

MULTIFUNCTION DIGITAL TIMER MTR 10

Command contact

Can be switched in two ways:

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

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

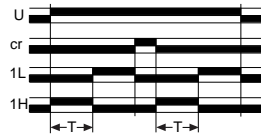
U: power supply

cu Switched off contact. Its function is blocked.

Su función está inhibida

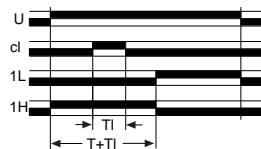
cr Reset contact

When connected the output relay is de-energized upon disconnecting, the programmed timing starts.



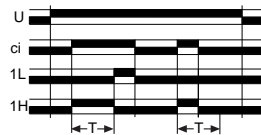
cl Lock contact

A partial shutdown of the timing takes place during its operation.



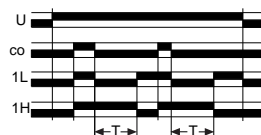
ci Delay on contact

When disconnected the output relay is de-energized; when connected the programmed timings starts.



co Delay off contact

When disconnected the output relay is de-energized. When connected, the relay is energized. When disconnected again, the programmed timings starts.



Function examples diagrams

U: power supply

R: output relay

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



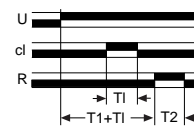
Double timing cycle work mode

1H - C1 - cu



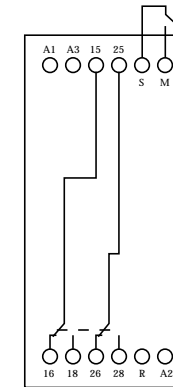
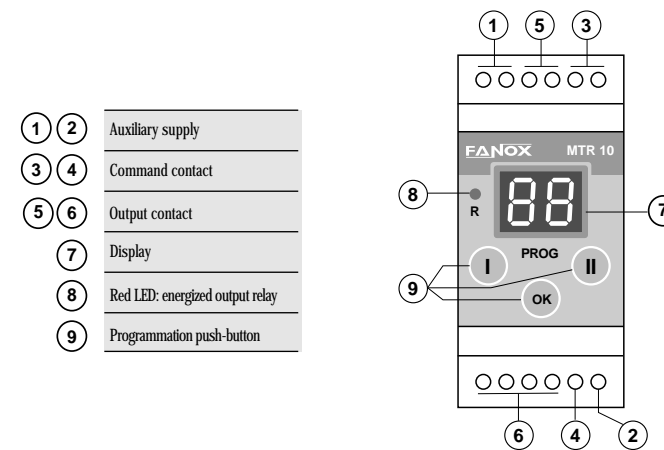
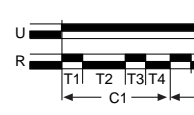
Four timings cycle work mode

1H - C1 - cu

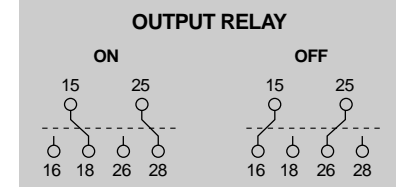


Timing with partial shutdown by command contact

1L - CO - cl



A1 - A2: 230 Vac (+15-10%)
A2 - A3: 24 Vac, cc (+15-10%)

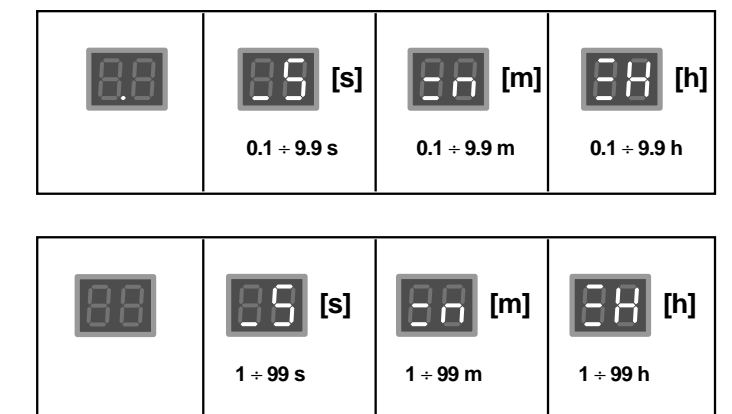


Technical data

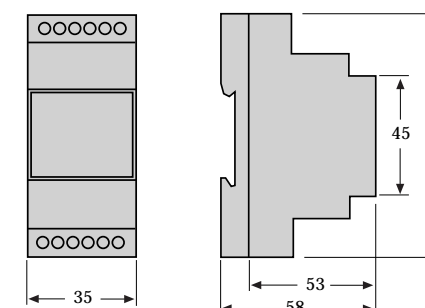


Auxiliary supply +15-10% / Consumption	230V 50/60 Hz / 8VA 24V Vdc.ac / 1W
Accuracy	1% ± 10 ms
Repeat accuracy	0.5%
Output contacts: 1 relay with 2 timed change over contacts NO-NC	C300 - 125/250V I _{th} = 5 A AC15 - 250V - 2A DC13 - 30V - 2A DC13 - 115V - 2A
Terminals: max section / screw torque	2,5mm ² , No.22 - 12AWG/ 20 Ncm, 1,8 LB - IN
Mechanical / electrical life	>20 x 10 ⁶ OP / 10 ⁵ OP
Protection degree / weight	IP40 front / 0,15 kg
Storage / operation temperature	-30°C +70°C / -20°C +55°C

TIMES RANGES: THREE (seconds, minutes and hours)



Dimensions



PROGRAMMABLES PARAMETERS

- 1° Initial state of output relays:
energized (1H) or de-energized (1L).
- 2° Working mode: cycle (C1) or non-cycle (CO).
- 3° Number of different times per program: up to 8 in cycle mode
and up to 9 in non-cycle.
- 4° Time setting range: from 0,1 seconds to 99 hours.
- 5° Command contact.

With built-in battery which allows timer to be programmed
without connecting to auxiliary voltage.



- ATTENTION: To prevent electrical shock, disconnect from power source before installing or servicing.
- Check that the auxiliary voltage supply is correct.

Programming

The built-in battery allows timer to be programmed without connecting to auxiliary voltage.

1 Start

Hold down **OK**, and in less than 4 seconds, first push **I** and then push **II**.
Release **OK**

2 Initial state of output relay

1L: de-energized "0" 15/25 16/26 18/28
1H: energized "1" 15/25 16/26 18/28

3 Working mode

CO: non cycle

C1: cycle

4 Number of timings

Non cycle mode (CO)
1, 2, 3, 4, 5, 6, 7, 8 or 9

Cycle mode (C1)
2, 4, 6 or 8

5 Time settings

5.1 Digits

Left digit **I**

Right digit **II**

5.2 Conversion factor

F1: without decimal point (x1)

F.1: with decimal point (x0,1)

5.3 Unit

S: seconds

M: minutes

H: hours

6 End of timing

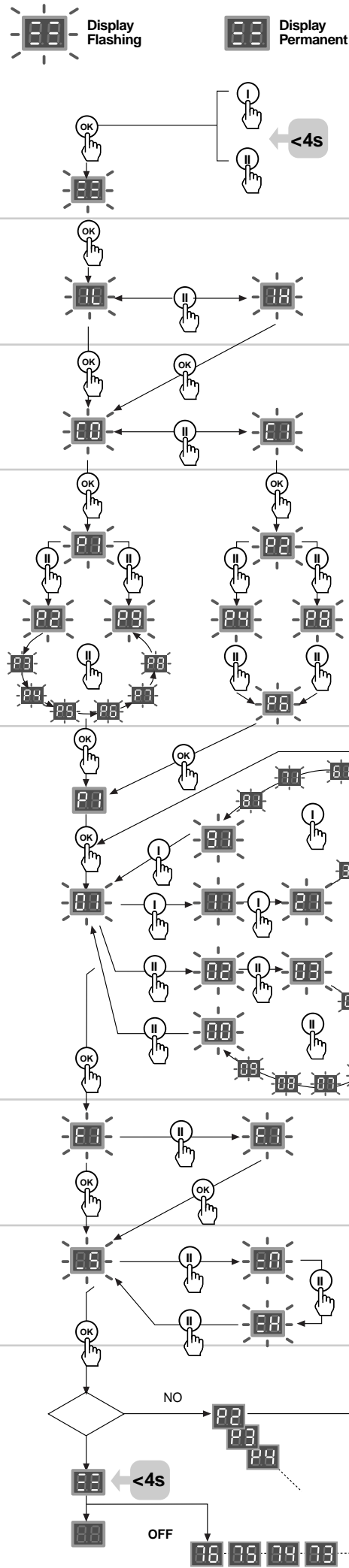
¿Last timing?

• **NO**: go to **5**

• **YES**: display shows **EE** for 4s and then:

– Programming with battery:
Its turns off.

– Programming with auxiliary voltage:
The program starts.



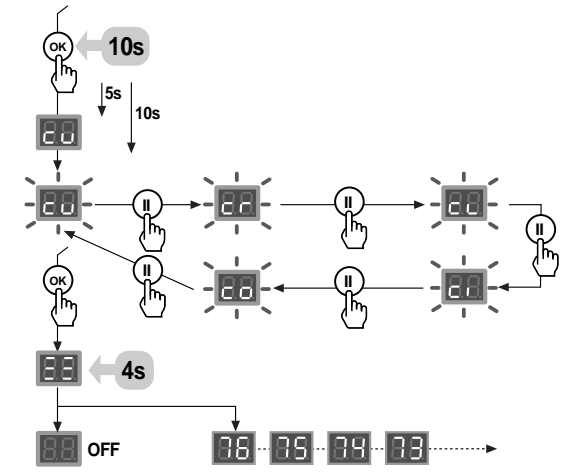
7 Command contact

At the end of programming, select command contact mode.
Hold down OF for 10s.

The programmed mode is shown in 5s. The timer is supplied with **cu** (function blocked).

The display shows **EE** during 4s and then:

- Programming with battery:
Its turns off.
- Programming with auxiliary voltage:
The program starts.



Review of the programmed settings

With timer working. Timing does not stop.

- The initial state of output relay is shown for 3s: 1L or 1H

- The working cycle is shown for 3s: CO or C1

- The number of timings is shown for 3s.

- Non cycle mode CO.
1, 2, 3, 4, 5, 6, 7, 8 or 9
- Cycle mode C1
2, 4, 6 or 8

- Present timing time is shown.

- Programmed value per timing.

• Select the timing number.

• Programmed time value.

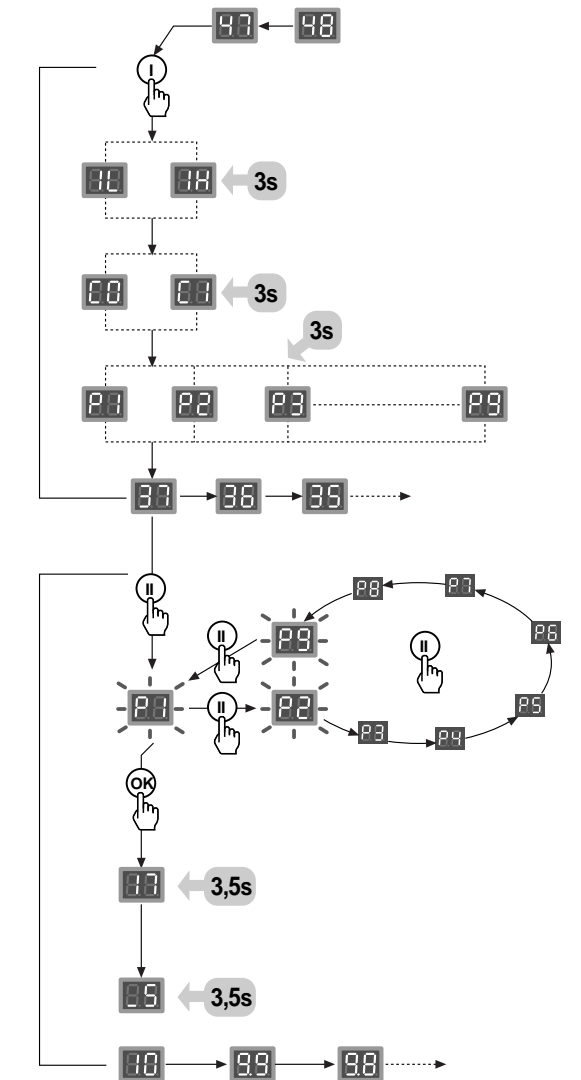
• Time unit:

Seconds: **S**

Minutes: **M**

Hours: **H**

Present timing time is shown.



Timing monitoring

Nearly each 10s information about the number of timings in course and the display time unit appears for 2s.

• First digit:

seconds **S**

minutes **M**

hours **H**

• Second digit: timing number.

1 1^a, **2** 2^a, **3** 3^a, ...

