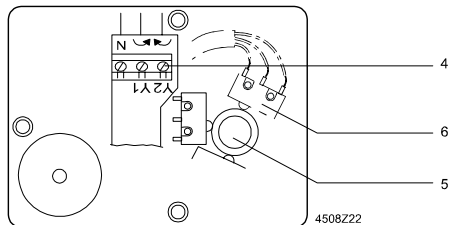
Mechanical design

Maintenance-free electric actuator with reversible synchronous motor. The angular rotation of 90° is electrically limited by two limit switches.

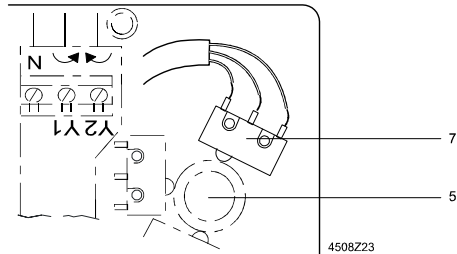
A manual setting knob is used for setting the required valve position manually. Manual operation is preselected with the selector having the positions «AUTO» and «MAN».

After manual operation, the selector must be reset to «AUTO».





- 1 Manual setting knob
- 2 Position indicator, can be changed manually, depending on the required direction of rotation.
- 3 Selector for automation, or manual operation
- 4 Connecting terminals
- 5 Coupling and cam shaft
- 6 Space for auxiliary switch
- 7 Auxiliary switch ASC9.7.
For on/off or changeover operation. The switching point is adjustable. Factory-wired with a 3-wire cable of 1.5m.



Engineering notes

For 3-port and 4-port slipper valves (mixing slipper valves), refer to data sheets.

The permissible ambient temperatures given under «Technical data» must be observed.

If auxiliary functions are required, the actuator must be equipped with an auxiliary switch. In the case, its switching points must be entered in the plant's documentation.

Mounting notes

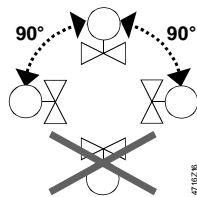
Overview of
Mounting Instructions

Type	Mounting instructions
SQK349.00	4 319 0178 0

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

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

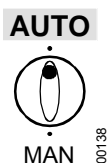
Orientation



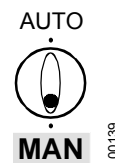
Commissioning notes

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.

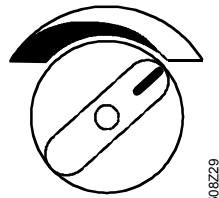
For automatic operation, the selector must be set to «AUTO»



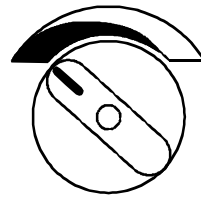
AUTO = automatic operation



MAN = manual operation



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

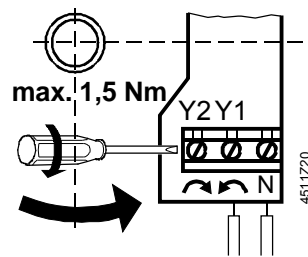


Manual setting «FULLY OPEN»
= maximum supply of heat

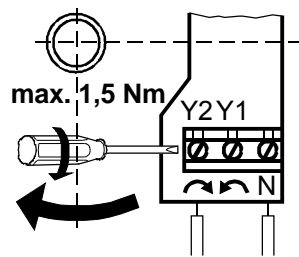
*) If the hydraulic circuit is reverse, the removable scale for the position indication must be turned.

Direction of rotation

The direction of rotation of the actuator or the slipper valve is determined by the – position of the slipper valve (hydraulic circuit)



Control signal supplied to terminal Y1
= anticlockwise rotation *)



Control signal supplied to terminal Y2
= clockwise rotation

*) The direction of rotation given above is the «as supplied» condition of actuator and 3-port slipper valve (mixing valve) for boiler flow from left

The wiring connecting to 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.

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 device is considered an electronics device for disposal in terms of European Directive 2012/19/EU and may not be disposed of as domestic garbage.

- Dispose of the device through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

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

		SQK349.00
Power supply	Operating voltage	AC 230 V, ± 15 %
	Frequency	50 / 60 Hz
	Power consumption ¹⁾	3 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° ± 3° (factory setting)
	Torque ¹⁾ Starting torque Nominal torque	10 Nm 5 Nm
Norms and directives	Electromagnetic compatibility (Application)	For residential, commercial and industrial environments
	Product standard	EN60730-x
	EU Conformity (CE)	CE1T4508X1
	Electrical safety	EN 60730-1
	Protection standard EN 60730	Class II
	Housing protection standard Upright to horizontal	IP42 to EN 60529
	Environmental compatibility	The product environmental declaration CE1E4508en01 contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).
Dimensions / weight	Dimensions	see «Dimensions»
	Cable glands	2 x Ø 20.5 mm (for M20)
	Weight	0.5 kg
Materials	Housing base, yoke	plastic
	Cover	plastic

¹⁾ These values apply at nominal voltage, at an ambient temperature of 20 °C and at the specified nominal running time

Accessories for SQK349.00

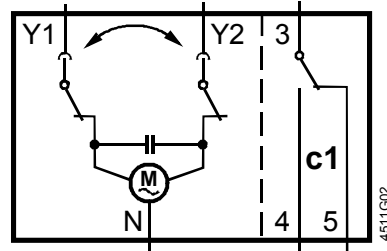
Auxiliary switch ASC9.7	Switching capacity	AC 250 V, 10 A resistive, 3 A inductive
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General ambient conditions

	Operation EN 60721-3-3	Transport EN 60721-3-2	Storage 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 diagram

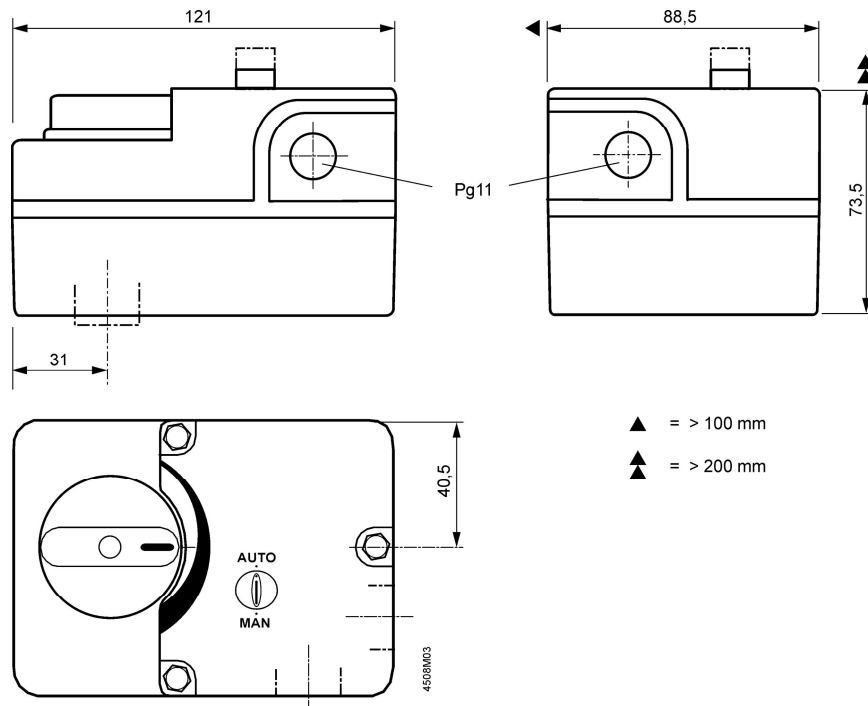
SQK349.00
AC 230 V



C1 = auxiliary switch ASC9.7

Dimensions

Dimensions in mm



- ▲ = > 100 mm
- ▲▲ = > 200 mm

Total height of motorized valve:

- = connection dimension of slipper valve
- + connection dimension of actuator
- + min. clearance to the ceiling or wall for installation, electrical connections and operation.

Revision numbers

Type	Rev. No, valid from
SQK349.00	..D

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