Timers

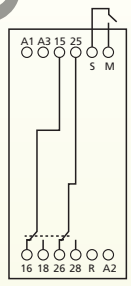
- ***Multifunction digital timer.***
- ***Possibility of programming up to 9 different times. Each time can be set from 0,1 seconds to 99 hours.***
- ***With built-in battery which allows timer to be programmed without connecting to auxiliary voltage. Complete battery discharge does not affect operation or adjustment settings.***

- For control and automation systems in industry.
- Command contact with 5 programmable functions.
- 2 digit, 7 segment LED displays and push-buttons provide programming, and during operation allow for monitoring of the time period and review the programmed settings.
- 45 mm module size, 35 mm wide. DIN EN 50022-35 rail mounting.

Programmable parameters

- Initial state of outpout relays: energized (1H) or de-energized (1L).
- Working mode: cycle (C1) or non-cycle (C0).
- Number of different times per program: up to 8 in cycle mode and up to 9 in non-cycle.
- Time setting range: from 0,1 seconds to 99 hours.
- Command contact.

MTR-10



Auxiliary voltage
A1-A2: 230 Vac
A2-A3: 24 Vac, dc

Model	MTR-10
Auxiliary power supply (+15 -10%)	230 V 50/60 Hz, 24 Vdc, ac
Code no.	12110

Characteristics	
Time setting range	From 0,1 seconds to 99 hours
Accuracy	1% ±10 ms
Repeat accuracy	0,5%
Number of different times per program	Up to 8 in cycle mode and 9 in no-cycle
Output contacts	1 relay with 2 timed change over contacts NO-NC
Switching power	I_{th}: 5A; AC15 - 250V - 2A; DC13 - 30V - 2A
Terminals: max section / screw torque	2,5 mm², No. 22 - 12AWG / 20Ncm, 1.8 LB - IN
Mechanical / electrical life	>20 x 10^6 operations / >10^5 operations
Consumption	8 VA (230 Vac) - 1W (24 Vdc)
Protection degree / weight	IP 40 front / 0,15 kg
Storage / operation temperature	-30°C +70°C / -20°C +55°C
Standards	IEC 255

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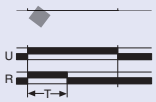
Function example diagrams

U: power supply **R**: relay output
Output relay at start: **1L** de-energized; **1H** energized.
Work mode: **CO** non-cycle; **C1** cycle.
Command contact: **cu**, **cr**, **cl**, **ci**, **co**.

Delay on
1L - CO - cu

Timing on
1H - CO - cu

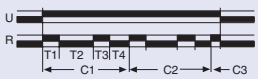


Delay off
With command contact
1H - CO - co

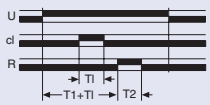
Double timing
1L - CO - cu

Double timing
Cycle work mode
1H - C1 - cu

Four timings
Cycle work mode
1H - C1 - cu



Timing with pause by command contact
1L - CO - cl



Command contact Can be switched on in two ways:

- By closing an external voltage free contact between M and S
- By connecting 5-35 Vac,dc between M(+) and R(-)

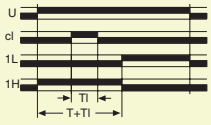
One of the following arrangements can be programmed:

Each diagram represents the effect of the command contact for the two initial states of the output relay: de-energized (1L) and energized (1H).

cu **Switched off contact**
Its function is blocked

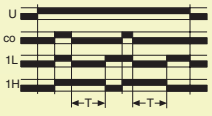
cr **Reset contact**
When connected the output relay is de-energized; upon disconnecting, the programmed timing starts.

cl **Pause contact**
A pause in the timing takes place during its operation.



ci **Delay on contact**
When disconnected the output relay is de-energized; when connected the programmed timing starts.

co **Delay off contact**
When disconnected the output relay is de-energized. When connected, the relay is energized. When disconnected again, the programmed timing starts.



FANOX
PAE Asuaran Edif. Artxanda, 23 • 48950 ERANDIO • BIZKAIA • SPAIN
Tel. +34 94 471 14 09 • Fax +34 94 471 05 92
E-mail: fanox@fanox.com • http: //www.fanox.com

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