



Gear actuators

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 and for AHQM DN 40-100. It is also used with pressure independent balancing and control valve type AB-QM from DN 40 to DN 100.

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

Features & benefits

- No tool requirement for installation
- LED visual operation feedback
- Protection from excessive stem travel
- End position indication
- Selectable stem travel speed



Ordering

Product code numbers

Type	Supply voltage [V] AC	Control signal type	Code number
AMV 435	24	3-point	082H0162
AMV 435	230	3-point	082H0163

Accessories code numbers



065Z0315

Stem heater for AMV(E) 335/435

Stem heater for AMV(E) 335/435



065Z0313

Adapter AMV(E)335/435-VRB/G,VF/L DN15-50

Adapter AMV(E)335/435-VRB/G,VF/L DN15-50



082H7090

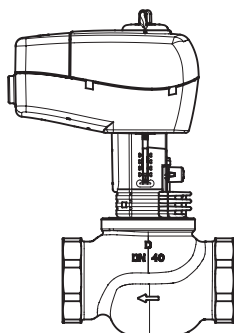
AM-PBU 25, Supply voltage [V] AC: 24

AM-PBU 25

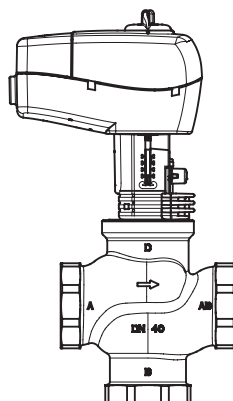
Overview

Product portfolio

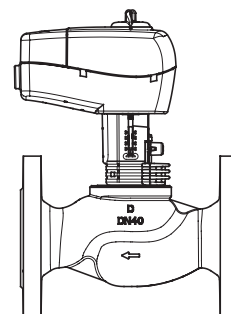
Actuator - valve combinations



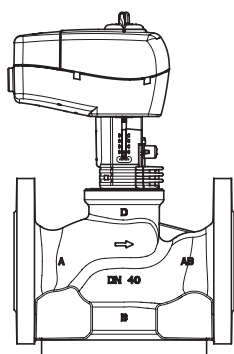
AMV 435 + VRB 2, VRG 2 (DN15-80)



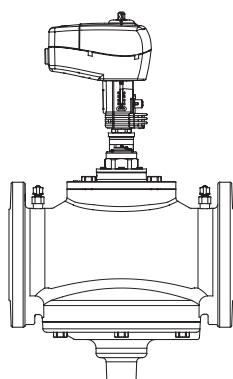
AMV 435 + VRB 3, VRG 3 (DN15-80)



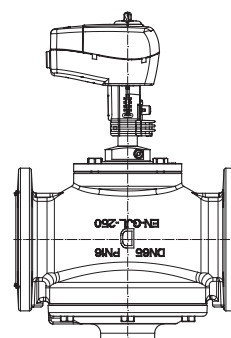
AMV 435 + VF 2, VL 2 (DN15-80)



AMV 435 + VF 3, VL 3 (DN15-80)



AMV 435 + AB-QM (DN 40-100)



AMV 435 + AHQM (DN 40-100)

Functions

Operation

Commissioning

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

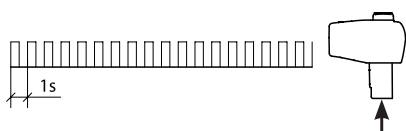
- Apply power
- Apply the appropriate control signal and check that the valve stem direction is correct for the application.

The unit is now fully commissioned.

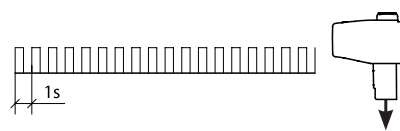
LED signalling / Actuator operating mode

LED function indicator

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



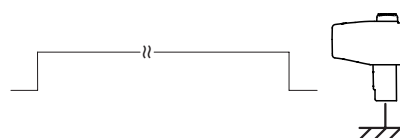
Flashing red (green if used with AB-QM) LED: moving to retracted position



Flashing green (red if used with AB-QM) LED: moving to extracted position



Constant red (green if used with AB-QM) LED: retracted position reached



Constant green (red if used with AB-QM) LED: extracted position reached

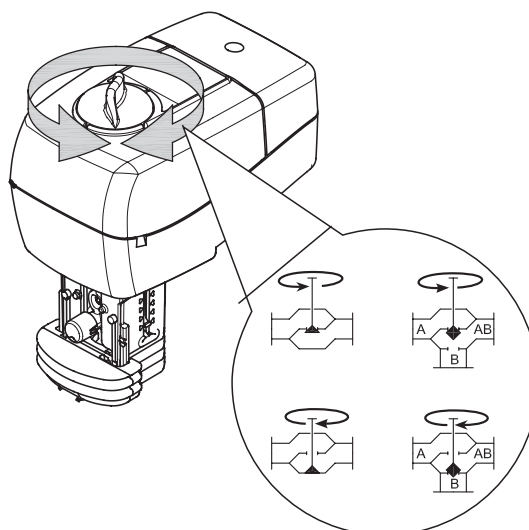
Manual override

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





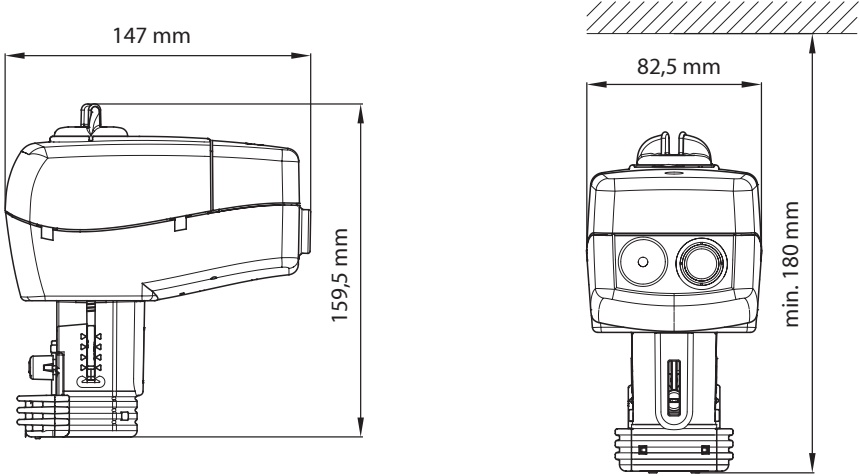
Product details

General data

Technical data

Power supply	V	24 AC/DC, 230 AC; +10 to -15%
Power consumption	VA	3 (24 V); 7,6 (230 V)
Frequency	Hz	50 or 60 (for VAC power supply)
Control input		3 point
Close of force	N	400
Max. stroke	mm	20
Speed	s/mm	7,5 or 15
Max. medium temperature		130
Ambient temperature	°C	0 ... 55
Storage and transport temperature		-40 ... +70
Protection class		II
Degree of protection		IP 54
Weight	kg	0,45

Dimensions



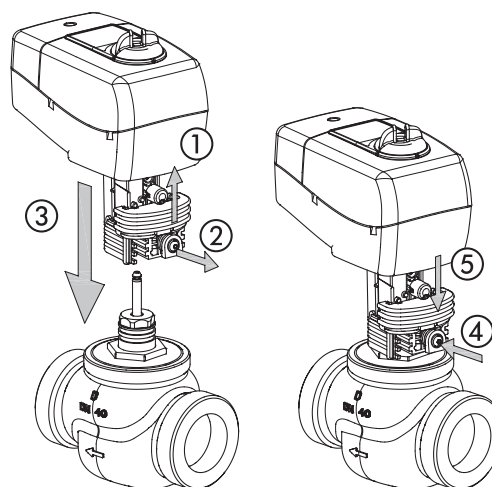
Installation

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.

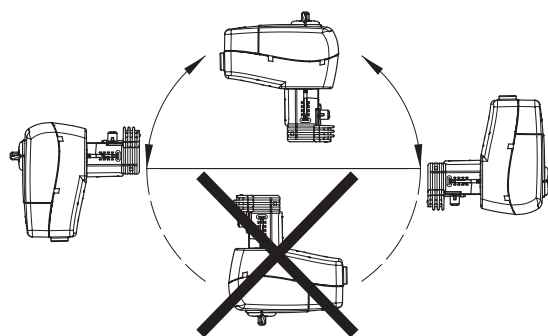
Note: The actuator may be rotated up to 360° with respect to the valve stem by loosening the retaining fixture. Once the actuator is placed, retighten the fixture.



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.

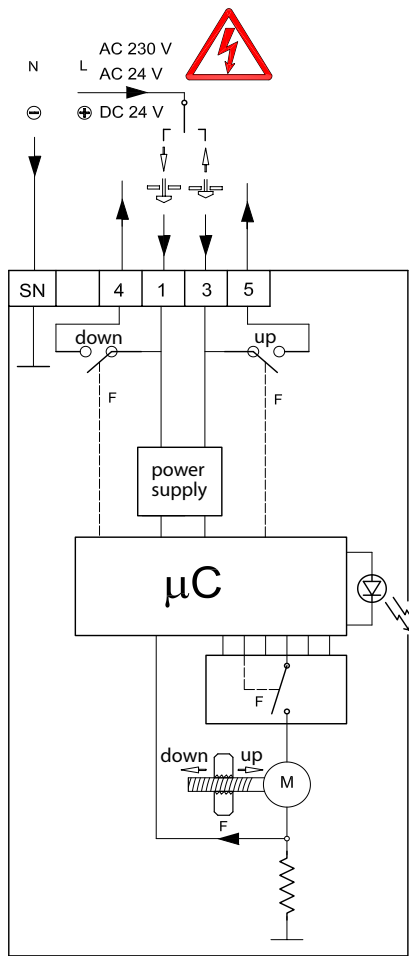
Note: Cable and cable gland used must not compromise the actuator's IP rating, and must ensure the connectors are fully strain relieved. Rubber cable gland delivered from factory does not compromise IP rating but it does not provide fully strain relieve according to LVD directive. Please observe local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



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)



Note: AB-QM valve closes if moved to extracted position (terminal 1) and opens if moved to retracted position (terminal 3).

Terminals 4, 5:
Output used for position indication or monitoring

N:
Neutral/Common (0 V)

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

Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the ‘Declaration of Conformity’. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
EAC Declaration	EAC KG417_024.Д.007811	EAC - Eurasian Customs Union	LVD, EMC
UA Declaration	UA Actuators 2024-06-27	Danfoss	LVD, EMC
Export Control Declaration	Gear and Thermal actuators	Danfoss	

Contact details

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