Electrical Actuators

SSY319...

for valves VXG48..., VXB489R..., VXI48...
VVP459..., VXP459..., VMP459..., VVG549...

- AC 230 V operating voltage, 3-position control signal
- Positioning force 300 N
- Manual override with indication of current position and direction of travel
- Force-dependent switch-off in both end positions and in the event of overload
- For direct mounting with coupling nut, no tools required
- Plug-in connecting cable
- Anti-locking, maintenance-free gear train

Use

For operation of Siemens 2-port and 3-port valves with a nominal stroke of 5.5 mm for water-side control of hot water and cooling water in heating, ventilation and air conditioning systems.
**Type summary**

<table>
<thead>
<tr>
<th>Type reference</th>
<th>Operating voltage</th>
<th>Positioning time at 50 Hz</th>
<th>Positioning signal</th>
<th>Connecting cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSY319</td>
<td>AC 230 V</td>
<td>150 s</td>
<td>3-position</td>
<td>1.5 m</td>
</tr>
<tr>
<td>SSY319/30</td>
<td></td>
<td></td>
<td></td>
<td>3.0 m</td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Type reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASY98</td>
<td>Retaining screw for cable connector</td>
</tr>
</tbody>
</table>

**Ordering**

When ordering, please give quantity, product name and type reference.

*Example:* 10 actuators, type SSY319

The minimum order quantity is 10 actuators.

**Delivery**

The actuators are delivered in multipacks of 10 together with the associated cables. Mounting Instructions are enclosed.

**Equipment combinations**

<table>
<thead>
<tr>
<th>Type reference</th>
<th>Valve type</th>
<th>k_\text{vs} \ [\text{m}^3/\text{h}]</th>
<th>PN class</th>
<th>Data Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>VXG48...</td>
<td>3-port valves</td>
<td>6.3...20</td>
<td>PN16</td>
<td>N4467</td>
</tr>
<tr>
<td>VXB489R...</td>
<td>1.6...16</td>
<td>Q4491</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VX148...</td>
<td>4...16</td>
<td>Q4849</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VVP459...</td>
<td>2-port valves</td>
<td>0.63...25</td>
<td></td>
<td>Q4845</td>
</tr>
<tr>
<td>VXP459...</td>
<td>2-port valves</td>
<td>0.63...25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMP459...</td>
<td>3-port valves with T-bypass</td>
<td>0.63...4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VVG549...</td>
<td>2-port valves</td>
<td>0.25...6.3</td>
<td>PN25</td>
<td>Q4380</td>
</tr>
</tbody>
</table>

k_\text{vs} = \text{nominal flow rate of cold water (5...30 °C) through the fully open valve (H_{100}) at a differential pressure of 100 kPa (1 bar).}

Other combinations are available on request.

**Technical design / mechanical design**

When the actuator is driven by a 3-position signal, it produces a stroke which is transmitted to the valve stem.

The description of operation in this document applies to those versions of the valve which close when deenergized (NC).

**3-position signal**

- Voltage at Y1: Stem extends: Valve opens
- Voltage at Y2: Stem retracts: Valve closes
- No voltage at Y1 or Y2: Actuator maintains its current position
Accessories

Retaining screw

Type ASY98 to secure cable connector.

The cable connector snaps into position, but can be additionally secured with the retaining screw.

Notes

Engineering

The admissible temperatures (refer to «Technical data») must be observed. The connecting cable of the actuator may come into contact with the hot valve body without harm, provided the temperature of the valve body does not exceed 90 °C.

Mounting

Mounting Instructions 4 319 5623 0 are enclosed with each multipack.

Assembly is made with the coupling nut; no adjustments are required.

The actuator should be installed so that it is initially in position 0 (also refer to «Manual override»):

Position the actuator and tighten the coupling nut manually.

Orientation

Commissioning

- Check wiring
- Check functioning of the actuator:
  - Actuator stem extends (position indicator from position 0 to 1): Valve opens
  - Actuator stem retracts (position indicator from position 1 to 0): Valve closes
- The actuator must only be operated in conjunction with a correctly mounted valve!

⚠️ Caution

Owing to the stroke / force-dependent switch-off feature, the correct operation of the actuator is only assured when mounted on the valve.
Manual override

The actuator can be adjusted manually to any position between 0 and 1. However, if the actuator receives a positioning signal from the controller, this will take precedence in determining the position.

Note

To retain the manually set position, unplug the connecting cable or disable the positioning signal.

Position indicator in position 1: Valve fully open
Position indicator in position 0: Valve fully closed

Maintenance

⚠️ When servicing the SSY319... actuator, make sure that power is disconnected (e.g. remove the plug).

Repairs

The SSY319... actuators cannot be repaired; they must be replaced as complete units.

Disposal

The actuators include electrical and electronic components and must not be disposed of together with domestic waste. Current local legislation must be observed.

Warranty

The technical data relating to specific applications is valid only in conjunction with the Siemens valves listed in this Data Sheet under «Equipment combinations».

The use of these SSY319... actuators with third-party valves invalidates any warranty offered by Siemens Building Technologies / HVAC Products.
## Technical data

<table>
<thead>
<tr>
<th>Power supply</th>
<th>Rated voltage</th>
<th>AC 230 V ± 15 %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rated frequency</td>
<td>50 / 60 Hz</td>
</tr>
<tr>
<td></td>
<td>Power consumption</td>
<td>6 VA</td>
</tr>
<tr>
<td></td>
<td>Fuse protection for incoming cable (fast)</td>
<td>2 A</td>
</tr>
<tr>
<td>Control</td>
<td>Positioning signal</td>
<td>3-position</td>
</tr>
<tr>
<td>Operating data</td>
<td>Positioning time for 5.5 mm stroke</td>
<td>150 s</td>
</tr>
<tr>
<td></td>
<td>Nominal stroke</td>
<td>5.5 mm</td>
</tr>
<tr>
<td></td>
<td>Nominal force</td>
<td>300 N</td>
</tr>
<tr>
<td>Perm. temperature of medium in the connected valve</td>
<td>1...+110 °C</td>
<td></td>
</tr>
</tbody>
</table>

### Electrical connections

- Connecting cable
  - SSY319 1.5 m 3-core to EN 60320 / IEC 60227
  - SSY319/30 3.0 m 3-core to EN 60320 / IEC 60227

### Industry standards

- Meets the requirements for CE marking:
  - EMC directive EN 50081-1
  - Immunity EN 61000-6-2
  - Low voltage directive EN 60730-1
- Protection class II to EN 60730
- Housing protection standard IP40 to EN 60529

### Dimensions / weight

- Dimensions refer to «Dimensions»
- Coupling thread to valve coupling nut, G 3/4"
- Weight 0.3 kg

### Housing

- Cover plastic / anthracite, RAL 9011
- Base plastic / light gray, RAL 7035

### General ambient conditions

<table>
<thead>
<tr>
<th>Environmental conditions</th>
<th>Operation IEC 721-3-3</th>
<th>Transport IEC 721-3-2</th>
<th>Storage IEC 721-3-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>+1...+50 °C</td>
<td>–25...+70 °C</td>
<td>–5...+50 °C</td>
</tr>
<tr>
<td>Humidity</td>
<td>5...85 % r.h.</td>
<td>&lt; 95 % r.h.</td>
<td>5...95 % r.h.</td>
</tr>
</tbody>
</table>

### Connecting cable

- Control signal OPEN (AC 230 V) black
- Control signal CLOSE (AC 230 V) white
- Neutral blue

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Siemens Building Technologies Electric actuators / Manual adjuster
HVAC Products
CE1Q4899en
12.12.2003
Dimensions

All dimensions in mm

```
Dimensions in mm:

- Height: 93 mm
- Width: 83 mm
- Depth: 69 mm
- Hole: G 3/4''
- Diameter: 25.5 mm
- Flange: 34 mm

R12

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HVAC Products
Electric actuators / Manual adjuster
CE1Q4899en
12.12.2003
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