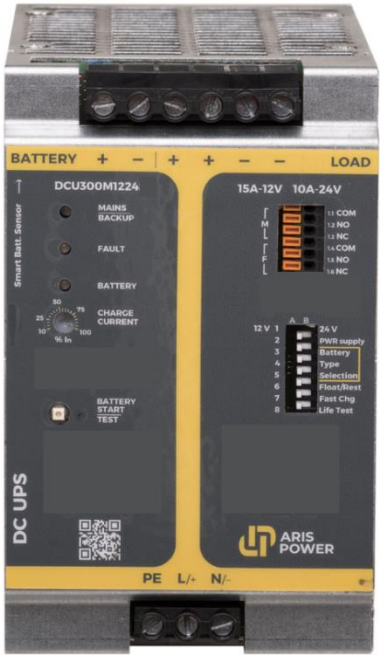
DCU300M1224

DC-UPS



300 W

DCU Series - DC-UPS, AC/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 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 2 voltage-free relay contacts

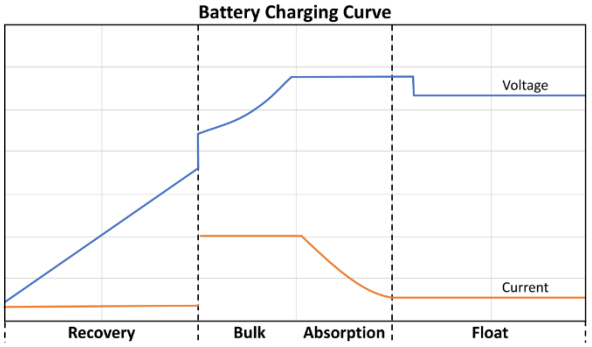
Norms - Certifications - Conformity

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	**12 Vdc**	**24 Vdc**
Charging Curve	**3 stages (IUoU) + Recovery**	
Charging Current setting (min/max)	**1.5 A / 15.0 A**	**1 A / 10 A**
Battery Type, selectable by Dip Switch	**Vented & Sealed Lead Acid, AGM, Li-Io, Li-PoFe, NiCd/NiCd/Ni-Mh**	
Voltage max	**14.75 Vdc**	**29.50 Vdc**
Boost Voltage	**14.4 Vdc**	**28.8 Vdc**
Float Voltage, dip switch selectable	**According to battery type**	
Recovery Charge	**2-10 Vdc**	**2-20 Vdc**
Low Voltage Disconnect (LVD) Threshold	**9.3 Vdc**	**18.5 Vdc**
Low Voltage Alarm Threshold	**11 Vdc**	**22 Vdc**
Time Boost–Bulk Charge (Typ. IN)	**min 5 s, max 15 h**	
Temperature Compensation	**SBS Smart Temperature Compensation probe (opt.)**	
Boost voltage Enable/Disable	**Local dip switch or Remote Link**	
Protections	**Reverse Polarity, Disconnected Battery Wrong Battery Voltage**	
Battery Diagnostics	**Sulphated Battery, Cell-In Short Circuit**	
Life Test	**Automatic Every 2 h in Standby, Manual on Push Button**	



Technical data

Input		
Rated Input Voltage AC	**115/230/277 Vac (range 85–305 Vac)**	
Frequency Range	**50/60 Hz (range 47- 440 Hz)**	
Input Current (Typ.)	**2.8 A (115 Vac), 1.4 A (230 Vac)**	
Rated Input Voltage DC	**110/220 Vdc (range 110–420 Vdc)**	
Input Current DC (Typ.)	**3.0 (110 Vdc), 1.5 A (220 Vdc)**	
Inrush Current (Typ. Cold Start)	**15 A max**	
Setup, Rise Time Max	**1 s**	
Recommended External Fuse/MCB	**10A, curve B**	
Load Output – Power Supply Mode – Mains ON & Battery OFF		
Voltage, selectable by Dip Switch [1]	**12 Vdc**	**24 Vdc**
Rated Current (I_R)	**15 A**	**10 A**
Ripple / Noise [2]	**80 mV_{PP}**	**100 mV_{PP}**
Short Circuit Protection	**yes**	
Over Load Protection	**Constant Current mode > 110% I_R**	
Over Voltage Protection	**35 Vdc**	
Load Output – Standby Mode – Mains ON & Battery ON		
Voltage Range, Automatic Set [1]	**12-14.4 Vdc**	**24-28.8 Vdc**
Max Continuous Current (I_R+I_{BATT})	**20 A**	**15 A**
Max Current for 30 s	**25 A**	**20 A**
Max Current for 15 s	**30 A**	**25 A**
Max Current for 5 s	**< 35 A**	**< 30 A**
Load Output – Backup Mode – Mains OFF & Battery ON		
Voltage Range, Automatic Set [1]	**9.5-12 Vdc**	**18.5-24 Vdc**
Max Continuous Current (I_R+I_{BATT})	**20 A**	**15 A**
Max Current for 60 s	**25 A**	**20 A**
Max Current for 30 s	**30 A**	**25 A**
Max Current for 5 s	**< 35 A**	**< 30 A**
Start from battery with no mains	**Yes, on Push Button**	
Quiescent current	**< 90 mA**	
Signal Output/Input		
Standby / Backup	**Change-over relay contact, M terminals**	
Common Fault	**Change-over relay contact, F terminals**	
Full set of monitor and alarm visual signals	**Flashing code on 3, Three-color LEDs**	
Climatic Data		
Operating Ambient Temperature (T_A)	**-25 up to +70°C**	
Relative Humidity, no condensation@25°C	**max 95%**	
Storage Temperature	**-40 up to +85°C**	
Cooling	**Natural Convection**	
General Data		
Efficiency (Typ.)	**>90%**	**>92%**
Temperature Derating Factor [1]	**2.5 %/°C , T_A > 50°C**	
Altitude Derating Factor [1]	**0.5°C/100 m, above 2000 m**	
Insulation Voltage (In/Out)	**4 kVac**	
Insulation Voltage (In/PE)	**2 kVac**	
Insulation Voltage (Out/PE)	**500 Vdc**	
Insulation Resistance (500 V)	**> 100 MΩ**	
Protection Class (EN/IEC 60529)	**IP 20**	
Pollution Degree Environment	**2**	
Dimensions (W x H x D)	**80 x 130 x 126 mm**	
Weight	**0.9 kg**	
Commercial Data		
Weight per unit, including packing	**1.0 kg**	
Dimensions per unit, including packing	**85 x 138 x 134 mm**	
Volume per unit, including packing	**0.0014 m^3**	
Custom Tarif HS	**85044055**	
Country of origin	**Italy**	