Timer
LED, Multi Function, Digital

LB4064-101 Timer – 220/240V.AC. 50/60Hz

Description:

This **multi function Timer** is designed for use with Air Track Photo Gates and the IEC Free Fall instruments that use solenoid release system. It is high speed with resolution to 0.0001s and has several counting modes. The rear face has sockets for powering Photo Gates and a power source and special socket for the Free Fall solenoid release at the instant that timing begins.

Special features are:

- High speed timing to 100 microseconds resolution.

- Large six digit LED display. Press button operation, LED indication of functions..

- Memory items can be selectively deleted to remove errors. Memory items can bescrolled, totalled or averaged.

- Automatic loading memory up to a depth of 20 values

- ACCURACY: All timing operations are crystal locked ensuring an accuracy of better than: 0.01% +/-1 least significant digit.

- Output sockets for 2V, 6V and 12V.AC. supply for Photogate lamps. (On rear panel)

- Power socket for solenoid to release ball for Free Fall experiment. (On rear panel)

- Remote Reset socket behaves exactly the same as the RESET press button.

Initial Power On:

- Digital display should illuminate.

- Small LEDs indicate the Function selected.

- Press FUNCTION buttons UP/Down to select timing Function required.

Diameter: 45mm	Length: 56mm	Weight: 400g

Press Button Operations:

START: initiates timing.

STOP: stops timing and value is automatically stored in memory.

RESET: If timer running, will 'freeze' display while held depressed. If timer stopped, will zero display.

MEM UP / MEM DOWN scrolls and recalls active memory locations.

Automode:

This very useful function is set by pressing STOP then RESET buttons sequentially. When set, the starting and stopping of timing will occur upon a change in status of the START / STOP electrical connections. This excellent automatic feature can save classroom time and difficulty because there is no need to create or select 'making' or 'breaking' external connections for experiments.

Memory:

When STOP occurs by either press button or by external circuit, the last value is automatically stored into memory. When any value is stored, the small LED marked MEM lights. When the first 20 values are stored (memory full), the memory LED flashes and subsequent readings are not stored. The timer can be used normally even if the memory is full.

MEM UP/DOWN buttons scroll through the active memory store. When the first or last stored memory is reached, a longer beep sounds.

TOTAL button adds all memory values together. Press and hold until double beep is heard. Total of memory values will display whilst button is held depressed.

AVRG button calculates the average of all the memory values. Press and hold until double beep is heard. Average will display whilst button is held depressed.

PURGE button removes selected memory values. Scroll to select the unwanted value. Press and hold button until double beep is heard. Selection is now erased from memory leaving the other values untouched. Display shows '------'.

CLEAR button empties all memory values. Press and hold button until double beep is heard. Memory store will be empty and the small memory LED will be off.

Timing Functions For External Connections:

START/STOP: When status of the START socket connections is changed momentarily the timer runs. The start connections then have no effect. When the status of the STOP connections is changed momentarily the timer stops and the value is stored into memory.

PHOTOGATE: When status of the START socket connections is changed the timer runs. When same sockets revert to original status the timer stops and the value is stored in memory. The sockets also provide the power required to run most photogate circuits. Sockets on the rear panel provide 2V, 6V, or 12V.AC. power to run photogate lamps or LEDs.

PERIOD: When the status of the START socket connections is changed the timer runs. When same sockets revert to their original status there is no effect. When same sockets are changed again, the value is stored in memory, display is reset and the next period is started, effectively this is the time or period between successive Starts. Press STOP to stop timing.

PENDULUM: When the status of the START socket connections is changed the timer runs. When same sockets revert to original status there is no effect. When same sockets are changed and reverted again, there is no effect. Upon the fifth change, the value is stored in memory, the timer is reset and then starts timing the next pendulum period. Press STOP to stop timing. Effectively this is a double 'PERIOD' which occurs during a complete pendulum swing through a photogate.

REMOTE: duplicates the RESET and Memory Clear button function. Using a long cable, this socket can be joined to the common or 'GRND' socket by a switch or press button to create a REMOTE RESET control. As with the Reset button, this socket will clear the memory locations if joined to 'GRND' until two beeps are heard.

Designed and manufactured in Australia

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