



SQS359.54
with safety shutoff function, without manual override



SQS359.03, SQS359.05
without safety shutoff function, with manual override



Electromotoric Actuators

for VVG549..., VVP459... and VXP459... valves

SQS359.03

SQS359.05

SQS359.54

- AC 230 V operating voltage, 3-position control signal
- Positioning force 250 N to 400 N (refer to «Technical data»)
- Direct mounting on valves; no adjustments required
- Optional auxiliary switch for extra functions with SQS359.03
- Choice of actuators with or without safety shutoff function to DIN 32 730
- Position indication, with manual override (SQS359.03, SQS359.05)
- Position indication, without manual override (SQS359.54)

Use

For operation of Siemens valves VVG549..., VVP459... and VXP459... with 5.5 mm stroke for water-side control of hot water and cooling water in heating, ventilation and air conditioning systems.

Type summary

Type reference	Operating voltage	Positioning signal	Positioning time at 50 Hz	Safety shut-off function	Safety shut-off time
SQS359.03	AC 230 V	3-position	35 s	No	—
SQS359.05			15 s		
SQS359.54			20 s	Yes	5 s

Accessories

Type reference	Description	For actuators	Space for
ASC9.6	Auxiliary switch	SQS359.03	1 x ASC9.6

Order

When ordering, please give the quantity, product name, type reference, and any accessories required.

Example: 20 actuators type SQS359.03 and
20 auxiliary switches type ASC9.6

Delivery

The actuators are delivered in packs of 20 pieces.
Actuators, valves and accessories are supplied in separate packages.

Equipment combinations

Type reference	DN	PN class	k_{vs} [m ³ /h]	Data Sheet	SQS359.03	SQS359.05	SQS359.54
VVG549...	15...25	PN25	0.25...6.3	Q4380	✓	✓	✓
VVP459...	15...40	PN16	0.63...25	Q4845	✓	✓	✓
VXP459...				✓		✓	
VVG44...			N4364	✓			
VXG44...			N4464	✓			

The admissible differential pressures Δp_{max} and Δp_s for the complete motorized valve are shown in the relevant Data Sheets.

Mechanical design

Features and benefits

- Electromotoric actuator, maintenance-free
- Reversible synchronous motor
- Antilocking gear train
- Load-dependent switch-off in stroke limit positions

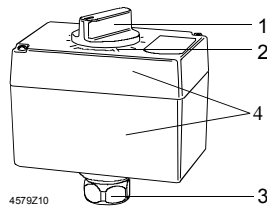
3-position control signal

The reversible synchronous motor is driven by a 3-position control signal.
The stroke is generated via an antilocking gear train.

3-position control at terminals Y1 or Y2:

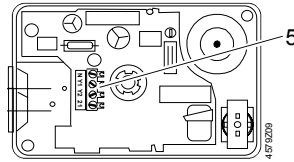
- Voltage at Y1: Stem extends, valve opens
- Voltage at Y2: Stem retracts, valve closes
- No voltage at Y1 or Y2: Actuator holds the current position

Manual override



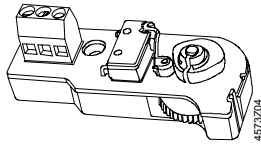
- 1 Manual override (SQS359.03, SQS359.05)
- 2 Position indication
- 3 Coupling nut for valve neck
- 4 Housing

Terminal strip



- 5 Terminal strip

Accessories



Auxiliary switch ASC9.6

- Suitable for actuator type SQS359.03
- Switching point adjustable from 0...100 % stroke

For more information about accessories, refer to «Technical data».

Notes

Engineering

Caution 

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

Safety regulations and restrictions designed to ensure the safety of people and property must be observed at all times.

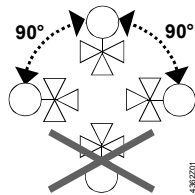
The admissible temperatures (as shown in «Technical data») must be observed.

If an auxiliary switch is required, its switching point should be indicated on the plant schematic.

Mounting

Mounting Instructions 74 319 0315 0 are enclosed in the product packaging.

Orientation



Commissioning

When commissioning the system, check wiring and the functions. In addition, select or check the auxiliary switch settings.

Manual adjuster

Switching off the positioning signal.

The valve can be fully closed (= 0 % stroke) by turning the manual adjuster counterclockwise. Control is automatically resumed when the positioning signal returns.

Maintenance

The actuators are maintenance-free.

When servicing the actuator: Switch off pump and power supply, close the main shutoff valve in the pipework, release pressure in the pipes and allow them to cool down completely. If necessary, disconnect electrical connections from the terminals.

The actuator must be correctly fitted to the valve before recommissioning.

Disposal



The device 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 relating to specific applications are valid only in conjunction with the valves listed in this Data Sheet under «Equipment combinations».

The use of SQS359... actuators in conjunction with third-party valves invalidates all claims under Siemens Building Technologies / HVAC Products warranty.

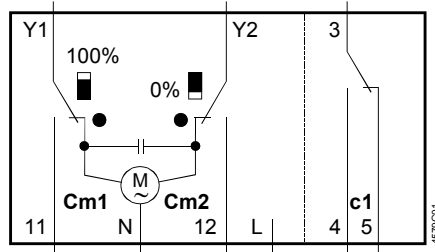
Technical data

Power supply	Rated voltage	AC 230 V
	Voltage tolerance	±15 %
	Rated frequency	50 / 60 Hz
	Power consumption	
	SQS359.03	3.5 VA
	SQS359.05	4.5 VA
	SQS359.54	6 VA
	Switching capacity of end switches	terminals 11 or 12
	SQS359.03, SQS359.05	AC 250 V, 6 A res. / 2.5 A ind.
Type of control	Positioning signal	3-position
Operating data	Positioning time in control mode	
	SQS359.03	35 s at 50 Hz for opening and closing
	SQS359.05	15 s at 50 Hz for opening and closing
	SQS359.54	20 s at 50 Hz for opening and closing
	Positioning time with spring return	
	SQS359.54	closing time 5 s
	Positioning force	
	SQS359.03	400 N
	SQS359.05	250 N
	SQS359.54	300 N
	Stroke	5.5 mm
	Admissible temperature of medium in the valve	1 ... 130 °C (short-time up to 150 °C)
Electrical connections	Cable entry	2 openings 20.5 mm dia. (for M20)
Industry standards	Meets the requirements for CE marking	
	EMC Directive	89/336/EEC
	Low-voltage Directive	73/23/EEC
	Degree of protection of housing	IP54 to EN 60529
Dimensions / weight	Dimensions	see «Dimensions»
	Weight	
	SQS359.03	0.5 kg without packaging / 0.6 kg with packaging
	SQS359.05	0.5 kg without packaging / 0.6 kg with packaging
	SQS359.54	0.6 kg without packaging / 0.7 kg with packaging
Materials	Actuator housing	plastics
	Housing cover and manual adjuster	plastics
	Gear train	plastics
	Stem with coupling	metal
Accessories	ASC9.6 auxiliary switch	for SQS359.03
	Switching capacity	AC 250 V, 10 A res. / 3 A ind.

General environmental conditions

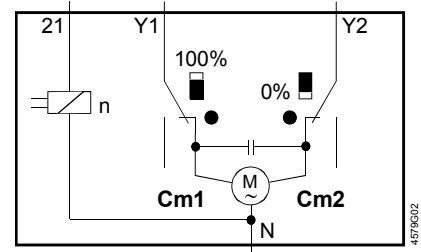
	Operation IEC 721-3-3	Transport IEC 721-3-2	Storage IEC 721-3-1
Environmental conditions	Class 3K5	Class 2K3	Class 1K3
Temperature	-5 ... +50 °C	-25 ... +70 °C	-5 ... +50 °C
Humidity	5 ... 95 % r.h.	< 95 % r.h.	5 ... 95 % r.h.

Internal diagrams



SQS359.03, SQS359.05
AC 230 V, 3-position, non-spring return

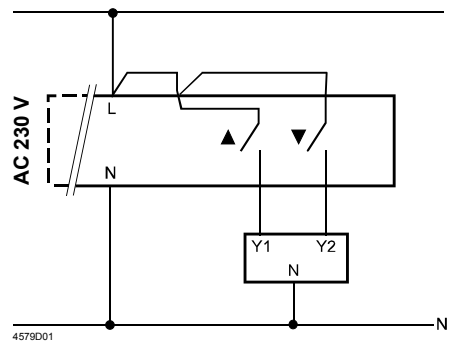
Cm1 End switch 100 % stroke
Cm2 End switch 0 % stroke
c1 ASC9.6 auxiliary switch can be fitted (SQS359.03 only)
L Potential-free auxiliary terminal



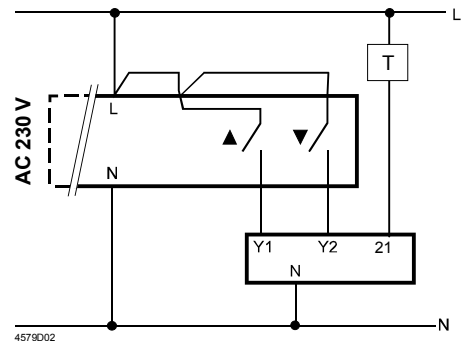
SQS359.54
AC 230 V, 3-position, with spring return

Cm1 End switch 100 % stroke
Cm2 End switch 0 % stroke

Connection diagrams
Mains voltage side



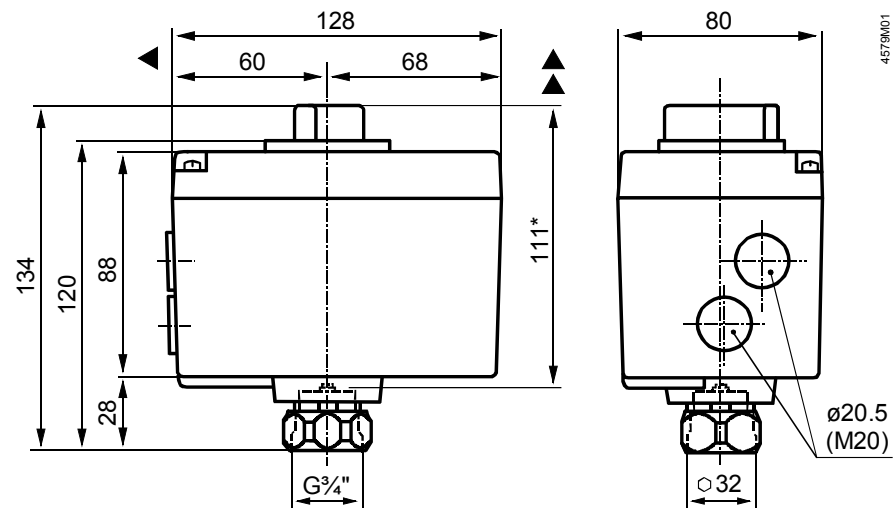
SQS359.03, SQS359.05
AC 230 V, 3-position, non-spring return



SQS359.54
AC 230 V, 3-position, with spring return

Dimensions

All dimensions in mm



* Height of actuator after fitting on valve

◄ > 100 mm minimum clearance from wall or ceiling

▲ > 200 mm for mounting, connection, operation, service, etc.