

INSTALLATION AND OPERATING INSTRUCTIONS

uCharge
Automatic Battery Charger

MAS 0612 12V-6A
MAS 0612R 12V-6A
MAS 0324 24V-3A
MAS 0324R 24V-3A

IMPORTANT

- This device is to be installed and operated by skilled and qualified personnel ONLY and in compliance with current standards to avoid damage and safety hazards.
- For use within specified parameters only.
- Ensure adequate air-flow over all sides of case.
- Do not install in proximity of explosive gasses or flammable materials.
- Isolate the AC input supply and battery before any connection or disconnection to the units terminals.

INSTALLATION

The charger should only be installed in electrical panels with covers or doors and adequate ventilation should be considered.

Mount the unit on a flat heat conductive surface.

The charger can be mounted on symmetrical 35 x 7.5mm DIN rail or fixed using 2 No. (diagonally) or 4 No. M4 screws through the preformed holes in the mounting flanges.

Leave at least 15mm of space on all sides for adequate heat dispersion and free air convection.

CONNECTION

Ensure that the AC supply and battery are isolated before connection. It is good practice to install the charger close to the battery and to use conductors of sufficient cross-section to minimise voltage drops (thus maximising the battery charge).

The AC input should be protected by an MCB or fuse.

A 10A HRC DC output fuse should be fitted for battery protection.

OPERATION

Default Mode (3 Stage Charger With Battery Detection):

The MAS 06 12 is designed for charging most battery types.

The default configuration is 3 stage (bulk / absorb / float).

When a battery is connected the chargers output switches on to charge the battery.

Removal of the battery and all connected load switches the output off.

The charger is protected against reverse battery polarity in this mode.

PSU Mode (PSU / 2 Stage Charger Without Battery Detection) :

Linking pins 7 and 8 of the signals connector 'C1' forces the charger into PSU mode (constant current / constant voltage output) where the chargers output is always on.

The charger is not protected against reverse battery polarity in this mode.

OUTPUT VOLTAGE CALIBRATION

The output float voltage is factory preset to 13.8V (12V units) or 27.6V (24V units). The operator MUST ensure that the chargers output voltage is set in accordance with the battery manufacturers recommendations.

To set the output voltage:

- Disconnect the battery and all loads connected to the output terminals.
- Attach a calibrated DVM to the +/- output terminals.
- Turn the 'CAL' pot fully anti-clockwise (minimum). The LED is off.
- When the LED flashes Green / Red adjust the 'CAL' pot to the desired output voltage, displayed on the DVM.
- When the LED stops flashing Green / Red the unit is calibrated.

STATUS LED MODES

Seconds	0.0	0.5	1.0	
Solid Green	[Green bar]			Charger OK (Relay On)
Green/Red 1Hz	[Green bar] [Red bar]			DC Over or Under Voltage Fault
Off/Red 10Hz	[Red bar]			OVP/AC/Charger Fault
Red Pulse 0.1s	[Red bar]			Battery Disconnected
Green/Red 5Hz	[Green bar] [Red bar]			Calibration Mode
Off/Red 1Hz	[Red bar]			Over Temperature

AC INPUT RATING

Voltage range	90 - 264V
Frequency	47 - 63Hz
Input current	1.5A max

DC OUTPUT RATING

Voltage & current	12V 6.0Apk (12V model) 24V 3.0Apk (24V model)
Ripple & noise	<0.5%
Line regulation	±1.0%
Load regulation	±1.0%
Efficiency	Up to 90%

OPERATING CONDITIONS

Operating temperature	-10 to +50 °C
Storage temperature	-20 to +85 °C

CONNECTION

Rising clamp terminals.
Maximum cable cross-section = 2.5mm²

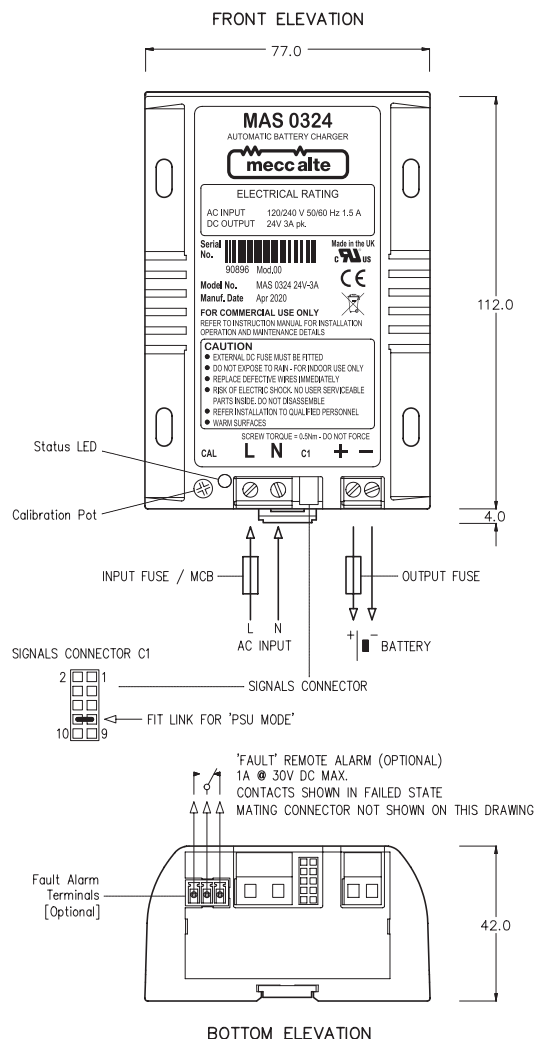
ENCLOSURE

High impact ABS plastic, black finish

WEIGHT

400 grams

EXTERNAL CONNECTIONS & DIMENSIONS



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