

INSTALLATION AND OPERATING INSTRUCTIONS

sCharge
Automatic Battery Charger

MAS 1012R 12V-10A
MAS 0524R 24V-5A

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. The charger is mounted on symmetrical 35 x 7.5 or 35 x 15 mm DIN rail. 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. An HRC DC output fuse should be fitted for battery protection.

OPERATION

Default Mode (3 Stage Charger With Battery Detection):

The SmartCharge 125-LC 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

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

AC INPUT RATING

Voltage range	100 - 264V
Frequency	47 - 63Hz
Input current	2.3A Max
Leakage current	<1mA / 240VAC

DC OUTPUT RATING

Voltage & current	12V 10.0A (12V model) 24V 5.0A (24V model)
Ripple & noise	<0.5%
Line regulation	±1.0%
Load regulation	±1.0%
Efficiency	Up to 88%

OPERATING CONDITIONS

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

CONNECTION

Rising clamp terminals.
Maximum cable cross-section:
AC Input & DC Output = 6.0mm²
Fail Alarm = 2.5mm²

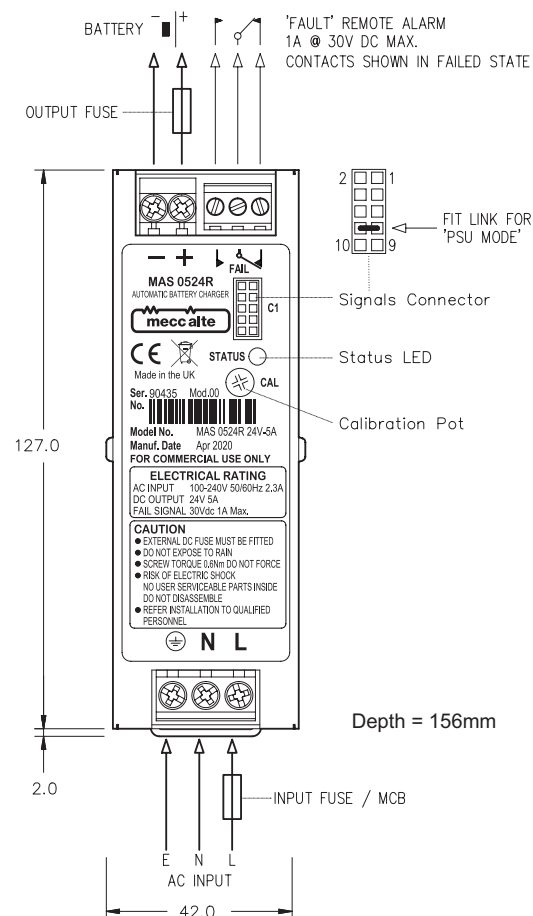
ENCLOSURE

Metal, bare aluminium / RAL9005 black finish

WEIGHT

750 grams

EXTERNAL CONNECTIONS & DIMENSIONS



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POWER FROM WITHIN