

600 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
- Buffer time setting of load backup
- Universal charging output, selectable Battery Type
- External digital sensor for Temperature compensation
- Manual Battery start-up button with no mains
- Battery life test, automatic or manual via 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

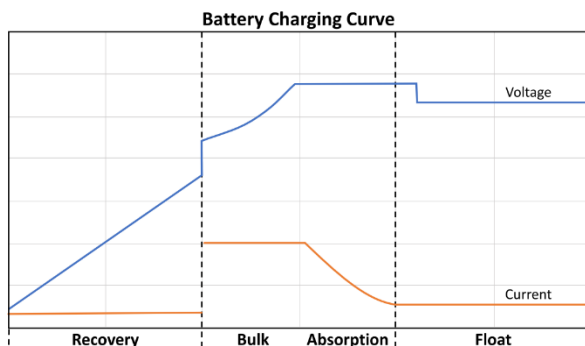
Norms – Certifications - Conformity

This device complies with:

- **Electrical Safety** Low Voltage Directive 2014/35/EU, 2014/35/UE as follows: 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

Battery Management

Rated Voltage	12 Vdc	24 Vdc
Charging Curve	3 stages (I_{UO}) + Recovery	
Charging Current setting (min/max)	3.5 A / 35.0 A	2 A / 20.0 A
Battery Type, selectable by dipswitch	Vented Lead, VRLA AGM lead, VRLA Gel lead, Li-Io, Li-PoFe, NiCd	
Voltage max	14.75 Vdc	29.50 Vdc
Boost Voltage	14.4 Vdc	28.80 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	External digital sensor	
Boost voltage Enable/Disable Protections	Local dipswitch or Remote Link	
Battery Diagnostics	Reverse Polarity, Disconnected Battery, Wrong Battery Voltage, Sulphated Battery, Cell-In Short Circuit	
Life Test	Automatic Every 2 h in Standby, Manual on Push Button	



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Features

Input	
Rated Input Voltage AC	115/230/277 Vac (range 85–305 Vac)
Frequency Range	50/60 Hz (range 47–440 Hz)
Input Current AC (Typ.)	5.3 A (115 Vac), 2.5 A (230 Vac)
Rated Input Voltage DC	110/220 Vdc (range 110–420 Vdc)
Input Current DC (Typ.)	6.0 (110 Vdc), 3.0 A (220 Vdc)
Inrush Current (Typ. Cold Start)	15 A max
Setup, Rise Time Max	1 s
Recommended External Fuse/MCB	10 A, curve B
Load Output – Power Supply Mode – Mains ON & Battery OFF	
Voltage, selectable by Dip Switch ¹	12 Vdc 24 Vdc
Rated Current (I _a)	35 A 20 A
Ripple / Noise ²	80 mV_{pp} 100 mV_{pp}
Short Circuit Protection	yes
Overload Protection	Constant Current mode > 110% I_a
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})	45 A 40 A
Max Current for 30 s	50 A 45 A
Max Current for 15 s	55 A 50 A
Max Current for 5 s	< 60 A < 55 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})	45 A 40 A
Max Current for 30 s	50 A 45 A
Max Current for 15 s	55 A 50 A
Max Current for 5 s	< 60 A < 55 A
Time Buffering for Backup	30 s up to ∞
Start from battery with no mains	Yes, on Push Button
Quiescent current	< 100 mA
Signal Output/Input	
Standby / Backup	Change-over relay contact, M terminals
Common Fault	Change-over relay contact, F terminals
Rectifier failure	Change-over relay contact, S terminals
Full set of monitor and alarm LED signals	Flashing code on 3, Three-color LEDs
MODbus / CANbus data link	Dual RJ45 connector
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)	100 x 130 x 126 mm
Weight	1.2 kg
Commercial Data	
Weight per unit, including packing	1.25 kg
Dimensions per unit, including packing	110 x 138 x 134 mm
Volume per unit, including packing	0.0012 m³
Custom Tariff HS	85044055
Country of origin	Italy