



INSTALLATION INSTRUCTIONS

FOR INVERTERS WITHOUT CHANGE OVER RELAYS

C502 – C509 & C512 – C518

LAMP RANGE:

	4 – 16 WATTS	15 – 28 WATTS
12 VOLTS	C502	C512
24 VOLTS	C504	C514
50 VOLTS	C506	C516
110 VOLTS	C508	C518
	4 – 85 WATTS	
240 VOLTS	C509	

GENERAL DESCRIPTION

These inverters are continuously rated and intended for operation on supplies which are either AC/DC or DC only. The method of connection is by terminal block fitted with a quick release mechanism so that leads may be easily removed. Wires of 0.5 – 2.5mm² cross section may be connected by pushing a solid conductor into the connection or operating the release mechanism to insert a stranded conductor.

PROTECTION

A fuse should always be fitted in a slave luminaire to protect the integrity of the system against total failure of any unit (BS 60598-2-22). Full wave rectification protects against polarity reversal.

RUNNING CONDITIONS

Overall voltage ranges are:

DC supplies

Maximum	=	Nominal + 13% continuously with excursions up to 25%
Minimum	=	Nominal – 16%

AC supplies

Maximum	=	Nominal + 6% continuously
Minimum	=	Nominal – 11%

If there is any doubt about the supply voltage, then please check with supplier

TEMPERATURE

The ambient temperature range for the inverter is 0 – 55°C but in any event the centre side of can should not exceed 60°C.

DIMENSIONS

42mm W x 35mm H x 150mm L x 140mm FC

REMOTE MOUNTING

Inverters may be operated in remote gearboxes but increasing distance will result in voltage attenuation at the high frequency used due to capacitive effects between



wires and earth. This will impair lamp striking and running efficiency. **MINERAL INSULATED CABLES MUST NOT BE USED IN ANY CIRCUMSTANCE.** Multicore cables, which also have an inherently high capacitance between wires, may be used with caution providing the insulation is thick and opposite sides of the core leads are used for opposite ends of the lamp to minimise losses.

Distance between inverter and luminaire should be kept to a minimum. If in doubt – ask for advice.

ELECTRICAL INSTALLATION

The connection diagram for the inverter shows the lamp leads in bold to indicate that they must be considered ‘hot’ for EMC purposes. These wires must be kept as short as possible and separated from all other leads within the luminaire to minimise RFI transfer. Fused terminal blocks should be situated so that incoming supply leads are kept short. Where there is no alternative to mounting the inverter remote from the luminaire then for EMC compliance it is preferred that the low voltage supply is taken direct to the remote box and not through the connecting conduit with lamp leads. Where the low voltage supply must run through the conduit then these leads should be effectively screened. To prevent premature lamp damage, after test the assembled luminaire should only be energised for a minimum of 24 hours to fully charge the batteries. The un-switched supply should be left undisturbed during the commissioning and installation period.

WIRING



Should there be any difficulty with the lamp striking under abnormal conditions, it is permissible to tie down Terminal 6 to earth in order to improve the strike. It should not be necessary to do this under normal circumstances.

WARRANTY

All our electronic products are guaranteed for three years to cover both faulty workmanship and materials. This “Return to Base” warranty requires that the product is used within the terms and conditions stated above and in our literature, and in particular, modules must be used with the correct or approved battery pack. Items should be carefully checked thermally so that the specified temperatures are not exceeded under any conditions. Do not insulation test this product. Products returned to us under warranty must be carriage paid. Mackwell Electronics accept no liability for costs incurred. This does not affect your statutory rights.

Battery packs are guaranteed for one year, but when operating within the temperature specified in our web site have a design life in excess of four years as required by BS EN 60598-2-22.