



UniCharge 65

Automatic Battery Charger

DS-397/2

UniCharge 65 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 UniCharge 65 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 intelligent 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 UniCharge 65 is fully protected against overload, reverse battery connection, over voltage and over temperature.



Input Specification

Voltage Range, V_{IN}	90 - 264V AC
Frequency	47 - 63Hz
Input Current	1.5A rms max.
Leakage Current	None

Output Specification

Voltage / Current	12.0V Nominal 6.0Apk. 24.0V Nominal 3.0Apk. <i>Other Voltages on Request</i>
Ripple & Noise	$\pm 0.5\%$
Line Regulation	$\pm 1.0\%$
Load Regulation	$\pm 1.0\%$
Efficiency	Up to 90%
Overload Protection	Constant Current Limit / Fold back
Over Temp. Protection	Output shutdown with automatic recovery
Reversed Battery Protection	Automatic protection. Disabled when in PSU mode.

Alarms and Levels

DC Output Voltages	Float = Factory set to 13.8V (12V) or 27.6V (24V). Boost (Bulk/Absorb) = Float Voltage +4%.
AC / Charger Fail	Loss of AC input or DC output voltage control.
Low DC Voltage Alarm	Float Voltage -12% Alarm, -8% Reset.
High DC Voltage Alarm	Float Voltage +7% Alarm, +5% Reset.
Over Voltage Protection	16.0V (12V) or 30.5 (24V) instantaneous lockout.
Battery Disconnected	Open circuit on DC output (Disabled in PSU mode)

FEATURES

- COST EFFECTIVE
- MICRO-PROCESSOR CONTROL
- COMPACT SIZE
- SEALED ELECTRONIC CONSTRUCTION
- ROBUST & HIGH RELIABILITY
- AUTOMATIC MULTI-STAGE CHARGING
- CONTINUOUSLY RATED
- PROTECTIONS:
SHORT CIRCUIT AND OVERLOAD
OVER VOLTAGE
OVER TEMPERATURE
REVERSE BATTERY
- UNIVERSAL AC INPUT RANGE
- LOW RIPPLE OUTPUT
- NATURALLY COOLED
- SIMPLE CALIBRATION PROCEDURE
- COMPREHENSIVE ALARM MONITORING
- OPTIONAL FAIL ALARM CONTACT SET
- UL APPROVED TO UL1236 Edition 8
- cUL APPROVED TO CSAC22.2 No.107.2-01 Edition 2

APPLICATIONS

- STANDBY & PRIME POWER GENERATORS
- AUTOMOTIVE
- ALARM SYSTEMS
- MARINE
- INDUSTRIAL CONTROL SYSTEMS
- ROBUST PSU
- PORTABLE EQUIPMENT

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Isolation

Withstand Voltage	Input – Output 1.5kV AC
Isolation Resistance	Input - Output 500V DC / 100M Ohms

Environmental Specification

Working Temperature	-10°C to +50°C
Working Humidity	20 - 90% RH
Storage Temperature	-20°C to +85°C
Storage Humidity	10 - 95% RH
Unpacked Weight	400 grams.

Finish

Black ABS plastic case - Fine Spark Erode

Fail Alarm Relay Contact Set (Optional)

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.

Termination

AC Input and DC Output:
Connections terminate to rising clamp screw terminals and will accept 2.5mm² stranded cable.

Optional Fail Alarm:
Connections terminate to rising clamp screw terminals and will accept 1.5mm² stranded cable.

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

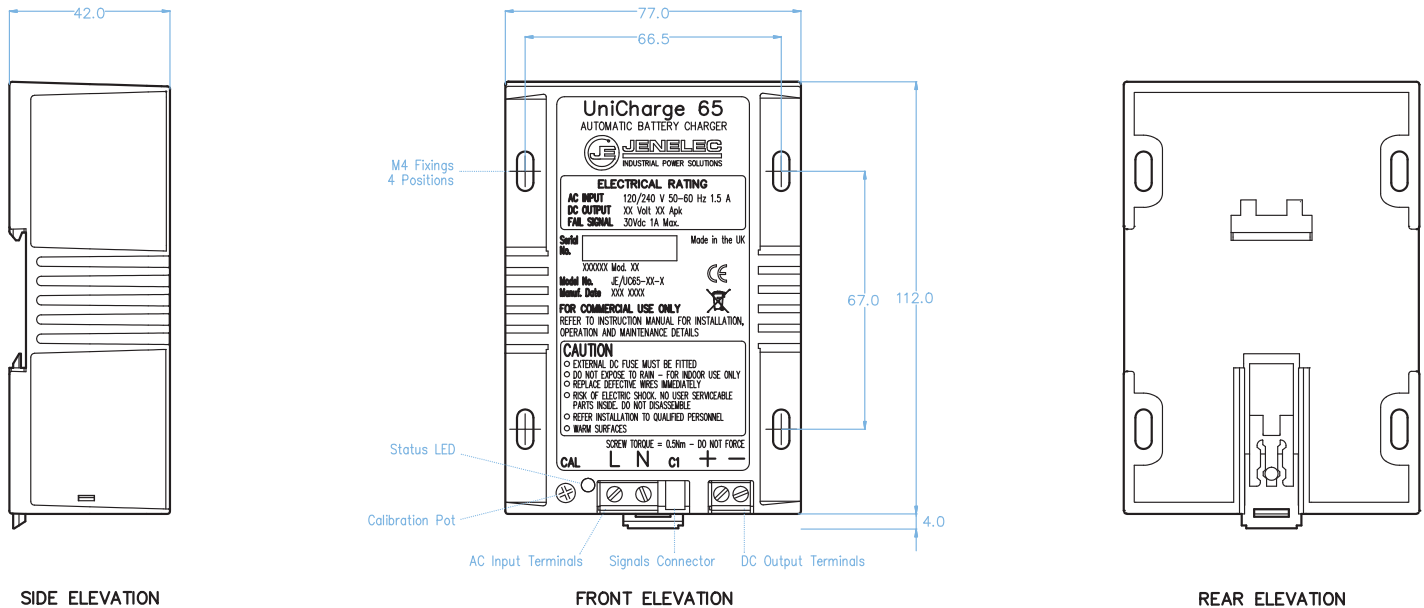
NOTE: Reverse battery and battery disconnected alarms are disabled in PSU mode.

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

Ordering Information:

Model No.	DC Output	Fail Alarm
JE/UC65-12	12V 6A pk	No
JE/UC65-24	24V 3A pk	No
JE/UC65-12-F	12V 6A pk	Yes
JE/UC65-24-F	24V 3A pk	Yes

General Arrangement



SIDE ELEVATION

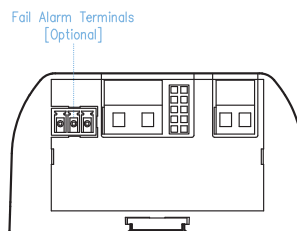
FRONT ELEVATION

REAR ELEVATION

BOTTOM ELEVATION

TO CALIBRATE:

- DISCONNECT THE BATTERY. CONNECT A DC VOLTMETER TO THE +/- OUTPUT TERMINALS.
- TURN THE 'CAL' POTENTIOMETER FULLY ANTI-CLOCKWISE. WHEN THE STATUS LED FLASHES GREEN/RED @ 5Hz, ADJUST THE 'CAL' POTENTIOMETER AND SET THE DESIRED FLOAT VOLTAGE LEVEL.
- WHEN THE LED RED/GREEN @ 5Hz FLASH SEQUENCE ENDS THE UNIT IS CALIBRATED.



Status LED

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

Top-hat din rail mount or screw fixing.