



Valve Actuator Raise Lower Control Module **MVC 010T**

Jan.10



CE

MVC 010T

Features

- 0-10 Vdc Input
- 2 x SPNO Relays
- Raise / Lower Control proportional to 0-10 Vdc Input
- Daily Automatic Reset
- DIN Rail Mounting (TS35)
- ON/OFF Override
- LED Indication
- 24V ac/dc control supply
- 225s Time Base (specials available)

Technical Data

Input Signal	0-10Vdc
Output Contacts	2 x SPNO
Contact Rating	8 A/250 Vac (resistive)
Power Supply	24 Vac or Vdc +/- 10% (32 mA typical @ 24 Vdc)
Mode of Operation	See Overleaf
Terminals	Rising Clamp for 0.5 - 2.5mm ² Cable
LED Indicators	ON when relay energised
Ambient Temp Range	0...50°C
Dimensions:	92.5mm (h) x 68mm (w) x 47mm approx.

This product is designed to meet the requirements of CE when correctly installed

General

The MVC 010T Raise / Lower Controller is designed to control an electric valve actuator with an operating time (from open to closed) of 3.75 minutes or less.

The MVC 010T will open or close the valve in proportion to the voltage change in the 0-10 Vdc Input Signal.

The MVC 010T will control in a time proportional manner, proportional to 0-10 Vdc input.

E.g. Input change by 2V then output relay will be switched on for 45s.

To maintain actuator position the MVC 010T, will drive the actuator closed for 4 minutes

Once every 24 hours, the MVC 010T will operate Relay K1 (MTR1) for 4 minutes to ensure the valve returns to a known state.

Special versions are available upon request.

The MVC 010T is designed to fit on TS35 section DIN Rail.

Ordering Code

MVC 010T Valve Control Module



Configuration

Reset Jumper:

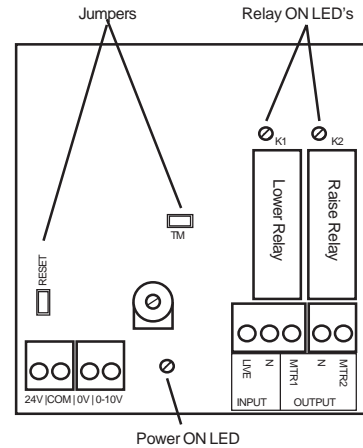
Remove and replace the Reset Jumper after 5 Seconds to reset the MVC 010T

TM Jumper:

Not fitted. For factory adjustment only - do not use.

Mode of Operation

These notes assume that the MVC 010T is connected in such a manner that Relay K1(MTR1) closes the valve and Relay K2(MTR2) opens the valve.



On initial power up (and also after operation of the Reset Jumper) Relay K1(MTR1) closes for 4 minutes, driving the valve to a known position (i.e. fully closed) then Relay K1(MTR1) opens.

The operation of the MVC 010T is directly proportional to the 0-10 Vdc input signal, such that a 10 V signal operates the unit for 3.5 minutes, a 5 V signal operates the unit for 1.75 minutes and a 2.5 V signal operates the HFD MVC 010T for 0.875 minutes, etc.

Any change to the input signal is ignored until the time period has finished.

If there is no change in the Input Signal, the MVC 010T remains quiescent with both relays open.

The Relays K1(MTR1) and K2(MTR2) track the input voltage proportionally to time, rising voltage will cause K2(MTR2) to open the valve and decreasing input voltage will cause K1(MTR1) to close the valve.

The MVC 010T automatically resets, closing Relay K1(MTR1) for 4 minutes, 24 hours after initial power up, and thereafter every 24 hours, thus ensuring that deviations due to tolerances are kept to a minimum.

E.g. (See graph below) If the MVC 010T receives a 5v Input after power on reset, Relay K2(MTR2) closes for 1.75 minutes and the opens, driving the valve to the half open position.

If the input signal then drops (or has dropped) to 2.5V, Relay K1(MTR1) will close for 0.875 minutes and then opens, thus closing the valve to a quarter open position.

If the input signal now rises to 5V, Relay K2(MTR2) will close for 0.875 minutes and then open, driving the valve back to the half open position.

If the input signal now rises to 7.5V, Relay K2(MTR2) will close for a further 0.875 minutes causing the valve to open further, to the three quarter open position.

Should the input signal now drop to 0V, Relay K1(MTR1) will close for 2.625 minutes thus driving the valve to the one quarter open position.

The MVC 010T tracks the input signal voltage with a 1% accuracy.

