

# *London Electronics Limited*

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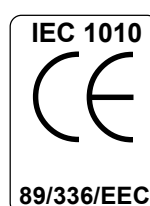
E-Mail [help@london-electronics.com](mailto:help@london-electronics.com)

Web site with news, distribution details, product descriptions <http://www.london-electronics.com>

## Operating Instructions

### **MINI-TIMER**

1/8 DIN Elapsed Timer with Non-Volatile Memory



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# **IMPORTANT INTRODUCTORY NOTES**

Thank you for choosing to use a London Electronics Ltd. product. We hope that you will be entirely satisfied with your purchase, and welcome any comments you may have which will help us to improve the ease of use, clarity of this manual, etc. for future shipments.

We invite you to write to us, free of charge, if posted in the United Kingdom, to:-

**London Electronics Ltd.**  
**Customer Services Department**  
**FREEPOST SG334**  
**SHEFFORD**  
**Bedfordshire SG17 5BR**

Alternatively you may send us a fax on **01462-850968** (international code +44)  
Or, telephone us on **01462-850967** (international code +44)

Or, send us an E-Mail to **help@london-electronics.com**

To enable us to provide a swift and accurate service, please be sure to provide the following information :-

- 1) Full Model Number , including all options fitted.
- 2) Serial Number
- 3) DETAILED description of your difficulties, suggestions etc.
- 4) Input Range and Display range

This product is covered by a 2 year warranty, during which period we will put right or replace any meter found to be faulty through bad workmanship or materials. This warranty does not cover damage caused by misuse or accident.

**IMPORTANT** If the meter is a vital component in your process, you may wish to consider the purchase of a spare to cover the possible eventuality of a failure or accident, as we cannot guarantee instant repair or replacement.

We are constantly striving to improve our products and services, and as a result, changes to instruments do occur. Please ensure that this manual is kept safely for future reference, as future manuals, covering revised designs may no longer describe your product accurately.

We believe these instructions to be accurate, and the product to be competently designed and manufactured. We do not make any claims as to the suitability of this product for any particular application. The choice of product and responsibility for the choice lies with the User.

# VERY IMPORTANT WARNINGS



**You should carefully read all warnings and commence installation ONLY when you are satisfied that all warnings are adequately covered.**



! Connections to this equipment shall be carried out in accordance with current IEE regulations, and all wiring shall be separated in accordance with IEC1010

Notes:

! Power supplies to this equipment must be anti-surge fused at 630mA

Notes:

! Before installation, check that model number and supply voltage suit your application

Notes:

! Lethal voltages may be present on the circuit board. Do not touch any circuitry when power is applied.

Notes:

! This product is designed for Installation class II service

Notes:

! This product is designed for use in Pollution-Degree 2 environments

Notes:

! Use an insulated screwdriver when adjusting potentiometers and do not touch any circuitry

Notes:

! Replace front cover when meter is unattended

Notes:

! All adjustments to jumper settings or terminations must be made with power removed

Notes:

! Ensure all screw terminals are tight before applying power.

Notes:

**Safety First .....Don't make assumptions..... Always double check.  
If in doubt, ask someone who is QUALIFIED to assist you in the subject.**

# EQUIPMENT SPECIFICATIONS

## **Input Signal**

Count Enable..... Contact Closure, switching 5V at less than 2mA.  
Resolution..... Display resolved to nearest 1/100 hour (36 seconds)  
Temperature stability..... 100 ppm of range/C span and zero

## **Display**

Device type ..... High brightness red LED 10mm high  
Format..... 0- 999999.99 Hours

## **Power Supply**

DC Supply..... 19 to 29 VDC  
Power Consumption..... Allow 4VA

## **Mechanical**

Bezel Size..... 48mm high by 96mm wide in horizontal format. May be mounted vertically also  
Cutout Size..... 45 mm high by 92 mm wide in horizontal format.  
Depth behind Panel..... 100mm  
Weight..... 300 grammes typically  
Case Material..... UL 94V0 rated black ABS

## **Environmental**

Operating Temperature..... -20 to +50 degrees C  
Storage Temperature..... -40 to +85 degrees C  
Humidity..... 90% rh max. at 40 C, non condensing.

# PANEL REQUIREMENTS



All wiring to this meter must be carried out in accordance with current IEC regulations  
Separation of all power carrying cables must be ensured in accordance with IEC 1010

Installation Class II  
Pollution degree 2



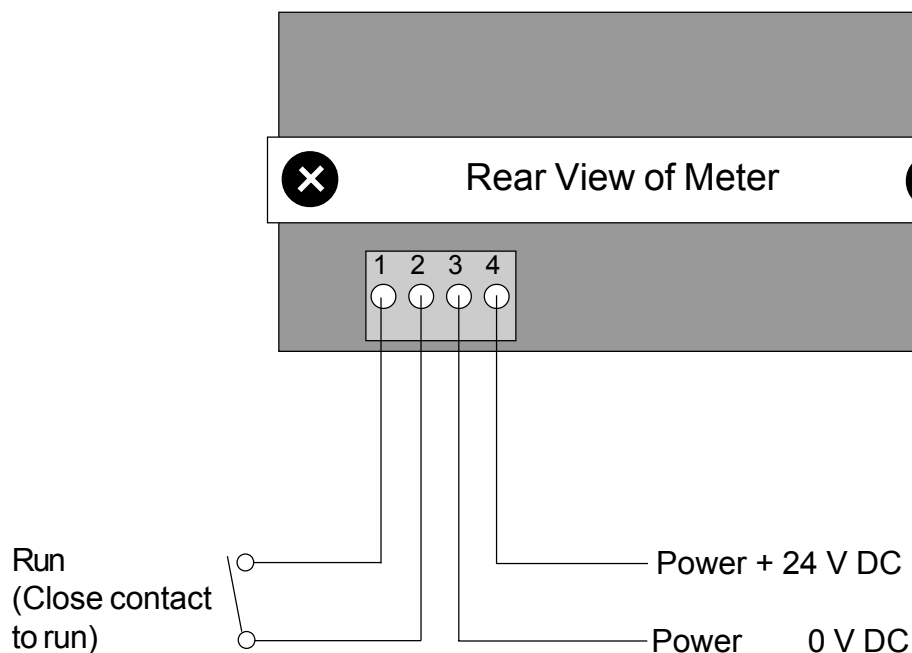
This meter is to be installed within a secure enclosure, to prevent accidental access by persons to the powered connections present on the meter's rear terminals.

## CUTOUT DIMENSIONS

A hole 45 mm high and 92 mm wide, with minimal radius is required

# Connections

**Connector Specifications :-** [VDE Rated Voltage, group B insulation VAC = 380]-[VDE Rated Current = 8 Amperes.]  
[Vibration Immunity per VDE0611 <10g]-[Rated Number of mating cycles <100]-[Screw Clamp material/plating Steel/ZnCc]  
[Contact Spring material/plating CuSN/gal SnPb]-[Plug-in force, per pole is from 3 to 6 Newtons]-[Disconnect force per pole is from 4 to 7 Newtons]-[Screw clamp tightening torque recommended 0.5Nm]-[Solid wire csa between 0.13 to 1.5mm<sup>2</sup>] [Multistrand wire csa from 0.5 to 1.5mm<sup>2</sup>]- [AWG conductor range from 22 to 16]-[Gauge to DIN/EN50027 Size A1]



For normal operation, terminals 1 and 2 will be joined together permanently, and the unit will accumulate time whenever power is applied. Terminals 1 and 2 may, however, be used as external control inputs, to accumulate time only when they are connected together.

**IMPORTANT:** Do not run signal wires near any power-carrying cables. Power-carrying cables will almost certainly radiate appreciable amounts of electro-magnetic energy, which could interfere with the small signals you are trying to measure. Use screened cable, in its own separate conduit or tray. Connect the screen at one end only, to a clean earth point as near to the meter as possible.

# Declaration of Conformity

Declaration Number : MINI-TIMER  
Issue Date : 16 June 1999  
Products Covered : MINI-TIMER  
Title : 1/8 DIN Elapsed Time Display

This is to confirm that the Products covered by this declaration have been designed and manufactured to meet the following specifications :

EN55022:1987 Conducted Emissions: Class B  
EN55022:1987 Radiated Emissions : Class B  
IEC801-2:1984 Electro-Static Discharge Immunity: 8kV Air  
IEC801-3:1984 Radiated ElectroMagnetic field Immunity: 3V/m  
IEC801-4:1988 Fast Transient Immunity : AC 1kV, cable 0.5kV

Thus the products conform with the applicable sections of the following standards:

EN50081-1:1992 (normative)  
EN50082-1:1992 (normative)

and comply with the requirements of Council Directive 89/336/EEC relating to Electro-Magnetic Compatibility, & are designed to meet 72/23/EEC safety directive.

## Conditions

The meters covered by this certificate must be installed in adherence to the following conditions :-

Signal cabling shall be routed separately to power carrying cabling (includes relay output wiring)  
All signal cabling shall be screened. The screen shall only be terminated to the power earth terminal

This certificate applies only to meters carrying Serial Numbers 701001 or higher.

Signed as true and correct, for and on behalf of London Electronics Ltd.



Warren Court, Beds.

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J.R. Lees

Director