

Model	Control	Control Signal
MVA21	On-off (with cable)	110...230 V~
MVA23	On-off	110...230V~
MVA41	On-off PWM (with cable)	24V~
MVA43	On-off PWM	24V~



APPLICATION AND USE

MVA actuators are used in V.ZB globe valves coupling for cool/warm water control in two- and four-pipe terminal units and zone plants.

OPERATION

MVA actuators are of electro-thermal type and are controlled by an on-off signal or, for MVA41/43 only, by pulse width modulation too.

Actuators are powered by control signal; this causes the heating of a thermostatic element. Consequently a small piston comes out and, opposing to return spring, lowers the valve stem.

MVA23-43 actuators can be equipped with an auxiliary micro-switch mod. D41, which can be mounted by removing the side cover. The D41 micro-switch has the contact closed when the actuator is supplied. This is a particular application of fan-coil terminal unit since: the fan, connected to the microswitch contact on the actuator, operates with open valve and stops when valve is near to close position. This happens in order to avoid cool air throw.

MANUFACTURING CHARACTERISTICS

MVA actuators consist of a base and two thermoplastic (PA6 - 30% glass fiber) covers.

MVA21/41 models are equipped with supply cable.

Inside the actuator there is a thermostatic element heated by a PTC thermistor.

Actuators are equipped with a guillotine system, located on the lower part, which allows an easy valve assembly by screw tightening.

TECHNICAL CHARACTERISTICS

Power supply (control signal)	
MVA21-23	110...230 V \pm 10%
MVA41-43	24 V~ \pm 10%
Consumption	5 VA (working) 13 VA (fuse dimensioning)
Frequency	50/60 Hz
Cold start timing	2' (power-up to 1 st stem movem.)
Stroke timing	opening: 3' closing (cooling): 8'
Stroke	4 mm
Force	110 N
Temperature	
- working	5T 50
- storage	-25T 65
Protection class	II (CEI 107-10)
Connection cable (MVA21/41)	two-wires 1.5 m (CEI 20-22/II)
Terminal board (MVA23/43)	screw type for 1,5 to 2,5 mm ² conductors
Nr. 1 conduit opening (MVA23/43)	rubber, with D=6 mm hole
Protection	IP 31 For environments with normal pollution according to IEC 730-1 (93)/6.5.3
Weight	0.2 Kg

Product conforms to EMC 89/336 directive with reference to the below-mentioned standards:

EN50081-1 for emission EN50082-1 for immunity

POSSIBLE COMBINATIONS AND CONNECTIONS

MVA actuators should be used with CONTROLLI V.ZB terminal and zone valves.

MVA21/23 actuators can be connected to any ON-OFF (110...230 V~) controller while MVA41/43 actuators can be connected both to any ON-OFF controller and to pulse width modulation controllers (24 V~); in particular with CONTROLLI RT700 series and DIGITROLL 7000 controllers.

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CONTROLLI

ISO 9002

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ACCESSORIES (only for MVA23/43)

D41 SPST 2(0,2) A - 250 V aux. contact (contact closed when actuator is supplied)

INSTALLATION AND ASSEMBLY

For valve body assembly:

- Remove the plastic protection cover on valve spring.
- Place the actuator on the valve body oriented in the required (see Fig.1).
- Tighten A screw.
- Connect the cable following the diagram on the right and check the controllers electrical connections on the related data sheets.

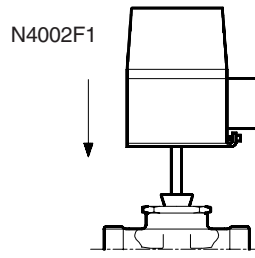


FIG. 1

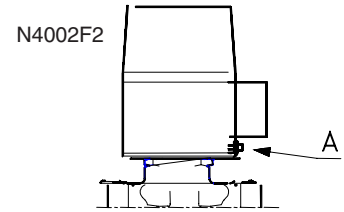
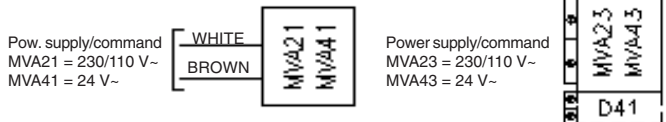


FIG. 2

CONNECTION CABLE (MVA21/41)

TERMINAL BOARD (MVA23/43)

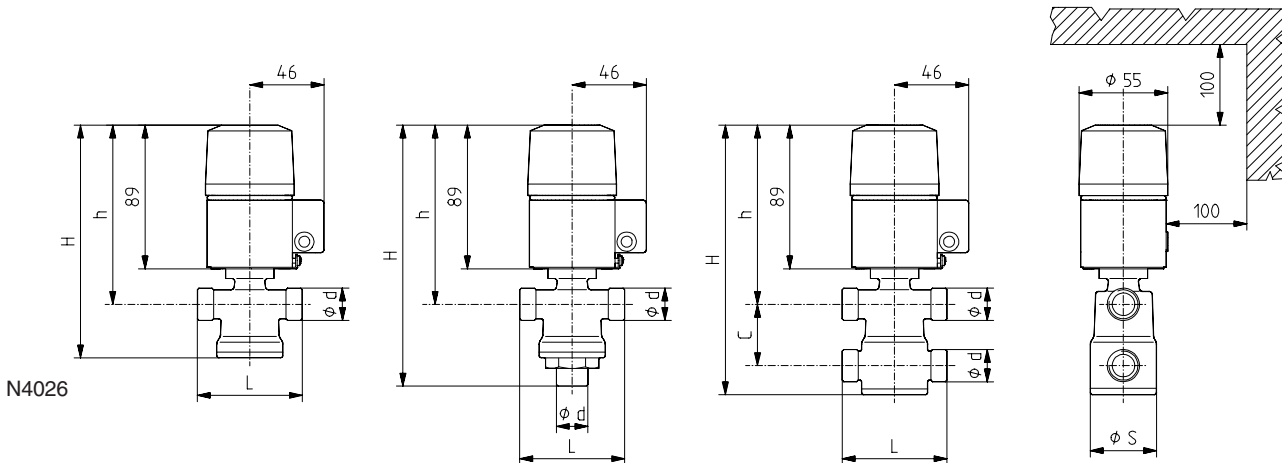
CAUTION: do not supply the actuator when it is not mounted on the valve body.



Once coupling has been carried out, in order to ensure seal by valve closing, perform an operating cycle by supplying the actuator for a few minutes.

N3049F1/F2

ACTUATORS AND VALVE OVERALL DIMENSIONS (mm.)



VALVE MODEL	Ø d	L	Ø S	C	H	h	Valve weight (kg.)
VMZ09B/10B/11B/12B/13B/1B	G1/2	66	42	--	169	112	0,45
VMZ2B	G3/4	77	46	--	174	115	0,55
VSZ09B/10B/11B/12B/13B/1B	G1/2	66	42	--	151	112	0,40
VSZ21B/2B	G3/4	77	46	--	158	115	0,50
VSZ11B/12BA/13BA1BA	G1/2	66	42	--	145	133	0,50
VSZ21BA/2BA	G3/4	77	46	--	151	137	0,50
VTZ09B/10B/11B/12B/13B/1B	G1/2	66	42	38	168	112	0,50
VTZ21B/2B	G3/4	77	46	65	193	115	0,50

The performances stated on this sheet can be modified without any prior notice due to design improvement.



Automatic control systems for:
air conditioning/heating/industrial thermal process.

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