Command contact

Can be switched in two ways:

• By closing an external voltage free contact between M and S.

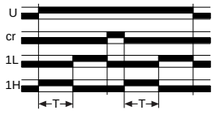
• By connecting 5-35 Vac,dc between M(+) and R(-)

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

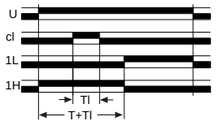
U: power supply

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.

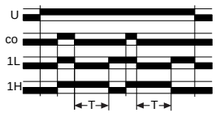


cl Lock contact
A partial shutdown of the timing takes place during its operation.



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.

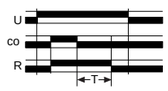
Work mode: **CO** non-cycle; **C1** cycle.

Command contact: **cu, cr, cl, ci, co.**

Delay ON
1L - CO - cu

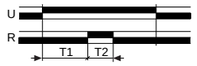
Timing ON
1H - CO - cu

Delay OFF with command contact
1H - CO - co

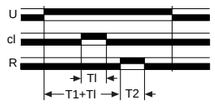


Double timing
1L - CO - cu

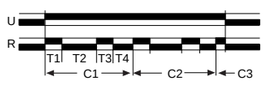
Double timing cycle work mode
1H - C1 - cu



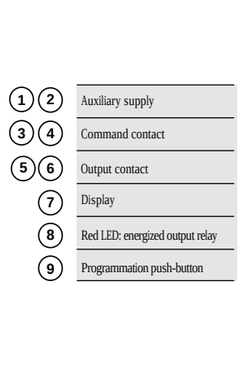
Four timings cycle work mode
1H - C1 - cu



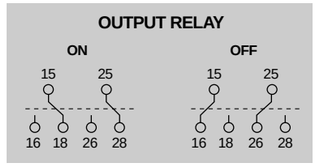
Timing with partial shutdown
by command contact
1L - CO - cl



MULTIFUNCTION DIGITAL TIMER MTR 10



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

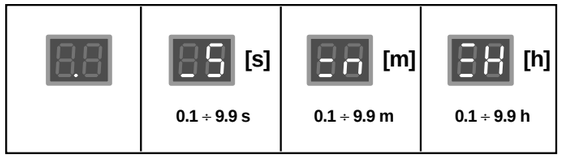


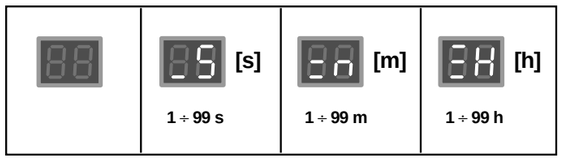
Technical data

CE

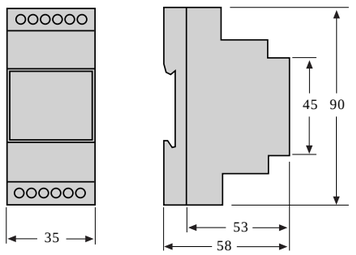
Auxiliary supply +15-10% / Consumption	230V 50/60 Hz / 8VA 24V Vdc.ac / 1W
Accuracy	1% ± 10 ms
Repeat accuracy	0,5%
Output contacts: 1 relay with 2 timed change over contacts NO-NC	C300 - 125/250V I_{th}= 5 A AC15 - 250V - 2A DC13 - 30V - 2A DC13 - 115V - 2A
Terminals: max section / screw torque	2,5mm², 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

1º Initial state of output relays:
energized (1H) or de-energized (1L).

2º Working mode: cycle (C1) or non-cycle (CO).

3º Number of different times per program: up to 8 in cycle mode and up to 9 in non-cycle.

4º Time setting range: from 0,1 seconds to 99 hours.

5º 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.

Programmation

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

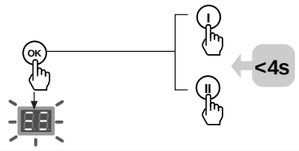
Display Flashing

Display Permanent

1 Start

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

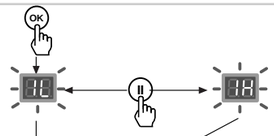
Release (OK)



2 Initial state of output relay

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

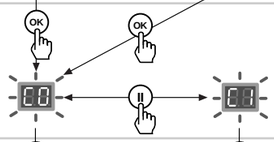
1H: energized "1" 15/25 — 16/26, 18/28



3 Working mode

CO: non cycle

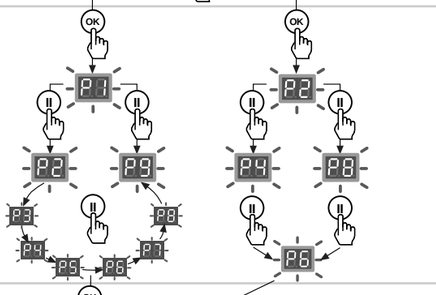
C1: cycle



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

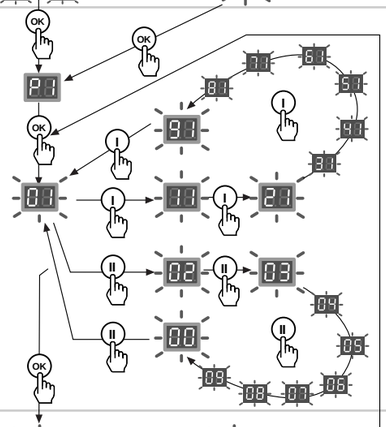


5 Time settings

5.1 Digits

Left digit (I)

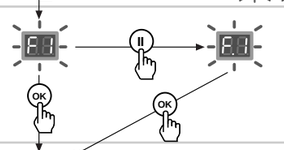
Right digit (II)



5.2 Conversion factor

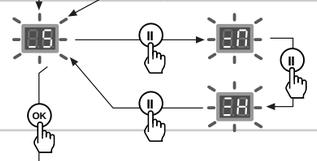
F1: without decimal point (x1)

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



5.3 Unit

: seconds
: minutes
: hours



6 End of timing

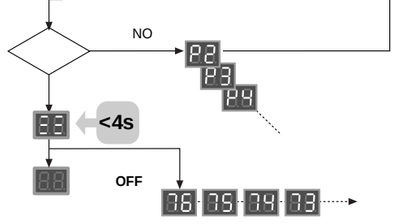
¿Last timing?

• **NO:** go to 5

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

– Programmation with battery:
Its turns off.

– Programmation with auxiliary voltage:
The program starts.



7 Command contact

At the end of programmation, select command contact mode.

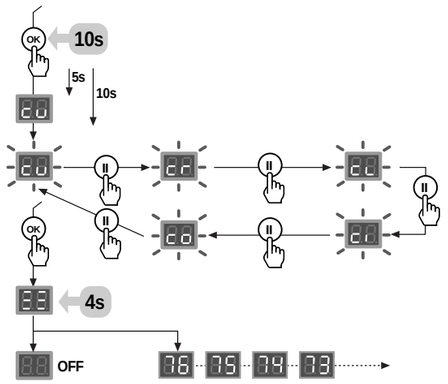
Hold down OF for 10s.

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

The display shows during 4s and then:

– Programmation with battery:
Its turns off.

– Programmation 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 showed for 3s: 1L or 1H

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

- The number of timings is showed for 3s.
• Non cycle mode CO.
1, 2, 3, 4, 5, 6, 7, 8 or 9
• Cycle mode C1
2, 4, 6 or 8

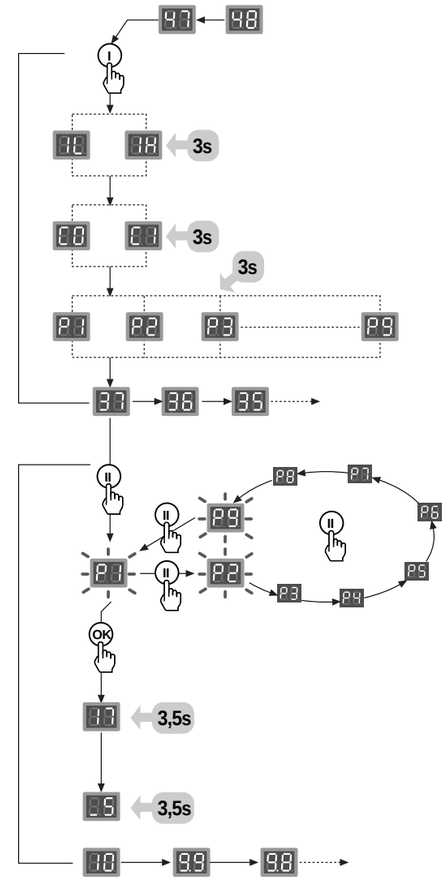
- Present timing time is showed.

- Programmed value per timing.

• Select the timing number.

• Programmed time value.

• Time unit:
Seconds:
Minutes:
Hours:
Present timing time is showed.



Timing monitoring

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

• First digit:
seconds
minutes
hours

• Second digit: timing number.
1ª, 2ª, 3ª, ...