



## VA250.2 : Valve Actuators

For controllers with switched output (2/3-point control). For operating through or three-way valves of the Comar Line series.

Two-part housing of fire-retardant plastic: lower part in black, upper part in yellow. Synchronous motor with electronics for control and switch-off, magnetic clutch and maintenance-free gearbox. Electronic recognition of end position and motor switch-off using time-switch in the device. Fixing bracket of plastic and cap nut of brass for fitting the valve. Assembly with the valve is practically automatic. Disengageable gears for positioning the valve by hand (no. 6 Allen key). Power cable 1.2 m long,  $3 \times 0.75 \text{ mm}^2$ . Fitting position: anywhere from vertical to horizontal, but not upside down.

Type	Control	Running time [s]	Stroke [mm]	Pushing force [N]	Power	Weight [kg]
<b>VA250.2</b>	2/3-point	120	8	250	230 V~	0.7
Power supply	230 V~	± 15%, 50...60 Hz		Protection (horizontal)	IP 54 as per EN 60529	
Power consumption	F120	2.0 W	4.0 VA	Protection class	24 V	III as per IEC 60730
					230 V	II as per IEC 60730
				Min. response time	200 ms	
Max. media temperature	100 °C					
Permissible ambient temp.	-10...55°C					
Ambient humidity	5...95 %rh without condensation					

1) Infinitely variable from 0...100%; max. load 5(2) A, 24...230 V

2) Only one potentiometer or one set of auxiliary contacts can be fitted to each drive!

## Operation

By applying power to the cable, the final control element can be moved to any position by means of the coupling rod.

Direction of stroke movement in the case of 3-point control:-

- The coupling rod extends (and the valve opens) if power is applied to the drive via the blue (MM/N) and the brown (01) wires.
- The coupling rod retracts (and the valve closes) if power is applied to the drive via the blue (MM/N) and the black (02) wires.

In the case of 3-point control, the direction can be changed by transposing the connections.

Direction of stroke movement in the case of 2-point control (the black wire 02 is always live):-

- The coupling rod extends (and the valve opens) if power is applied to the drive via the blue (MM/N) and the brown (01) wires.
- The coupling rod retracts (and the valve closes) if power is applied to the drive via the blue (MM/N) wire, and power is not applied to the brown (01) wire.

In both end positions (i.e. on hitting a stop in the valve or reaching the maximum stroke), or in the event of an overload, the magnetic coupling is activated. The control signal is switched off by the electronic cut-out after three minutes (60 seconds for F100).

Manual adjustment is performed by disengaging the gears (sliding switch next to the power cable) and simultaneously turning, using an Allen key in the insert on the upper part of the drive. Eight mm of stroke is attained with 1½ turns.

N.B.: After manual adjustment, re-set the sliding switch (engage the gears).

### Engineering and fitting notes

The ingress of condensate, drops of water etc. along the valve spindle and into the drive should be prevented. Should not be fitted upside down.

The assembly of drive and valve is done by fitting and tightening the cap nut without further adjustment; no tools should be used. The valve spindle and the drive spindle are coupled together automatically, either by using the manual adjustment facility and moving to 100% stroke, or by applying power at terminals MM/N and 01. To disassemble, the drive and valve spindles should be loosened first, then the cap nut.

The drive is supplied ex works in the middle position.

The concept of a synchronous motor combined with a magnetic coupling ensures parallel operation of more than one valve drive of the same type.

The following accessories can be fitted to each actuator: either one set of auxiliary contacts or a potentiometer.

The auxiliary contacts should be screwed onto the drive's top cover. Before the mechanical connection can be established, the indicator knob should be removed. A new indicator is then visible on the lid of the auxiliary contacts.

N.B.: The housing should not be opened.

**Fitting outdoors.** If the devices are fitted outdoors, we recommend that additional measures be taken to protect them against the effects of the weather.

### Additional technical data

The upper part of the housing, with the lid and indicator knob, contains the synchronous motor with the capacitor. The lower part contains the maintenance-free gears and the gear-release knob.

Auxiliary change-over contacts

Switch rating: max. 230 V a.c.; min. current 20 mA at 20 V

Switch rating: max. 4...30 V d.c.; current 1...100 mA

Power consumption:

Type	Running time s	Condition	active power P W	apparent power S VA
VA250.2	30	Operating	2.4	4.5
VA250.2	120	Operating	2.0	4.0

### CE conformity

EMC directive 89/336/EEC

EN 61000-6-1

EN 61000-6-2

EN 61000-6-3

EN 61000-6-4

Machine directive 98/37/EEC (II B)

EN 1050

Low-voltage directive 73/23/EEC

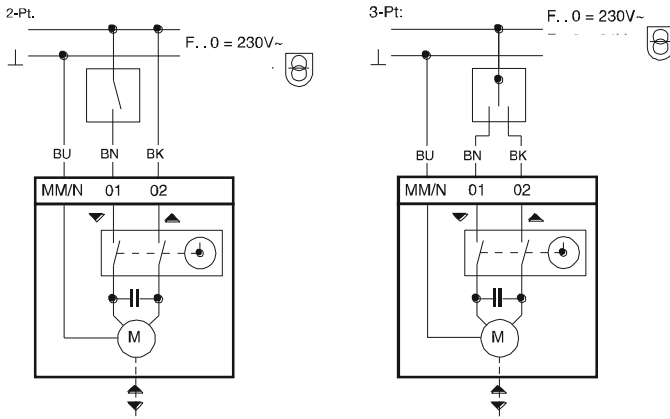
EN 60730-1

EN 60730-2-14

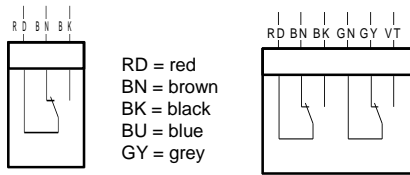
Over-voltage category III

Degree of pollution II

## Wiring diagram



## Accessories



## Dimension drawing

