



MTS 010



Features

- **Five operating modes:**
 High/Low
 Raise/Lower
 Binary
 2 Timer modes
- **Rising cage field terminals**
- **LED status indication**
- **Hand/Off/Auto jumper for ease of commissioning**
- **DIN rail mounting**
- **Adjustable timer range**

Technical Data

Input signal	0-10Vdc (1mA max.)
Output contacts	2 x SPCO
Contact rating	12A@230Vac (res)
Power supply	24V ac or dc
Power consumption	70mA max@24Vac50mAmax@24Vdc
Mode of Operation	Raise/Lower High/low Binary Single stage Timer Two stage Timer
LED indication	ON when relay energised
Manual override	ON/OFF/AUTO (link selectable)
Timer	0 to 30 seconds per stage 0 to 240 seconds per stage
Electrical	terminals for 0,5-2,5 mm ² cable
Connections	rising cage connectors
Ambient range	0...+50°C
Approvals	This products meet the CE-demands
Dimensions	83 x 46 x 45mm
Weight	73 gram

Application

The MTS 010 converts 0-10Vdc input signal into a relay output pair.

The module can be configured, for a raise/lower, high/low or binary output with or without stage delays or as a timer module.

Applications include the control of valve or damper actuators or for pump changeover, in conjunction with a BMS controller.

The unit has an adjustable timer function and can slo be used as a single or two staged time module.

The MTS is powered from 24Vac or 24Vdc and is designed to fit onto TS35 Section DIN Rail

Ordering Code

- MTS 010T1** Two relay module 0-10Vdc, timer 0-30sec
- MTS 010T2** Two relay module 0-10Vdc, timer 0-240sec

Modes of Operation

The MTS 010 offers a choice of five operating modes.

- Three Relay Modes
- Two Timer Modes

Configuration - Relay Modes

The MTS 010 offers a choice of three relay operating modes, High/Low, Raise/Lower or Binary (see table 1), which are selected using the Function Link.

The stage delay is the minimum time between any stage switching on or off and can be set between 0 and 30 seconds (0 and 240 seconds for the MTS using the timer adjustment potentiometer).

The units are factory preset to no delay (timer potentiometer fully anti-clockwise).

Relay mode configuration table

Table 1

1/ High / Low mode - relays switch in sequence

Input Voltage	Relay 1	Relay 2
0V	OFF	OFF
5V	ON	OFF
10V	ON	ON

Function Link

BIN RL HL



2/ Raise / Lower Mode - relays switch as below

Input Voltage	Relay 1	Relay 2
0V	OFF	OFF
4V	ON	OFF
7V	OFF	OFF
10V	OFF	ON

Function Link

BIN RL HL



3/ Binary Mode - relays switch as below

Input Voltage	Relay 1	Relay 2
0V	OFF	OFF
4V	ON	OFF
7V	OFF	ON
10V	ON	ON

Function Link

BIN RL HL



Configuration - Timer Mode

The MTS 010 offers a choice of two timer operating modes, either as single or two stage timer.

To set the unit up as a timer module put two jumpers of the function link.

The unit now operates without a 0-10v input and the delay time is set by using the timer potentiometer.

The units come factory preset set to no delay when the potentiometer is fully anti clockwise. (see timer selection below)

Function Link

BIN RL HL



Timer Selection

There are two timer options

The standard unit provides 0 to 30 seconds delay per stage using the timer adjustment potentiometer, if you require 0 to 240 seconds please order the MTS 101T2.

The units will be factory preset to no delay when the potentiometer is fully anti-clockwise

Commissioning

Two Links are provided as a commissioning aid ON-OFF-AUTO (H=ON, O=OFF, A=AUTO) one for each relay.

In the ON position, the appropriate relay will be energised regardless of the 0-10Vdc Input Voltage, likewise in the OFF position the relay will remain off.

When the jumper is in AUTO position, the relays will be energised in accordance with the mode of operation.

Connection

The diagram below shows the terminal designations and board layout for the MTS 010 range.

