

## 300 W – 48 V

### DCU Series - DC-UPS, AC/DC uninterruptible power systems for critical DC loads with Data Link

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

- Selectable Output Voltage, 48 Vdc
- Load-first, Dynamic Load/Battery power sharing
- Adjustable maximum battery charging current
- Suitable for backup of high inrush current DC loads
- Buffer time setting of load backup
- 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 manual on push button
- Extensive **BATTsafe** battery management firmware
- Full set of protection and monitoring functions
- Local monitoring and diagnostics on LEDs
- Remote alarms via 3 voltage-free relay contacts
- Communication via Modbus data link

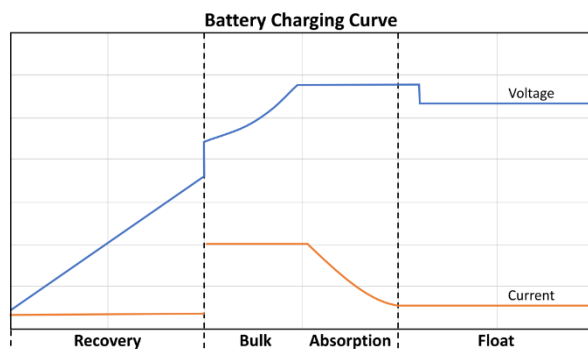
### Norms - Certifications - Conformity

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>24 Vdc</b>
Charging Curve	<b>3 stages (IUoU) + Recovery</b>
Charging Current setting (min/max)	<b>1 A / 10 A</b>
Battery Type, selectable by Dip Switch	<b>Vented &amp; Sealed Lead Acid, AGM, Li-Io, Li-PoFe, NiCd/Ni-Mh</b>
Voltage max	<b>29.50 Vdc</b>
Boost Voltage	<b>28.8 Vdc</b>
Float Voltage, dip switch selectable	<b>According to battery type</b>
Recovery Charge	<b>2-20 Vdc</b>
Low Voltage Disconnect (LVD) Threshold	<b>18.5 Vdc</b>
Low Voltage Alarm Threshold	<b>22 Vdc</b>
Time Boost-Bulk Charge (Typ. IN)	<b>min 5 s, max 15 h</b>
Temperature Compensation	<b>SBS Smart Temperature Compensation probe (opt.)</b>
Boost voltage Enable/Disable Protections	<b>Local dip switch or Remote Link 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>



### Technical data

<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 (Typ.)	<b>2.8 A (115 Vac), 1.4 A (230 Vac)</b>
Rated Input Voltage DC	<b>110/220 Vdc (range 110-420 Vdc)</b>
Input Current DC (Typ.)	<b>3.0 (110 Vdc), 1.5 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>10A, curve B</b>
<b>Load Output – Power Supply Mode – Mains ON &amp; Battery OFF</b>	
Voltage, selectable by Dip Switch <sup>1</sup>	<b>24 Vdc</b>
Rated Current (I <sub>a</sub> )	<b>10 A</b>
Ripple / Noise <sup>2</sup>	<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>Vdc</b>
<b>Load Output – Standby Mode – Mains ON &amp; Battery ON</b>	
Voltage Range, Automatic Set <sup>1</sup>	<b>24-28.8 Vdc</b>
Max Continuous Current (I <sub>R</sub> +I <sub>BATT</sub> )	<b>15 A</b>
Max Current for 30 s	<b>20 A</b>
Max Current for 15 s	<b>25 A</b>
Max Current for 5 s	<b>&lt; 30 A</b>
<b>Load Output – Backup Mode – Mains OFF &amp; Battery ON</b>	
Voltage Range, Automatic Set <sup>1</sup>	<b>18.5-24 Vdc</b>
Max Continuous Current (I <sub>R</sub> +I <sub>BATT</sub> )	<b>15 A</b>
Max Current for 60 s	<b>20 A</b>
Max Current for 30 s	<b>25 A</b>
Max Current for 5 s	<b>&lt; 30 A</b>
Time Buffering for Backup	<b>30 s up to ∞</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>
Rectifier failure	<b>Change-over relay contact, S terminals</b>
Full set of monitor and alarm visual signals	<b>Flashing code on 3, Three-color LEDs</b>
Modbus data link	<b>Dual RJ45 connector</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% &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>80 x 130 x 126 mm</b>
Weight	<b>0.9 kg</b>
<b>Commercial Data</b>	
Weight per unit, including packing	<b>1.0 kg</b>
Dimensions per unit, including packing	<b>85 x 138 x 134 mm</b>
Volume per unit, including packing	<b>0.0014 m<sup>3</sup></b>
Custom Tariff HS	<b>85044055</b>
Country of origin	<b>Italy</b>