AC Input:

Input Voltage Range: 90 ~ 265 VAC
Frequency Range: 47 ~ 63 HZ
Power Factor Correction: 0.96 ~ 0.98

DC Output:

Output Power: 300 W Max.
Output Voltage: 10.0 ~ 14.7 VDC
Output Current: 20 Amp Max.

Signal Inputs/Outputs:

Customer Fuel Board Interface
Built in 2-Port USB Hub

Processor:

Charger will utilize an 8-bit processor with flash memory. The processor is serially programmable through an on-board connector, and firmware updates are possible over the USB interface. The built in A/D Inputs monitor and control battery charging voltage and current, and compensate for load current during charge.

Charging Operation:

Upon application of AC power, the Charger Control Board will utilize the Main Board to perform a three-stage charging algorithm:
Initialization:
Trickle Charge mode in order to determine battery connection and state of charge.
Stage 1:
Constant current stage with a 14.40 V +/- 0.5% limit. The current level depends on battery type with a maximum of 20 A.

Single 26 AH battery = 5A +/- 5%
Single 35 AH battery = 10A +/- 5%
Single 50 AH battery = 15A +/- 5%
Single 75 AH battery = 20A +/- 5%

Current may also be affected by load, i.e.:
Single 55AH battery will charge at 15A nominal; the maximum charger current is 20A; Load current greater than 5A will reduce the available charge current and increase stage 1 time.

Stage 1 is complete when the battery voltage reaches 14.40 V. If the battery does not reach 14.40 V within 18 hours, the charger will switch to a Trickle Charge mode until power is removed or cycled.

Stage 2:
Constant Voltage stage with a "taper" current profile. The voltage will stay within the range of 14.40V to 14.70V +/- 5% during this stage. The current will fall from stage 1 current level to approximately 0.5A according to battery charge level.

Stage 2 is complete when the charge current falls to 1/100th of the AH rating of the battery. If the charge current does not fall to the specified level within 18 hours, the charger will switch to a trickle charge mode until power is removed or cycled.

Stage 3:
Trickle Charge with a constant voltage of 13.50V to 13.80V. the charger will remain in Trickle Charge mode until power is removed or cycled.

Fuel Board Support:

The charger has a driver that will support standard indicator/switch functions of a customer provided fuel board. It will also allow for communication with an optional Shurite Systems DC Power Monitor.

> AC on
> Shutdown
> Battery Connect
> Charging
> Charged
> Alarm Silence/Reset Pushbutton
> Battery Capacity – 5 states
> Error Indication

Fan Operation:

The fan output is enabled under the following conditions:

1. AC disconnected and load current is 2A or greater.
2. AC connected.

Features:

● User Selectable Battery Profiles. 26 AH, 35 AH, 55 AH and 75 AH SLA
● Overdischarge Recovery Mode

Standards:

The primary power supply is UL60601 approved for medical applications.

Individual applications in customer's power system enclosure must be submitted for approval.