sCharge automatic battery chargers provide a cost effective solution to most industrial battery charging requirements.

Utilising the latest high efficiency switch-mode technology and micro-processor control, the range is suitable for charging most sealed or flooded batteries and is easily calibrated by the end user to suit the battery type. The multi-stage charging characteristic ensures accurate and efficient battery charging and is designed for permanent connection to the batteries maintaining them in a fully charged condition without overcharging.

The sCharge is fully protected against overload, reverse battery connection, over voltage and over temperature.

**INPUT SPECIFICATION**

- Voltage range, $V_{in}$: 100 - 264V AC
- Frequency: 47 - 63Hz
- Input current: 2.3A max.
- Leakage current: <1mA / 240VAC

**OUTPUT SPECIFICATION**

<table>
<thead>
<tr>
<th></th>
<th>MAS 1012R 12V-10A</th>
<th>MAS 0524R 24V-5A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage / Current</td>
<td>12.0V Nominal 10.0A</td>
<td>24.0V Nominal 5.0A</td>
</tr>
<tr>
<td>Other voltages on request</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Ripple and noise: ±0.5%
- Line regulation: ±0.5%
- Load regulation: ±1.0%
- Efficiency: Up to 88%
- Overload protection: Constant current limit
- Over temp. protection: Output shutdown with automatic recovery
- Reversed battery protection: Automatic protection. Disabled when in PSU mode.

**ALARMS AND LEVELS**

<table>
<thead>
<tr>
<th></th>
<th>MAS 1012R 12V-10A</th>
<th>MAS 0524R 24V-5A</th>
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</thead>
<tbody>
<tr>
<td>DC output voltages</td>
<td>Float = Factory set to 13.8V</td>
<td>Float = Factory set to 27.6V</td>
</tr>
<tr>
<td>Boost (Bulk/Absorb)</td>
<td>Float voltage +4%</td>
<td></td>
</tr>
<tr>
<td>AC / charger fail</td>
<td>Loss of AC input or DC output voltage control</td>
<td></td>
</tr>
<tr>
<td>Low DC voltage alarm</td>
<td>Float voltage -12% alarm, -8% Reset</td>
<td></td>
</tr>
<tr>
<td>High DC voltage alarm</td>
<td>Float voltage +7% alarm, +5% Reset</td>
<td></td>
</tr>
<tr>
<td>Over voltage protection</td>
<td>16.0V instantaneous lockout</td>
<td>30.5V instantaneous lockout</td>
</tr>
<tr>
<td>Battery disconnected</td>
<td>Open circuit on DC output (Disabled in PSU mode)</td>
<td></td>
</tr>
</tbody>
</table>

**APPLICATIONS**

- Standby and prime power generators
- Engine driven pumps and compressors
- Switch gear tripping
- Industrial control systems
- Robust PSU
- Alarm systems
- Navigational aids
**ISOLATION**

Withstand voltage: Input - Output, Input - Earth 1.5kV AC

Isolation resistance: Input - Output, Input - Earth, Output - Earth 500V DC / 100M Ohms

**ENVIRONMENTAL SPECIFICATION**

Working temperature: -10ºC to +50ºC

Working humidity: 20 - 90% RH

Storage temperature: -20ºC to +85ºC

Storage humidity: 10 - 95% RH

Unpacked weight: 750 grams

**FINISH**

Aluminium / RAL9005 black fine texture

**FAIL ALARM RELAY CONTACT SET**

Available on model MAS 0524R 24V-5A

Volt-free form C relay contact set for signalling of a fault alarm condition. The relay contacts de-energise 60 seconds after a fault occurs. The over voltage protection shutdown alarm de-energises the contacts instantly.

**GENERAL ARRANGEMENT**

AC input and DC output:
Connections terminate to rising clamp screw terminals and will accept 6.0mm² stranded cable.

Fail alarm:
Connections terminate to rising clamp screw terminals and will accept 2.5mm² stranded cable.

Connector 'C1' (signals):
Pins 7 and 8 should be linked when the charger should also function as a PSU.

NOTE: Reverse battery and battery disconnected alarms are disabled in PSU mode.

The remaining pins are for expansion modules, communication interfaces, firmware upgrade etc. and should not be used.

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>DC output</th>
</tr>
</thead>
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<tr>
<td>MAS 1012R 12V-10A</td>
<td>12V 10A</td>
</tr>
<tr>
<td>MAS 0524R 24V-5A</td>
<td>24V 5A</td>
</tr>
</tbody>
</table>

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