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IPC Irwin Millisecond Timer

Part Number IPC-3834-T

User Instructions



INTRODUCTION.

The IPC Irwin Millisecond Timer is most suited for an investigational approach for students to gain a sound understanding of the concepts of time and motion. With this in mind the timer has been designed to measure from 1mS to 9999s and incorporates a fully auto-ranging 13mm, 4-digit LED display. The unit itself is manufactured in a robust metal case with a durable powder coat finish.

Note: IPC Irwin provide, on-line, a comprehensive document containing full instructions and diagrams detailing how to setup the Millisecond Timer in order to perform a 'g' by Free Fall experiment.

DESCRIPTION.

The Millisecond Timer has two pairs of 4mm input sockets (A and B) to alternatively start and stop the timer, one pair operating in make mode and the other in break mode, the start/stop inputs can either be operated via a mechanical switch or electronic switch. The unit also provides a 'Hold' switch which allows the displayed time to be held while the timer continues to count, releasing the switch allows the display to revert back to the lapsed time. This same switch also allows the timer to be reset to 0.000s.

The rear panel contains an illuminated (green) mains on/off switch and a mains input IEC socket containing an in-built protection fuse. Normally the unit is supplied with a separate UK plug to IEC plug 2.0m mains lead.

Note: we recommend using the IPC Irwin Photo Timing Gate (IPC-3210-T) for all start/stop timing applications due to its ease of use, accuracy (no switch bounce) and repeatability.

IPC Irwin

Holker School, Cark in Cartmel, Grange over Sands, Cumbria LA11 7PQ, United Kingdom

Call: 015395 58555 **Email:** sales@ipcirwin.com



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INSTRUCTIONS.

The socket pair 'A' will alternatively start and stop the timer each time the sockets are connected together, while the socket pair 'B' will alternatively start and stop the timer each time a connection between them is broken. Any combination of sockets 'A' and 'B' can be used to operate the timer.

Should the mains on/off switch or display fail to illuminate, then first check the 250mA (fast blow) fuse at the rear of the unit (located in the mains IEC socket), if this is found to be intact then check the 5A fuse in the mains plug (if UK plug).

SPECIFICATIONS.

Electrical Supply	= 220-240VAC, 50-60Hz
Fuse Ratings	= IEC Socket Inlet: F250mA, UK Mains Plug: 5A
Dimensions	= 180 x 190 x 85mm overall
Mass	= 1.6kg
Timer Ranges	= 0 to 9.999s, 10 to 99.99s, 100 to 999.9s and 1000 to 9999s
Resolution	= 1.0mS
Accuracy	= $\pm 0.01\%$

Please Note: This Equipment is for Education, Training, or research Purposes Only.

IMPORTANT - ELECTRICAL SAFETY NOTICE

Only connect the product to single phase mains electrical supply (with neutral nominally at each potential), also check that the supply voltage and frequency are within the products stated range. Before connecting to the mains electrical supply, examine the information on the products rating label (the value of the fuse fitted to the product is also stated), ensure that the mains plug or outlet circuit is fitted with an appropriate fuse of higher value.

WARNING: THIS PRODUCT MUST BE EARTHED

This product is designed for Electrical Safety Class 1.

If a mains lead is not fitted or supplied, connect the wires to a Standard UK, 3-pin plug as follows:-

Green/Yellow wire to the terminal marked: E (Earth) or coloured Green or Green/Yellow.

Brown wire to terminal marked: L (Live) or coloured Brown.

Blue wire to terminal marked: N (Neutral) or coloured Blue.

LIVE PARTS SHOULD NEVER BE EXPOSED UNLESS THE PRODUCT HAS BEEN SWITCHED OFF AND ISOLATED FROM THE MAINS ELECTRICITY SUPPLY.

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Declaration of Conformity (In Accordance with EN ISO 17050-1:2010).

Manufacturer: **IPC Irwin, Holker School, Cark-in-Cartmel, Grange-over-Sands, Cumbria, LA11 7PQ, United Kingdom.**

Product/Part No: **Millisecond Timer (230V AC, 50Hz main voltage)/IPC-3834-T**

This conformity certificate approves the compliance of the product with the essential safety requirements of the following UK Standards and Regulations:

SI 2005 No.1803	General Product Safety Regulation (implements Directive 2001/95/EC).
SI 2016/1101	Electrical Equipment (Safety) Regulation (implements Directive 2014 /35/EU.
EN 61010-1: 2010	Electrical Requirements for Laboratory Test & Measurement Equipment.
EN 61000-6-1: 2019	EMC, Generic Standards, Immunity for Residential, Commercial and Light Industrial Environments.
EN 61000-6-3: 2019	EMC, Generic Standards, Emission for Residential, Commercial and Light Industrial Environments.
SI 2012 No. 3032	Restriction on Hazardous Substances (RoHS) in Electrical and Electronic Equipment Regulation, (implements Directive 2011/65/EU).



Mark can be used only in the case of conformity assessment according to all relevant UK Standards and Regulations.

EU Declaration of Conformity (In accordance with European Parliament and Council Decision No: 768/2008/EC Annex III).

This conformity certificate approves the compliance of the product with the essential safety requirements of the following EC/EU Directives (Manufacturer, Product/Part No: as above).

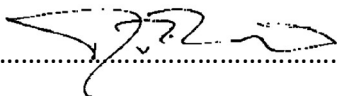
2001/95/EU	General Product Safety Directive.
2014/35/EU	Low Voltage Directive (LVD).
2014/30/EU	Electromagnetic Compatibility (EMC) Directive.
2011/65/EU	Restriction on Hazardous Substances Directive (RoHS).

European harmonised Standards used for conformity assessment and declaration:

EN 61010-1: 2010	Electrical Requirements for Laboratory Test & Measurement Equipment.
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Mark can be used only in the case of conformity assessment according to all relevant EC/EU Directives.

Dickon Knight (Director):  Date of Issue: 24th May 2023.

In the event of any correspondence concerning this product, please contact your supplying agent quoting the catalogue number and serial number shown on the apparatus rating label, together with the voltage and frequency of the mains electrical supply. This will help us to process your enquiry quickly. Any spare parts which may be required are supplied on the understanding that the replacement of those requiring the exposure of live electrical connections **will** be undertaken by an electrically qualified person.

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Thank you for choosing this IPC Irwin product, which has specifically been designed for education and we know it will bring you good service long into the future. This is just one product of a wide range of UK designed and manufactured products to enhance a STEM education. Please see www.ipcirwin.com website for more details on the products and service we provide to support teaching and learning in science and technology.

IPC Irwin also provide Portable Appliance Testers and a Calibration service, for more details please go to www.ipcirwin.com or call our sales and technical support line on 015395 58555.



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