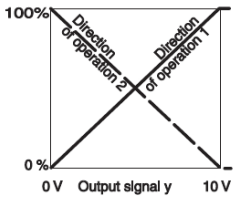
Areas of use

The Macon Motorized Actuator can be used on all Macon Valves (NT series 2-way valves, EDV 3-way mixing valves, EKV cooling valve and OPSK one pipe steam valve). For controllers with continuous output in conjunction with single-room control systems. Automatic valve adjustment and intelligent cut-off for maximum energy efficiency.

Specifications

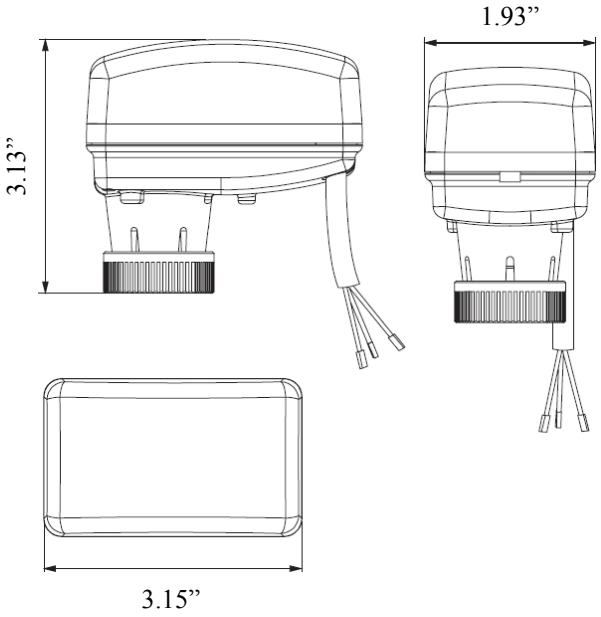
Design

- Two-piece plastic housing, light grey RAL7035
- Brass nut
- Plug-in cable, light grey, standard 1.50 m long, 3×0.35 mm², exchangeable
- Running time 13 s/mm
- Fitting position vertically upright to horizontal, not upside down.



Data

Direction of operation	NO/NC DIP switches
Running time	43 - 72 s (8s/mm)
Stroke	5.5 mm
Pushing force	120 N
Power supply	24V AC/DC, ±15%, 50 - 60 Hz
Power consumption	2.5 VA
Control signal	0 (2) - 10V
Max operating temperature	203°F at the valve
Noise level	<30 dB(A)
Perm ambient temperature	0 - 122°F
Perm ambient humidity	<75%rh
Ingress protection	IP 43 (EN 60529)
Protection class	III (EC 60730)



Operating

When being put into service (with valve fitted), the actuator moves to both end positions and stores the associated increments. The range of the control signal is then assigned to this effective stroke. The motor positions the valve and cuts out as soon as the stroke position matches the controller's output signal. In the end positions or in the event of an overload, the motor cuts out after 2 minutes at the latest. If the control voltage has not changed after 2 hours (in the range of 0 - 0.5 V), the motor briefly runs to the end position and corrects its position memory (if necessary). The MVA 2-10 performs a complete cycle every 24 hours in order to prevent the valve plug from jamming or sticking. The LED lights up if power is applied and flashes as long as the motor is running.

Direction of operation 1:
As the positioning signal increases, the actuator spindle extends on 2-way through valves and on the EDV 3-way valve the control passage opens.

Direction of operation 2:
As the positioning signal increases, the actuator spindle retracts on the 2-way through valves and on the EDV 3-way valve the control passage closes.

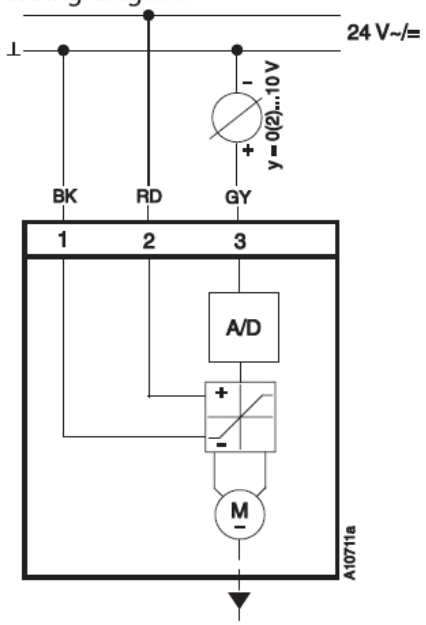
The black ground cable 1a (24 V~) and the blue ground cable 1b (control voltage) should both be connected to a common ground cable.

After removing the cap on the cover, the following settings can be made using jumpers:

- The input signal can be set to 0 - 10 V, 5.2 - 10 V or 0 - 4.8 V.
- The direction of operation 1 or 2 can be selected; the factory setting is 1 (DA).

Put the cap back on after making the settings.

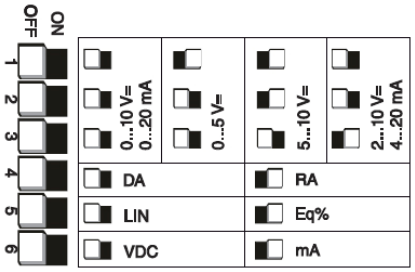
Wiring diagram

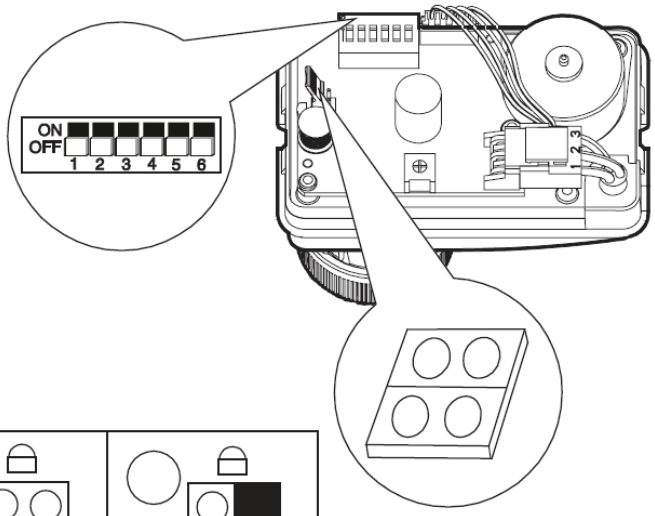


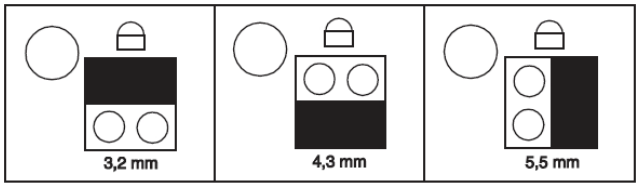
1	BK (black)
2	RD (red)
3	GY (grey)

LED Status Indicator	
Status	**Description**
OFF	No power applied
Flashing green	Actuator moving to position
Continuous green light	Position reached
Flashing red	Calibration cycle
Continuous red light	No input signal

DIP switch setting







Factory Setting: All the DIP switches in OFF position.

DIP switches 1-2-3
The DIP switches 1-2-3 are used for setting the control signal range.

DIP switch 4
The direction of operation of the actuator is set with DIP switch 4:
DIP switch 4 in OFF position: DA (Direct Acting)
DIP switch 4 in ON position: RA (Reverse Acting)

DIP switch 5
This switch can set the actuator so that the characteristic of the combination of valve with actuator corresponds to a linear or equal-percentage characteristic.
DIP switch 5 in OFF position: LIN
Use this setting if the valve has a linear or equal-percentage characteristic.
DIP switch 5 in ON position: Eq%
Use this setting with an open/close or a high-speed valve.

DIP switch 6
The voltage (VDC) or current (mA) is set with DIP switch 6.
DIP switch 6 in OFF position: VDC
DIP switch 6 in ON position: mA

Setting the stroke
The stroke can be set using a jumper.
Factory Setting: 4.3mm

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