



VISUALIZED DIGITAL TIMER

Type:
LTM60EO

THE INSTRUMENTS OF SERIES **LTM** ARE DIGITAL INSTRUMENTS WIDE USABLE IN THE INDUSTRY FOR THEIR PROGRAMMABLE CHARACTERISTICS AND THE FLEXIBILITY OF THEIR EMPLOYMENT.

LTM60, TIME TOTALIZER WITH 4 PROGRAMMABLE TIME SCALES AND A GLOBAL TOTALIZER OF THE TIME.



GENERAL FEATURES

- Frontal keyboard in polycarbonate (antiscratch, antioil, antacid).
- IP65 protection degree
- Accessible parameters with key software
- Removable terminals connection.
- Execution DIN 48 x 96.
- Recessed assembly.
- Special retaining brackets.

PROGRAMMABLE PARAMETERS

- 4 Time Scales
- Memory
- Reset Key
- START Input Selection

TECHNICAL CHARACTERISTICS

- | | |
|-------------------------------------|--|
| • POWER SUPPLY IN ALTERNATE CURRENT | : Single power 24 - 110 - 230 Vac (50 / 60 Hz). |
| • POWER SUPPLY IN DIRECT CURRENT | : Single power 24 Vdc |
| • POWER SUPPLY TOLERANCE | : +10% - 15%. |
| • ABSORPTION | : 2 W - 3 VA. |
| • OPERATING TEMPERATURE | : -5 °C + 55 °C. |
| • CLIMATIC CONDITIONS | : U.R. 95 % at 40 °C (without condensate). |
| • TIMINGS VISUALIZATION | : 6 digits, 14 mm high |
| • TIMINGS SCALES | : 9999h59m - 99h59m59s - 99m59s99c - 9999s99c |
| • START INPUT | : programmable as Continuous; Impulsive, Start/Stop |
| • AUXILIARY INPUTS POWER SUPPLY | : 24 Vdc - 80 mA available on terminals. |
| • COMMAND INPUTS | : 1 Start - 1 Reset Timing - 1 Inhibit Timing (Inhibit). |
| • PROGRAMMED DATA MEMORY | : static (without battery) |

DESCRIPTION OF THE FRONTAL KEYBOARD

 **YELLOW**

The key '**LEFT ARROW**' in normal operating phase visualizes, blinking, all the programmings executed without the limitation of the insertion code. The time of scansion of the programmings is given from the pressure of the same key. It exits automatically from this phase after 5 sec of the last pressure of the same key.
In programming phase it moves the cursor of the figure towards left of a step, than at the beginning it is on the right side first one on the. At the end it resumes from the first one to right.

 **YELLOW**

The key '**UP ARROW**' in normal operating phase it enter and exit to the Totalizer.
In programming phase it increases the value of the blinking figure.

 **BLUE**

The key '**PRG**' pressed for 2 sec. allows to enter in the programming phase, visualizing on display C.0000.
In the programming phase, pressing key 'PRG' impulsively, it exits from the programming phase. The instrument exits automatically from the programming phase, 60 sec. after the pressure of the last key.

 **GREEN**

The key '**ENT/RES**' in normal phase of counting has the 'RESET' function, with the modalities to it attributed in the programming phase.
In programming phase it confirms and memorizes the visualized data and passes to the successive function. If it has arrived to list end it resumes from the beginning.

INPUTS / OUTPUTS DESCRIPTION

DC POWER
(inputs 1-2)

24VDC Power Supply Input of the instrument.

AC POWER
(inputs 3-4)

AC Power Supply Input of the instrument; it can be to 24 - 110 - 230 VAC in according to demand.

24 VDC - 80mA
(inputs 5-6)

24 VDC - 80 mA auxiliary Power Supply that the instrument supply to feed the Encoder and amplified proximity.

START
(inputs 7)

START Input that execute the timing starting as the programming mode; it's configurable in Positive (PNP) or Negative (NPN) logic by the dip switches on the rear.

RESET
(inputs 8)

RESET Input that execute the timing reset; it's configurable in Positive (PNP) or Negative (NPN) logic by the dip switches on the rear.

INHIBIT
(inputs 9)

INHIBIT Input that execute the timing Inhibit; it's configurable in Positive (PNP) or Negative (NPN) logic by the dip switches on the rear.

PROGRAMMING OF THE OPERATION PARAMETERS

The programmable parameters are divided in two groups and protect with a 4 figures code.

In order to approach the programming, proceed in the following way:

- Press key **PRG** for about 2 sec. On the display appears:

Cod
0000

GROUP 1 : in order to approach the parameters of group 1, insert code **2357** and press **ENT**

SCL. 1

SCL. = Time Scale. Selection of the maximum time scale of the timing. It's possible to choose between 4 different time scales:

1 = 99m59s99c - 2 = 99h59m59s - 3 = 9999h59m - 4 = 9999s99c

PROGRAMMING OF THE OPERATION PARAMETERS

The programmable parameters are divided in two groups and protect with a 4 figures code.

In order to approach the programming, proceed in the following way:

- Press key **PRG** for about 2 sec. On the display appears:

Cod
0000

GROUP 2 : in order to approach the parameters of group 1, insert code **2413** and press **ENT**

MEM _{on}
MEM _{of}

Active or excluded memory.

This parameter allows to program the saving of the current counter value during the power off the instrument.

MEM.on. = memorization of the count during the power off. When power on the instrument the display will visualize the last present value in the power off phase.

MEM.of. = excluded memorization of the count; every time that the instrument comes powered off and then powered on the count comes lost and the instrument restart always from the initial condition.

RES 0
RES 3

Function of RESET Key ; this programming enable and disable the RESET function of the RES frontal key during the normal timing:

RES. 0 = RESET function of the RES key disabled

RES. 1 = RESET function of the principal timing only

RES. 2 = RESET function of the global timing only

RES. 3 = RESET function of the principal and global timings

In I.
In C.
In S.

Programming of the START Input.

This programming allows to Start the timing in three different modes:

In. I. = Impulsive Mode; the timing starts with the impulsive closing of the START input.

In. C. = Continuously Mode; the timing starts with the closing of the START input; the timing is interrupted every time the START input comes opened.

In. S. = Start/Stop Mode; the timing starts with the impulsive closing of the START input and it stops to the subsequent closing. Closing another time the input the timing resume and it stops to the subsequent closing.

AP P.
AP r.

Activation mode of the programmed parameters.

With this programming is possible to activate the executed programmings directly to the exit of the programming or, when exited of the programming, after a RESET (with frontal key or from rear input)

A.P. = P. Activation of the parameters to the exit of the programming.

A.P. = r. Activation of the parameters to the exit of the programming after a RESET.

Pressing the key the totalizer of time will be visualized for 5 sec.

tot.
000000

The totalizer visualizes the total time that the instrument has show.

It can be resetted through frontal key RES or from RESET input when it is visualized on the display.

DECLARATION OF 'CE' CONFORMITY

CE NORMATIVE CONFORMITY

Borgolavezzaro, September, 8th 2000

The building firm: **CET Control System S.a.s.**

Head office: **Strada Statale 211, Km 53,3**
28071 Borgolavezzaro (No) ITALIA
Tel. 0039 - (0)321 - 885301 Fax. 0039 - (0)321 - 885560

declare that the products:

type : **Electronic Timer**

model: **LTM 60**

use class: **Industrial**

are in conformity with the following normatives:



EN55011
ENV50141
ENV50204
EN61000-4-2
EN61000-4-4

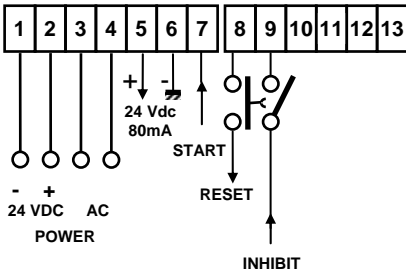
The manufacturing: **CET s.a.s.**

C.E.T. S.A.S.
di FRANCHINO & C.
S.S. 211 - TEL. 0321 - 885188 - 885301
28071 BORGOLAVEZZARO
C. I. • part. IVA 00141780031

Signature

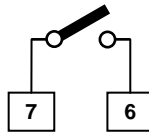
CONNECTIONS

PROGRAMMING NPN   PROGRAMMING PNP

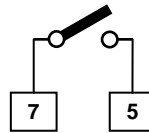


INPUT SIGNALS

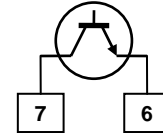
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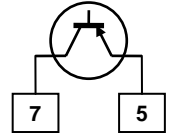
START



START



START



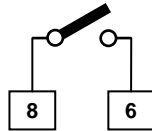
CONTACT NPN

CONTACT PNP

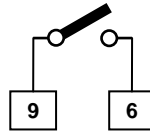
TTL LOGIC NPN

TTL LOGIC PNP

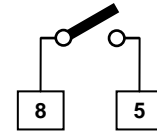
RESET



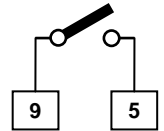
INHIBIT



RESET



INHIBIT



NPN

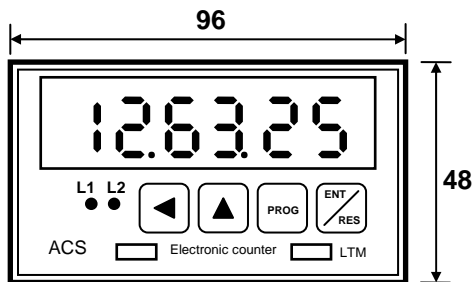
NPN

PNP

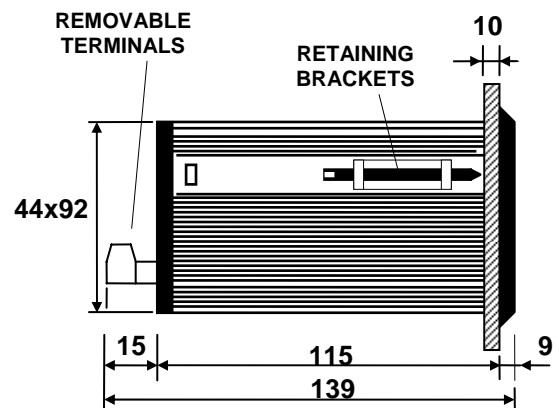
PNP

OVERALL DIMENSIONS

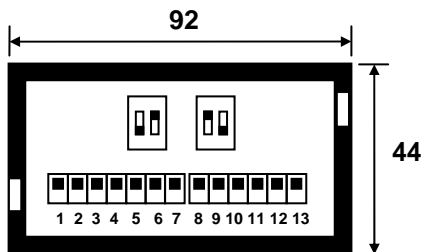
FRONT



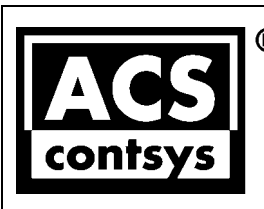
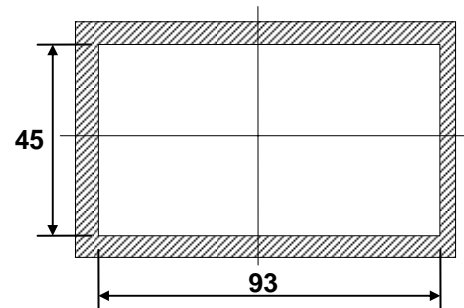
SIDE



REAR



DRILL TEMPLATE



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