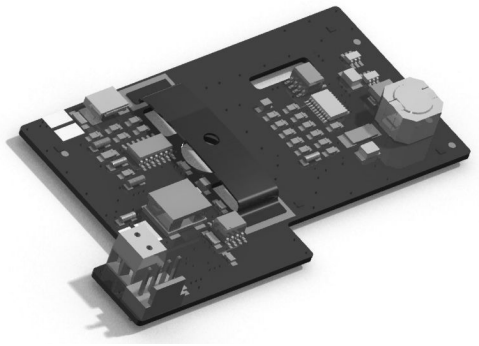

NiMH Battery Charger

DESCRIPTION:

General	NiMH Battery Charger
Battery	10 cell (12V nominal), ≤2800mAh
Charging Plug-Pack	Input: 100 to 240VAC 50/60Hz 0.8A Output: 24VDC 1.25A
Minimum Power Supply	22VDC to 28VDC min. 18W
Typical Charge Time	<4 hours
Battery Life	>300 discharge-charge cycles typical

OPERATION:

The NiMH battery charger is designed to allow safe, fast charging of a NiMH battery pack while also supplying power to the connected indicator. Operation is fully automatic, requiring only the connection of a plug-pack power supply to initiate charging. Charging should normally take less than 4 hours to complete.

While the plug-pack supply is disconnected and sufficient battery charge remains, the charger will automatically supply the output from battery power. To protect the battery pack, the charger will automatically disconnect the output when the battery is below a safe level.

The battery charger supports a dual colour (Red/Green) LED annunciator to show status.

Status Annunciator	Input Power	Output Power	Charging	Meaning
OFF	Not present	Battery [1]	No	Battery operation
GREEN	Present	Input	No	Ready
RED	Present	Input	Yes	Charging
FLASHING GREEN	Present	Input	No [2]	Fault [3]

Notes:

1. If battery is sufficiently charged.
2. It is necessary to remove then reconnect the input power before further charging will occur.
3. Refer to troubleshooting section for further information.

While charging is occurring it is normal for the battery to get hot. The battery temperature is monitored and charging may be suspended if the temperature becomes excessive. This is most likely to occur when the ambient temperature is high. This will result in an extended charging period. The status annunciator will remain RED during suspended charging.

TROUBLESHOOTING:

Problem	Possible solutions
Flashing green Status Annunciator [1] (within a few seconds of plug-pack connection)	• Wait for up to 30min: The battery may be excessively discharged and will take some time to recover. • Check Input Voltage: The charger requires a minimum 22V. • Check Battery Connections: The battery connections may be faulty. • Replace Battery: The battery may have failed.

Problem	Possible solutions
Flashing green Status Annunciator [4] (following a charge cycle)	• The battery may have failed to reach 100% charge, however the battery should be sufficiently charged to operate normally. To start a further charge cycle, simply disconnect the plug-pack supply for a few seconds and reconnect. If at this point the annunciator shows solid green, no further charging is required.
Battery gets hot	• It is normal for battery to get quite hot (80°C (176°F)) during charging.
Insufficient battery life	• Reduce System Power Requirements: Turn off or reduce backlight brightness; enable auto power-off (if supported). • Replace Battery: A battery will typically last at least 300 discharge-charge cycles.
With plug-pack connected, Status Annunciator never lights	• Check Wiring Polarity: The input supply polarity may be reversed. Ensure plug-pack polarity is correct, and all intermediate connections maintain polarity. • Check Input Voltage: The charger requires a minimum 22V

Notes:

4. To clear this state, it is necessary to disconnect the plug-pack supply for a few seconds and reconnect.

CONNECTIONS:

WARNING

- **The battery and the supply plug-pack must be isolated (disconnected) before installing or removing this device.**
- **Output connection must be completed before Input or Battery connections are made.**

Output connection "Out"
Connect attached wires to indicator power input.
Red ('+') to Indicator positive.
Black ('-') to Indicator negative.

Status Annunciator
Pre-connected LED or
2 way connector.

Input connection "In"
2 way screw terminal block.
Positive supply to '+' terminal.
Negative supply to '-' terminal.

Battery connection
4 way connector.