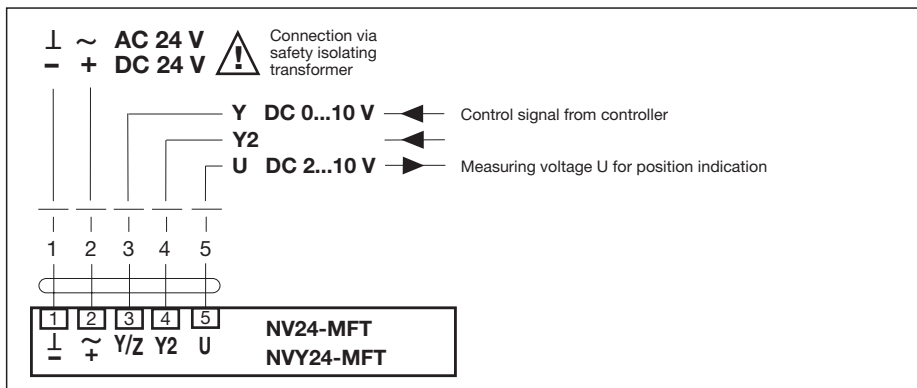




Wiring diagram



Linear actuators for 2-way and 3-way globe valves DN 15...80

Modulating actuator (AC/DC 24 V)
Control DC 0...10 V

Applications

Operation of globe valves.

Mode of operation

Modulating control is effected by means of a standard 0...10 V control signal.

Product features

Simple attachment to the neck of the valve by means of a clamping strap. Semiautomatic coupling of the valve stem to the actuator spindle. The actuator can be rotated through 360° on the neck of the valve.

Functional reliability

The actuator is short-circuit-proof and protected against polarity reversal. The stroke is adapted automatically and is also overload-proof.

Manual operation

Inserting a 5 mm hexagonal key and turning it clockwise causes the actuator spindle to extend from the actuator housing (pushing).

Together with the action of the valve, this causes the flow of water to increase. The actuator spindle retains its position until the power supply is energized (the controller takes first priority).

Position indication

The stroke of the valve is indicated mechanically on the bracket; the maximum stroke adjusts itself automatically. There is a twin-color LED status indicator under the cover of the housing.

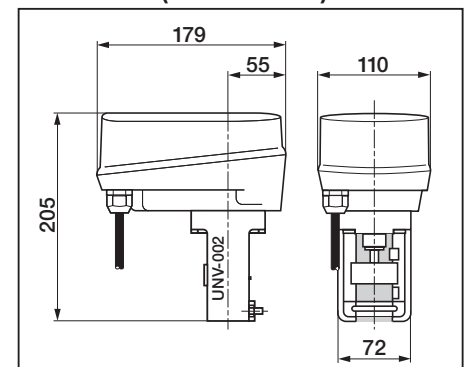
Safety note

The linear actuator contains no components which can be replaced or repaired by the user.

Note on delivery

The UNV-002 bracket is included in the scope of delivery, providing the valve and the actuator are ordered together.

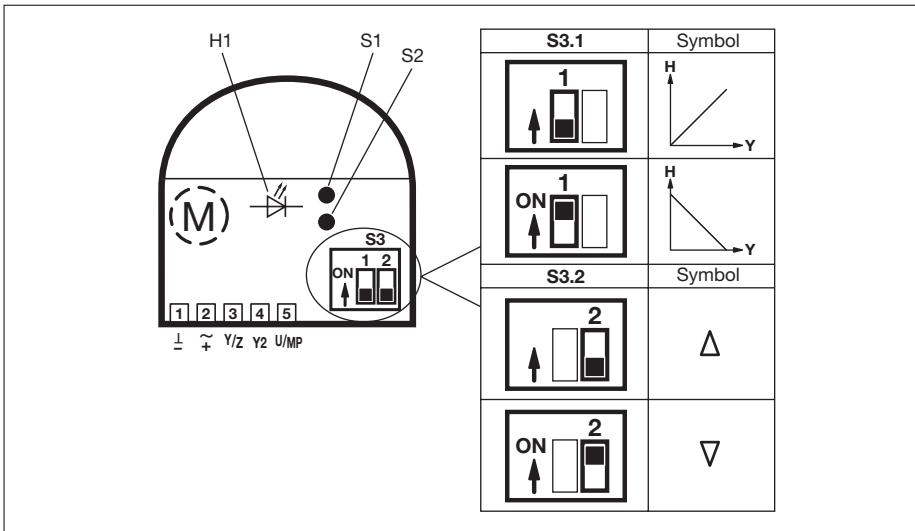
Dimensions (incl. UNV-002)



Technical data	NV24-MFT	Nvy24-MFT
Nominal voltage	AC 24 V 50/60 Hz, DC 24 V	
Nominal voltage range	AC 19.2...28.8 V, DC 21.6...28.8 V	
For wire sizing	5 VA	
Power consumption	3 W	
Connecting cable	1 m, 5 x 0.75 mm ²	
Control	DC 0...10 V @ 100 kΩ	
Operating range	DC 2...10 V	DC 0.5...10 V für 0...100 % stroke
Position feedback	DC 2...10 V (0.5 mA)	DC 0.5...10 V @ 0.5 mA
Uni-rotation	±5 %	
Nominal stroke	20 mm	
Actuating force	¹⁾ 1000 N / ²⁾ 800 N	
Manual operation	Hexagonal key, self-resetting	
Fast running function		•
Running time	150 s	35 s
Sound power level	Max. 35 dB (A)	Max. 45 dB (A)
Position indication	Mechanical 10...20 mm stroke	
Protection class	III (safety extra-low voltage)	
Degree of protection	IP54	
Ambient temperature range	0°...+ 50° C	
Non-operating temperature	-40°...+ 80° C	
Humidity test	To EN 60730-1	
EMC	CE according to 89/336/EEC	
Software class A	To EN 60730-1	
Mode of operation	Type 1 to EN 60730-1	
Maintenance	Maintenance-free	
Weight	1.5 kg incl. UNV-002 bracket (without valve)	

¹⁾ Closing force
²⁾ Inhibiting force

Arrangement of the operating controls on the NV../AV.. multifunctional



Under the cover of the actuator are the terminals for connecting the lead, the S1, S2 and S3 control devices and the H1 LED indicator.

By setting slide switch S3 or pressing pushbuttons S1 and S2, it is possible to configure the actuator very simply on site to suit actual requirements if changes are necessary from the factory settings.

Functional description

Function	Description	Switch	Symbol	Bold type in the table means standard factory setting (valve-specific).
Test	The valve effects full stroke with maximum running time and checks the adapted stroke to determine whether the two end-points (H = 0% and H = 100%) are reached.	Press S1		
Init (adaptation)	The possible stroke effected (between the two mechanical end stops of the valve) is detected as 100% stroke and stored in the microprocessor. The control signal and the running time are then matched to this 100% stroke.	Press S2		
Dir. of stroke	Direction of stroke relative to the control signal	S3.1	Symbol	Consequence
Direct	0% control signal corresponds to 0% position feedback. (The actuator spindle is extended or retracted according to the selected closing point.)	OFF		
Inverted	0% control signal corresponds to 100% position feedback. (The actuator spindle is extended or retracted according to the selected closing point.)	ON		
Valve closing point	Closing point with actuator spindle extended or retracted. The valve control path has zero flow.	S3.2	Symbol	Consequence
Up	The actuator spindle is retracted into the actuator and the valve stem is extended from the fitting. The position feedback indicates 0% if the stroke direction is "direct". Default setting for H4..B-, H5..B-, H6..N- and H7..N valves.	OFF		
Down	The actuator spindle is extended from the actuator and the valve stem is retracted into the fitting. The position feedback indicates 0% if the stroke direction is "direct". Default setting for H6..S valves.	ON		

Only authorized and trained persons are allowed to change the settings of slide switch S3 and pushbutton S2.

1) The electrical closing point is either identical to the deenergized position of the actuator spindle or the opposite of this position, depending on the selected emergency control function type (NVF24-MFT-T or NVF24-MFT-E-T). The actuator type is selected according to the valve design and the required NO (valve open when deenergized) or NC (valve closed when deenergized) function.

LED indicator H1

Green steady light	Actuator working properly
Green flashing light	Test run or adaptation with synchronization in progress
Red steady light	Fault ¹⁾
Red flashing light	After power interruption (> 2 s). The valve is automatically synchronized at the selected closing point the next time it closes. The LED indicator changes from a red flashing light to a green steady light.
Alternating red / green flashing light	Addressing via the control system and operation of the adaptation pushbutton S2 in progress

The actuator is maintenance-free. The twin-color LED indicator shows the actual actuator status.

It also allows simple commissioning if the factory settings need to be changed.

¹⁾ Possible causes: Actuator installed incorrectly; valve stem blocked; no valve installed. The adaptation must be repeated by pressing pushbutton S2 after all the above causes have been checked and rectified.