

## 150 W – 12/24 V

**DC-UPS, AC to DC uninterruptable power systems for critical DC loads.**

All-in-One: Power supply + Battery charger + Back-up functions, all packaged in one box.

- Selectable Output Voltage, 12 Vdc or 24 Vdc
- Load-first, Dynamic Load/Battery power sharing
- Adjustable maximum battery charging current
- Suitable for backup of high inrush current DC loads
- Universal charging output, selectable Battery Type
- SBS Smart Temperature Compensation probe (opt.)
- Manual Battery start-up button with no mains
- Battery life test, automatic or via manual button
- Extensive BATTSAFE battery management firmware
- Full set of protection and monitoring functions
- Local monitoring and diagnostics on LEDs
- Remote alarms via 2 voltage-free relay contacts

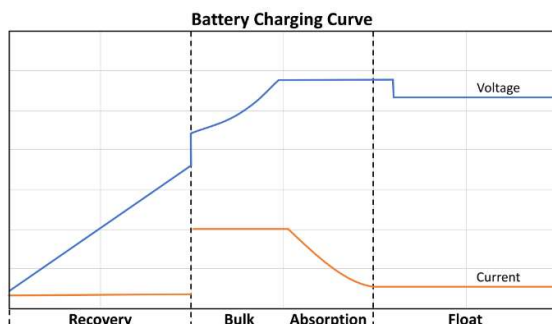
### Norms – Certifications - Conformity

This device complies with:

- **Electrical Safety** Low Voltage Directive 2014/35/EU, 2014/35/UE as follow:
- EN60950-1, (UL60950-1, UL508, C22.2, EN60335-2-29, UL1236), EN IEC 62368-1:2014/AC:2015;
- **EMC Emission** EN55011 (CISPR11), EN55022 (CISPR22) Class B, EN61000-3-3
- **EMC Immunity** EN61000-4-2,3,4,5,6,8,11
- **Fire Detection** and fire alarm systems EN54-4
- **Charging cycle** DIN41773
- **UL Pending**

### Battery Management

Rated Voltage	<b>12 Vdc</b>	<b>24 Vdc</b>
Charging Curve	<b>3 stages (IUoU) + Recovery</b>	
Charging Current setting (min/max)	<b>1.0 A / 10.0 A</b>	<b>0.5 A / 5.0 A</b>
Battery Type, selectable by Dip Switch	<b>Vented Lead, VRLA AGM lead, VRLA Gel lead, Li-Io, Li-PoFe, NiCd</b>	
Voltage max	<b>14.75 Vdc</b>	<b>29.50 Vdc</b>
Boost Voltage	<b>14.4 Vdc</b>	<b>28.80 Vdc</b>
Float Voltage, dip switch selectable	<b>According to battery type</b>	
Recovery Charge	<b>2-10 Vdc</b>	<b>2-20 Vdc</b>
Low Voltage Disconnect (LVD) Threshold	<b>9.3 Vdc</b>	<b>18.5 Vdc</b>
Low Voltage Alarm Threshold	<b>11 Vdc</b>	<b>22 Vdc</b>
Time Boost-Bulk Charge (Typ. IN)	<b>min 5 s, max 15 h</b>	
Temperature Compensation	<b>Digital sensor on UART Serial port</b>	
Boost voltage Enable/Disable Protections	<b>Local dipswitch, Reverse Polarity, Disconnected Battery, Wrong Battery Voltage, Sulphated Battery, Cell-In Short Circuit</b>	
Battery Diagnostics		
Life Test	<b>Automatic Every 2 h in Standby, Manual on Push Button</b>	



### Features

<b>Input</b>		
Rated Input Voltage AC	<b>115/230/277 Vac (range 85-305 Vac)</b>	
Frequency Range	<b>50/60 Hz (range 47-440 Hz)</b>	
Input Current AC (Typ.)	<b>1.6 A (115 Vac), 0.6 A (230 Vac)</b>	
Rated Input Voltage DC	<b>110/220 Vdc (range 110-420 Vdc)</b>	
Input Current DC (Typ.)	<b>1.4 (110 Vdc), 0.5 A (220 Vdc)</b>	
Inrush Current (Typ. Cold Start)	<b>15 A max</b>	
Setup, Rise Time Max	<b>1 s</b>	
Recommended External Fuse/MCB	<b>6 A, curve C</b>	
<b>Load Output – Power Supply Mode – Mains ON &amp; Battery OFF</b>		
Voltage, selectable by Dip Switch <sup>1</sup>	<b>12 Vdc</b>	<b>24 Vdc</b>
Rated Current (I <sub>a</sub> )	<b>10 A</b>	<b>5 A</b>
Ripple / Noise <sup>2</sup>	<b>80 mV<sub>pp</sub></b>	<b>100 mV<sub>pp</sub></b>
Short Circuit Protection	<b>yes</b>	
Over Load Protection	<b>Constant Current mode &gt; 110% I<sub>r</sub></b>	
Over Voltage Protection	<b>35 Vdc</b>	
<b>Load Output – Standby Mode – Mains ON &amp; Battery ON</b>		
Voltage Range, Automatic Set <sup>1</sup>	<b>12-14.4 Vdc</b>	<b>24-28.8 Vdc</b>
Max Continuous Current (I <sub>r</sub> +I <sub>BATT</sub> )	<b>15 A</b>	<b>10 A</b>
Max Current for 30 s	<b>17 A</b>	<b>15 A</b>
Max Current for 15 s	<b>20 A</b>	<b>20 A</b>
Max Current for 5 s	<b>&lt; 25 A</b>	<b>&lt; 25 A</b>
<b>Load Output – Backup Mode – Mains OFF &amp; Battery ON</b>		
Voltage Range, Automatic Set <sup>1</sup>	<b>9.5-12 Vdc</b>	<b>18.5-24 Vdc</b>
Max Continuous Current (I <sub>r</sub> +I <sub>BATT</sub> )	<b>15 A</b>	<b>10 A</b>
Max Current for 30 s	<b>17 A</b>	<b>15 A</b>
Max Current for 15 s	<b>20 A</b>	<b>20 A</b>
Max Current for 5 s	<b>&lt; 25 A</b>	<b>&lt; 25 A</b>
Start from battery with no mains	<b>Yes, on Push Button</b>	
Quiescent current	<b>&lt; 90 mA</b>	
<b>Signal Output/Input</b>		
Standby / Backup	<b>Change-over relay contact, M terminals</b>	
Common Fault	<b>Change-over relay contact, F terminals</b>	
Full set of monitor and alarm LED signals	<b>Flashing code on 3, Three-color LEDs</b>	
<b>Climatic Data</b>		
Operating Ambient Temperature (T <sub>a</sub> )	<b>-25 up to +70°C</b>	
Relative Humidity, no condensation@25°C	<b>max 95%</b>	
Storage Temperature	<b>-40 up to +85°C</b>	
Cooling	<b>Natural Convection</b>	
<b>General Data</b>		
Efficiency (Typ.)	<b>&gt;90%</b>	<b>&gt;92%</b>
Temperature Derating Factor <sup>1</sup>	<b>2.5 %/°C , T<sub>a</sub> &gt; 50°C</b>	
Altitude Derating Factor <sup>1</sup>	<b>0.5°C/100 m, above 2000 m</b>	
Insulation Voltage (In/Out)	<b>4 kVac</b>	
Insulation Voltage (In/PE)	<b>2 kVac</b>	
Insulation Voltage (Out/PE)	<b>500 Vdc</b>	
Insulation Resistance (500 V)	<b>&gt; 100 MΩ</b>	
Protection Class (EN/IEC 60529)	<b>IP 20</b>	
Pollution Degree Environment	<b>2</b>	
Dimensions (W x H x D)	<b>60 x 130 x 126 mm</b>	
Weight	<b>0.75 kg</b>	
<b>Commercial Data</b>		
Weight per unit, including packing	<b>0.8 kg</b>	
Dimensions per unit, including packing	<b>65 x 138 x 134 mm</b>	
Volume per unit, including packing	<b>0.0012 m<sup>3</sup></b>	
Custom Tariff HS	<b>85044055</b>	
Country of origin	<b>Italy</b>	