

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



APPLICATION AND USE

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

OPERATION

MVA actuators are 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 thermostatic element to heat up and a small piston to come out and, opposing to return spring, lower the valve stem.

MVA23-43 actuators are supplied with a microswitch mod. D41 with contact closed by powered actuator; a particular application of fan control terminal unit being: the fan, connected to microswitch contact on the actuator, operates by open valve and stops when valve is near to full close position. This in order to avoid cool air throw.

WORKING CHARACTERISTICS

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

MVA21/41 models are fitted with supply cable.

APTC thermistor heats the thermal element inside actuators.

Actuators are equipped with a guillotine system allowing easy coupling to the valve by screw tightening.

TECHNICAL CHARACTERISTICS

Power supply (control signal)

MVA21-23 110...230 V ± 10%

MVA41-43 24 V~ ± 10%

Consumption 5 VA (working)

30 VA (fuse dimensioning)

Frequency 50/60 Hz

Cold start timing 2' (power-up to 1st stem movem.)

Stroke time 3' (opening)

8' (closing)

Max stroke 3.5 mm

min. force 100 N

Temperature

- working 5T 50

- storage -25T 65

Protection class II (CEI 107-10)

Connection cable

(MVA21/41) 1.5 m (CEI 20-22/II)

Terminal board (MVA23/43) screw type for 1,5 to 2,5 mm² conductors

Nr. 1 conduit opening

(MVA23/43) rubber, D=6 mm hole

Protection IP 31

For environments with normal pollution production after IEC 730-1 (93)/6.5.3

Weight 0.2 Kg

Product conforms to EMC 891336 directive with reference to the under mentioned standards:

EN50081-1 for emission

EN50082-1 for immunity

POSSIBLE COMBINATIONS AND CONNECTIONS

MVA actuators are to 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, DIGITROLL 7000, NR 7112/14 NR7312/14 controllers.

ACCESSORIES

D41 SPST 2(0,2) A - 250 V aux contact (only for MVA23/43)
(contact closed when actuator is supplied)

Rev. f	07/00	1	DBL012E
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CONTROLLI

ISO 9002

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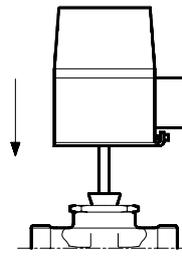
INSTALLATION AND ASSEMBLY

For valve body coupling:

- remove plastic protection cover fitted on valve spring
- place actuator on valve body in the expected position (see ill. 1)
- tighten A screw
- connect the cable as per beside wiring diagram and instruction provided on the data sheets relevant to R.700 and DIGITROLL 7000 controllers.

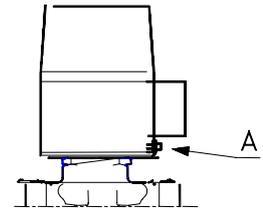
CAUTION: do not energize the actuator when it is not mounted on the valve body.

In order to ensure seal by valve closing, when coupling has been carried on, the actuator has to be powered for a few minutes so as to act a cycle.



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FIG. 1

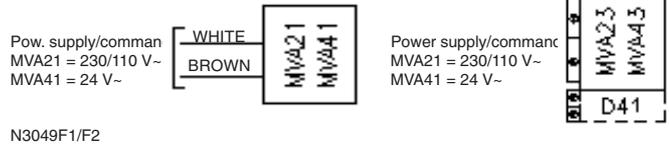


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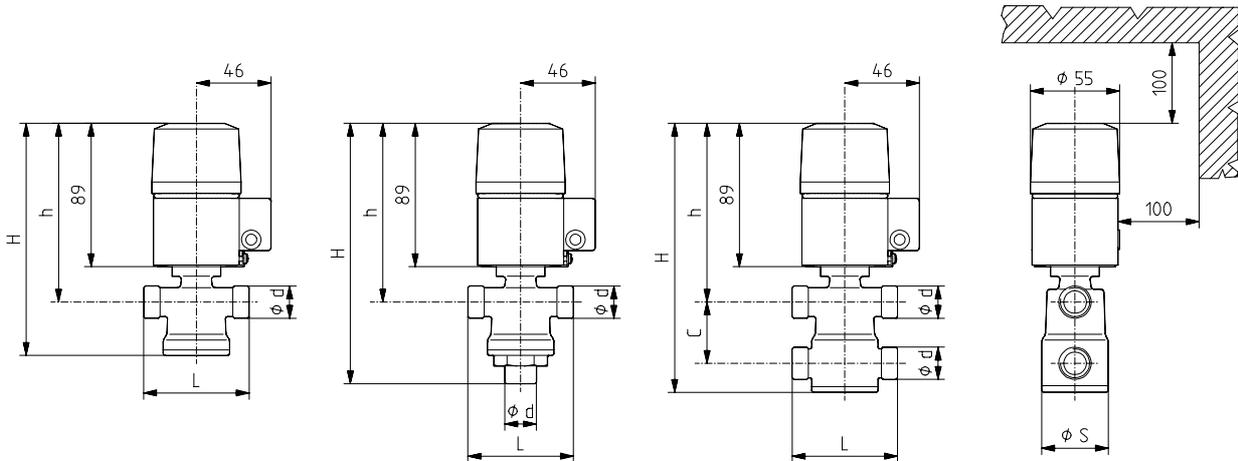
FIG. 2

CONNECTION CABLE
(MVA21/41)

TERMINAL BOARD
(MVA23/43)



ACTUATORS AND VALVE DIMENSIONS (mm)



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Part Number	Ø d	L	Ø S	C	H	h	Valve weight (kg)
VMZ09B/10B/11B/12B/13B/1B	G 1/2	66	42	--	169	112	0.45
VMZ2B	G 3/4	77	46	--	174	115	0.55
VSZ09B/10B/11B/12B/13B/1B	G 1/2	66	42	--	151	112	0.40
VSZ21B/2B	G 3/4	77	46	--	158	115	0.50
VSZ11BA/12BA/13BA/1BA	G 1/2	66	42	--	145	133	0.50
VSZ21BA/2BA	G 3/4	77	46	--	151	137	0.50
VTZ09B/10B/11B/12B/13B/1B	G 1/2	66	42	38	168	112	0.50
VTZ1BA	G 1/2	66	42	38	178	105	0.50
VTZ21B/2B	G 3/4	77	46	65	193	115	0.50

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