

GAMMATRONIX 5mm LED INTEGRATED BATTERY CHARGE / LEVEL INDICATOR (Model 'K')

Specifications : 12v or 6v dependent on model. Accuracy to +/- 1%. Consumption 5mA Maximum. Microprocessor controlled. Unit will operate down to 3.8v and up to 16v.

Function : The unit is able to operate as a battery charge indicator, or a battery level indicator, on Lead-Acid type 6v or 12v cells, according to model. The voltage or charge state of the battery is indicated on the 5mm tri-colour LED. The device makes a 'rolling average' of several measurements over the last 2 seconds, which will give a degree of immunity to false indications due to fluctuating battery loads.

The unit may be configured at installation time to run in one of two modes, selected by cutting, or leaving intact, a yellow 'loop' wire at the rear of the unit. It is permissible to cut and extend the yellow wires to a remote switch, should the user wish to change modes in operation.

The wires should be kept as short as possible (to avoid interference) and SHOULD NOT connect to anything other than the terminals of a switch. Connection of the yellow wire to power or ground lines may permanently damage the unit.

The indicated levels are as below. 12v figures given, 6v versions run at half of the levels below.

Charging Mode (Yellow wire cut)						Level Indicator Mode (Yellow wire intact)						
Red /Grn Flsh	grn	Yell	Yell Flsh	Red	Red Flsh	grn	Yell	Yell Flsh	Yell Fast Flsh	Red	Red Flsh	Red Fast Flsh
> 15.2v	13.2v	11.8v	11.5v	11.2v	<11.2v	12.1v	11.8v	11.5v	11.2v	11.0v	10.7v	<10.7v

Fitting : The device is supplied as a rubber covered LED/PCB assembly, with a removable mounting bezel. The unit takes approx 20mm depth behind the rear of the panel. If the bezel is used, a 6.5mm hole is required. You may wish to devise your own mounting method, without using the bezel, in which case a 5mm hole is required. If installing using the bezel, clip it into the 6.5mm hole. *(If the unit is to be used outside and may get wet, seal the bezel into its mounting hole, and the LED into the bezel itself, with a small amount of clear silicon or similar.)* Slip the retaining ring over the LED, and insert the ring / led assembly into the rear of the bezel, and press into place. Do not use excessive force, use a small screwdriver on the rear of the LED to press into the clip rather than pushing the whole PCB assembly forwards. Push the retaining ring over the rear of the clip to keep everything in place.

If installed in a vehicle, the unit can be connected as 'always on' or to operate only with ignition running. The unit, and the wiring to it, should be protected by a fuse not exceeding 2Amp rating. If a suitable existing fused circuit does not exist, fit an inline fuse holder or similar in the red wire to the supply. **OBSERVE CORRECT POLARITY OR UNIT MAY BE DAMAGED.**

For 'Always On' operation, connect the RED wire to battery positive (or other permanent live feed), and the BLACK wire to battery negative. For 'Ignition On' operation, connect Black to negative supply, and Red to a switched feed from the ignition switch.

If the LED is connected to high current circuits, voltage drops in your wiring may cause the unit to under-read. A voltmeter can be used to ascertain if your connection point accurately reflects battery voltage during operation.

The unit has inbuilt interference suppression, but in very noisy electrical environments it may require additional in-line suppression which can be purchased from car radio installation stores.

Lead-Acid Batteries

Lead acid batteries exhibit different off-load voltages when discharged (or 'flat') than when under load. A flat battery off-load may read close to 12v or 6v, but will immediately collapse to a few volts if current is drawn. The Charge / Level Indicator LED is intended to give a correct reading for a battery UNDER LOAD or under charge. As with any other voltmeter, it may give an erroneous high reading if the battery is not connected to a load due to the battery's internal resistance off-load effects.

Safety, end of life, and warranty statement



This unit is an installable component and not a complete system in its own right and therefore requires installation. The installation, use and suitability in a given application is the responsibility of the installer. Any damages or consequences are limited to the replacement of the unit under the 12 month guarantee. Do not allow the unit to become damaged, wet, dismantled, or make modifications to the enclosure or internal parts. Do not use the unit outside of its operating voltage specification (according to model.) At end-of-life this product should be taken to suitable recycling facilities and not put into general household rubbish.