

Data sheet

Actuator for three point control AMV 435

Description



AMV 435 actuator is used with two and three-way valves type VRB, VRG, VF and VL up to DN 80 diameter.

The advanced design incorporates load related 'switch-off' to ensure that actuators and valves are not exposed to overload.

Combinations with other valves could be seen under Accessories.

Main data:

- Nominal voltage:
 - 24 VAC/DC, 50 Hz/60 Hz
 - 230 VAC, 50 Hz/60 Hz
- Control input signal: 3 point
- Force: 400 N
- Stroke: 20 mm
- Speed (selectable):
 - 7.5 s/mm
 - 15 s/mm
- Max. medium temperature: 130 °C
- LED signalling
- End-position signals
- Manual operation

Ordering

Actuator

| Type | Supply voltage | Code No. |
|---------|----------------|-----------------|
| AMV 435 | 24 VAC/DC | 082H0162 |
| | 230 VAC | 082H0163 |

Accessories-Stem heater

| Type | DN | Power supply | Code No. |
|-------------|-------|--------------|-----------------|
| Stem heater | 15-80 | 24 V | 065Z0315 |

Accessories-Adapter

| Valves | DN | max Δp (bar) | Code No. |
|---------------------------------|----|--------------|-----------------|
| For old VRB, VRG, VF, VL valves | 15 | 9 | 065Z0313 |
| | 20 | 4 | |
| | 25 | 2 | |
| | 32 | 1 | |
| | 40 | 0.8 | |
| | 50 | 0.5 | |

Technical data

| | |
|--|--|
| Power supply | 24 VAC/DC, 230 VAC; +10 to -15% |
| Power consumption | 2 VA |
| Frequency | 50 Hz or 60 Hz (for VAC power supply) |
| Control input | 3 point |
| Close of force | 400 N |
| Max. stroke | 20 mm |
| Speed | 7.5 s/mm or 15 s/mm |
| Max. medium temperature | 130 °C |
| Ambient temperature | 0 ... 55 °C |
| Storage and transport temperature | -40 ... +70 °C |
| Protection class | II |
| Degree of protection | IP 54 |
| Weight | 0.45 kg |
| - marking in accordance with standards | Low Voltage Directive (LVD) 2006/95/EC: EN 60730-1, EN 60730-2-14 EMC Directive 2004/108/EC: EN 61000-6-2, EN 61000-6-3 |

Installation

Mechanical

No tool is required to mount actuator on the valve. Installation of the valve with the actuator is allowed in horizontal position or upwards. Installation downwards is not allowed.

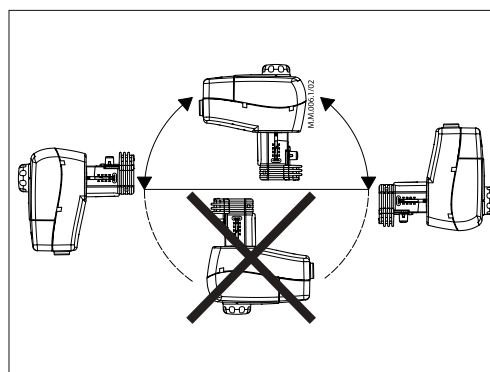
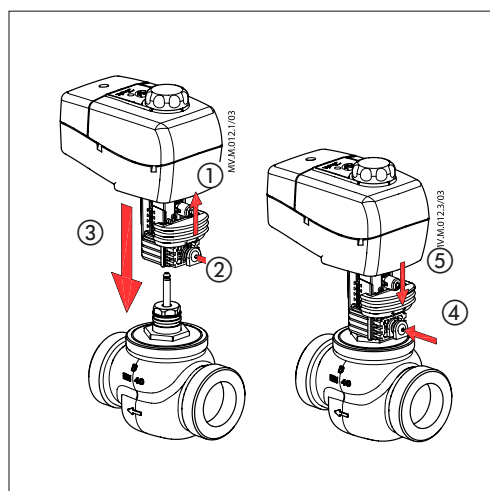
The actuator must not be installed in an explosive atmosphere, at ambient temperature lower than 0 °C or at ambient temperature higher than 55 °C. It must not be subject to steam jets, water jets or dripping liquid as well.

Note:
The actuator may be rotated up to 360° with respect to the valve stem by loosening the retaining fixture. Once the actuator is placed, retighten the fixture.

Electrical

Electrical connections can be accessed by removing the actuator cover. Two cable gland entries without thread (Ø16 and combined Ø16/Ø20) are prepared for cable glands. From factory one entry is provided by rubber cable gland and the other entry is prepared for opening.

Note:
Cable and cable gland used must not compromise the actuator's IP rating, and must ensure the connectors are fully strain relieved. Rubber cable gland delivered from factory does not compromise IP rating but it does not provide fully strain relieve according to LVD directive. Please observe local rules and regulations as well.



Commissioning

Complete the mechanical and electrical installation and perform the necessary checks and tests:

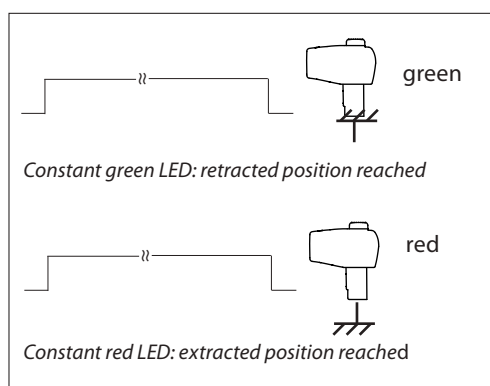
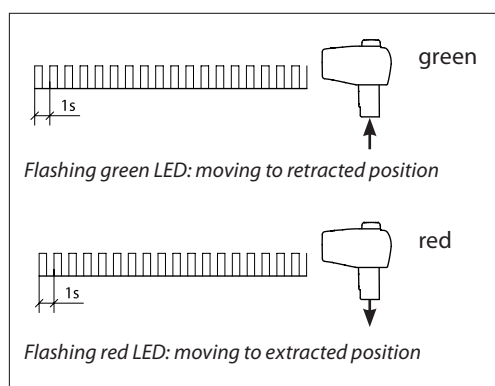
- Apply power
- Apply the appropriate control signal and check that the valve stem direction is correct for the application.

The unit is now fully commissioned.

LED signalling/
Actuator operating mode

LED function indicator

The bi-colour (green/red) LED function indicator is located on the actuator cover. It indicates the operating modes.



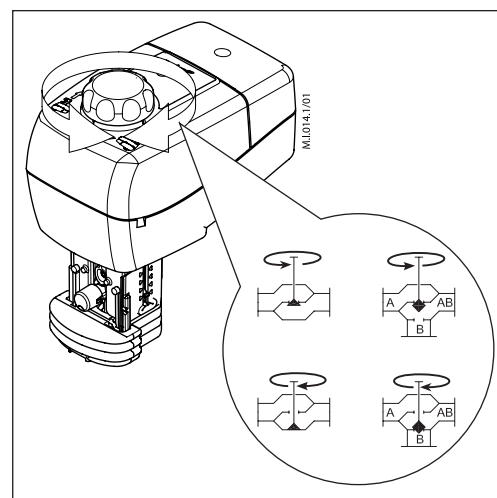
Manual override

Manual override is done by means of control knob on actuator housing:

- Disconnect control signal
- Adjust valve position using the control knob (observe the rotation direction)

After manual override is not needed:

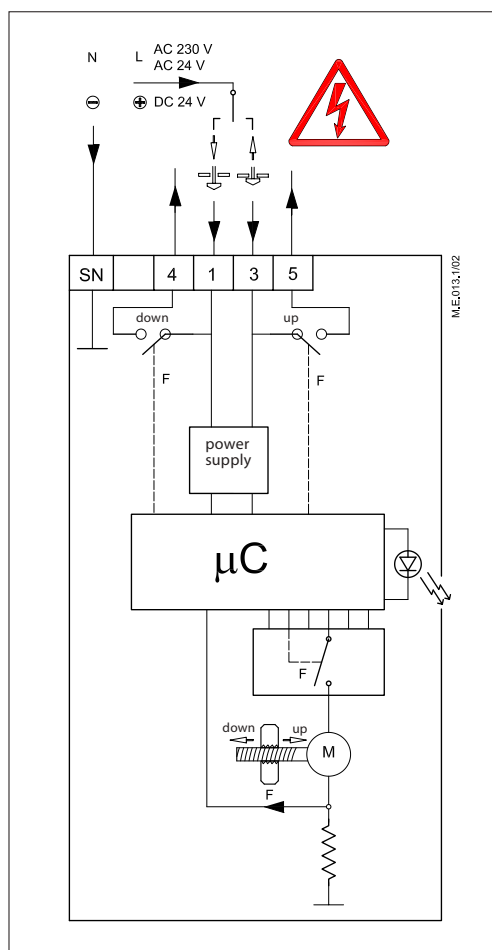
- Restore control signal



Wiring



Do not touch anything on the PCB!
Do not remove the cover before the power supply is fully switched off.
Max. power allowed on ports 4 and 5 is 7 VA.



Terminals 1, 3:

Control voltage input from the controller.
Power supply 24 VAC/DC, 230 VAC (dependent on type)

Terminals 4, 5:

Output used for position indication or monitoring

N

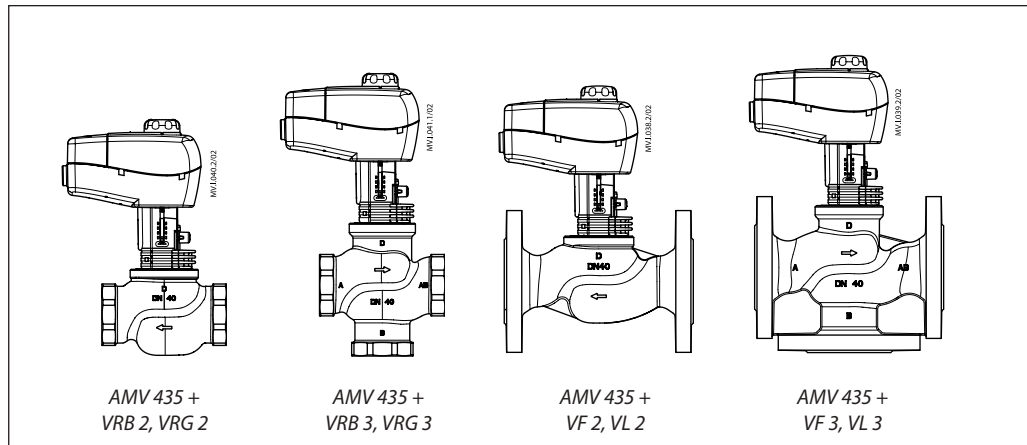
Neutral/Common (0 V)

| Wiring length | Recommended cross-sectional area of the wiring |
|---------------|--|
| 0-50 m | 0.75 mm ² |
| > 50 m | 1.5 mm ² |

Disposal

The actuator must be dismantled and the elements sorted into various material groups before disposal.

Actuator - valve combinations



Dimensions

