

Sentinel Dual Marine SMU

1:1 6-10 kVA/kW



ONLINE



TowerRack



Energy Share



Hot swap battery



Plug & Play installation



USB plug



HIGHLIGHTS

- **Power factor 1 kW = kVA**
- **Parallelable up to 3 units**
- **Compatible with marine environments**
- **Operating mode selection**
- **High quality output voltage**
- **High battery reliability**

Sentinel Dual Marine is the best solution for powering mission critical applications requiring maximum power reliability. It's easy to use and fully certified for marine applications. Flexibility of installation and use (digital display, user-replaceable battery set), as well as the many communication options available, makes the Sentinel Dual Marine suitable for marine environments. Up to 3 Sentinel Dual Marine can be operated in parallel in either capacity or N+1 redundant configuration offering increased reliability for critical system. The Sentinel Dual Marine can be installed as tower (floor standing, with frame and antivibration support) or in a rack. The Sentinel Dual Marine is available in 6 and 10kVA/kW models, both designed with

an online double conversion technology (VFI): the load is powered continuously by the inverter which supplies a sinusoidal voltage, filtered and stabilised in terms of voltage, form and frequency. In addition, the input and output filters significantly increase the load's immunity to mains disturbances and lightning strikes. Technology and performance: selectable ECO Mode and SMART ACTIVE Mode functions. The Sentinel Dual Marine can also be used as a frequency converter (50, 60 Hz) with simple configuration. Diagnostics: Standard digital display, RS232 and USB interfaces with PowerShield³ software downloadable, communications slot for connectivity accessories.

HIGH RELIABILITY IN MARINE ENVIRONMENTS

- Designed and built to match the specific needs of the marine, offshore and other demanding environments where power outages cause serious problems for critical navigation and communications equipment.
- The Sentinel Dual Marine anti-vibration frame protect the UPS to constant vibration from engines, waves, and hull movement, conditions that can be extremely critical for onboard electronics. Without proper vibration isolation, critical systems can suffer reduced performance, premature failures, and costly downtime.
- Internal PCBs undergo a coating treatment process.

SIMPLIFIED INSTALLATION

- Can be installed on the floor with the provided anti-vibration support, or in rack mount cabinets, suitable for marine and offshore use. The display panel can be rotated (using the key supplied);
- Low noise (<48 dBA): can be installed in any environment thanks to its high frequency switching inverter and PWM load-dependent digitally controlled fan;
- External bypass option for maintenance with interruption-free switching;
- Operation guaranteed up to 45 °C (the components are designed for high temperatures and are thus subject to less stress at normal temperatures);
- Built-in IEC output sockets with thermal protection.

OPERATING MODE SELECTION

Functions can be programmed via software or manually via the front display panel.

- ON LINE: efficiency up to 95%;
- ECO Mode: to increase efficiency (up to 98%), allows for the selection of VFD operating to power low priority loads from the mains supply;
- SMART ACTIVE: the UPS automatically decides upon the operating mode (VFD or VFI) based on the quality of the mains power supply;
- STANDBY OFF: the UPS can be selected to function only when the mains power supply fails (emergency only mode);
- Frequency Converter operation (50 or 60 Hz).

LONG BATTERY LIFETIME

- Equipped with long-lifetime batteries;
- Automatic and manual battery test;
- Reduced ripple component (detrimental to the batteries) using a low ripple current discharge (LCRD) system;

- Batteries are user replaceable without switching off equipment and without interruption to the load (Hot Swap);
- Extendible runtime using matching Battery cabinets;
- The batteries do not cut in during mains failures of <20 ms (high hold up time) or when the input supply is between 184 V to 276 V.

EMERGENCY FUNCTION

This configuration ensures the operation of those emergency systems that require continuous, reliable and long-lasting power supply in the event of a mains power failure, such as emergency lighting, fire detection/extinguishing systems and alarms. When the mains power supply fails, the inverter begins powering the loads with a progressive start up (Soft Start) in order to prevent overload.

BATTERY OPTIMISATION

The wide input voltage range and a high hold-up time minimise battery usage and increase efficiency and battery life; for smaller power breaks, energy is drawn from a group of appropriately-sized capacitors.

RUNTIME EXPANDABILITY

Optional battery extension packs can be connected to increase UPS runtime. In addition the Sentinel Dual range includes ER versions with no internal batteries and more powerful battery chargers for longer runtimes.

ENERGYSHARE

10 A configurable IEC output sockets allow for runtime optimisation by programming the switching off of low priority loads on mains failure; alternatively, emergency loads that are normally not powered when mains is present can be activated.

OTHER FEATURES

- Selectable output voltage (220/230/240 V);
- Dual input supplies configuration (SMU 10000 DI ER);
- Auto-restart when mains power is restored (programmable via software);
- Bypass on: when the machine is switched off, it automatically goes into bypass and battery charge mode;
- Minimum load switch-off;
- Low battery warning;
- Start up delay;
- Total microprocessor and DSP control;
- Automatic bypass without interruption;
- Use of custom power modules;
- Status, measurements and alarms available on standard backlit display;

- UPS digital updating (flash memory upgradeable);
- Output sockets protected with resettable thermal switch;
- Backfeed protection standard: to prevent energy from being fed back to the network;
- Manual switching to bypass.

ADVANCED COMMUNICATIONS

- Advanced multi-platform communications for all operating systems and network environments: PowerShield³ monitoring and shutdown software for Windows operating systems 11, 10, 8, Server 2022, 2019, 2016 and previous versions, Windows Server Virtualization Hyper-V, macOS, Linux, Citrix XenServer and other Unix operating systems;
- Plug and play function;
- USB port;
- RS232 serial port;
- Slot for installation of communications boards.

UNITY POWER FACTOR

- More power delivered;
- More real output power (W).

2-YEAR WARRANTY

OPTIONS

SOFTWARE

PowerShield³
PowerNetGuard

ACCESSORIES

NETMAN 208C
MULTICOM 302
MULTICOM 352
MULTICOM 372
MULTICOM 384
MULTICOM 411
MULTICOM 421
MULTI I/O
MULTIPANEL

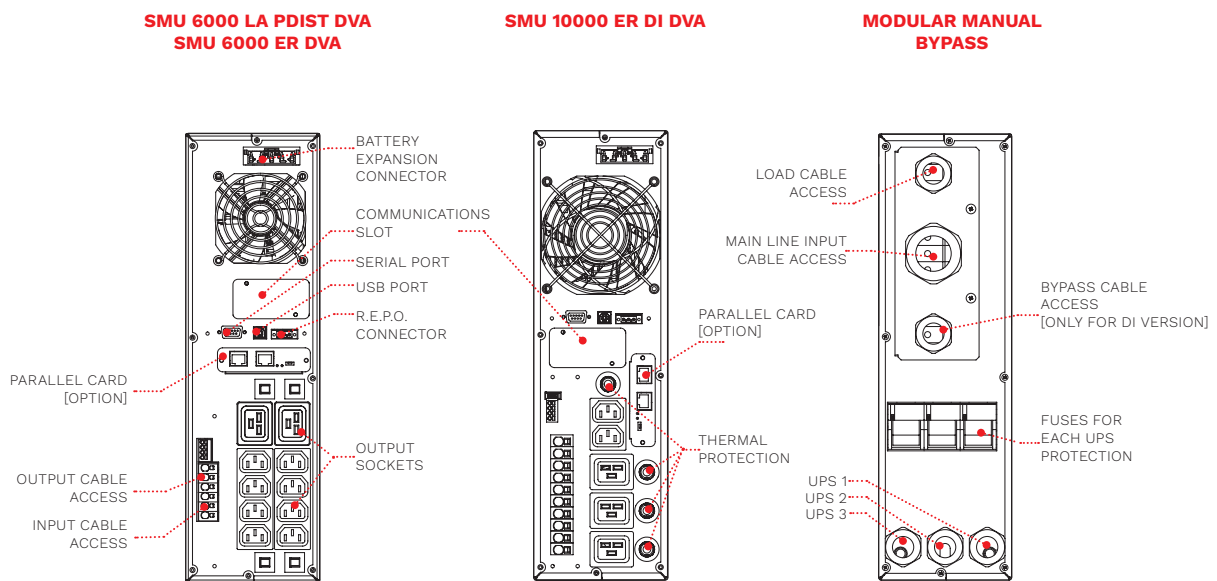
PRODUCT ACCESSORIES

Universal rails for installation in rack cabinets
Parallel card
Manual bypass single-phase
Modular Manual bypass single-phase

ANTI-VIBRATION FRAME COMBINATIONS

ARTICLE	NOTE	DIMENSIONS (WxDxH) [mm]	WEIGHT [kg]
SMU 6000 ER DVA	Sentinel Dual Marine SMU 6000 VA ER	482.6 (19")x640x131 (3U)	20
KIT SMU AVB 1XLGT	Single lightweight metal frame	280x640x545	9
SMU 6000 LA PDIST DVA	Sentinel Dual Marine SMU 6000 VA with internal batteries	482.6 (19")x640x131 (3U)	46
KIT SMU AVB 1XMED	Mediumweight single metal frame	280x640x545	9
SMU 10000 ER DI DVA	Sentinel Dual Marine SMU 10000 VA Dual Input ER	482.6 (19")x640x131 (3U)	21
KIT SMU AVB 1XLGT	Single lightweight metal frame	280x640x545	9
BTC SMU 180V BB L2	Complete Battery Cabinet Rack for SMU 6000	482.6 (19")x640x131 (3U)	55
KIT SMU AVB 1XMED	Mediumweight single metal frame	280x640x545	9
BTC SMU 240V BB L2	Complete Battery Cabinet Rack for SMU 10000	482.6 (19")x640x131 (3U)	56
KIT SMU AVB 1XMED	Mediumweight single metal frame	280x640x545	9
2x SMU 6000 LA PDIST DVA	Sentinel Dual Marine SMU 6000 VA with internal batteries	2x [482.6 (19")x640x131 (3U)]	92
KIT SMU AVB 2XHVV	Double heavyweight metal frame	400x640x545	11
2x SMU 10000 ER DI DVA	Sentinel Dual Marine SMU 10000 VA Dual Input ER	2x [482.6 (19")x640x131 (3U)]	42
KIT SMU AVB 2XMED	Double mediumweight metal frame	400x640x545	11
2x BTC SMU 180V BB L2	Complete Battery Cabinet Rack for SMU 6000	2x [482.6 (19")x640x131 (3U)]	110
KIT SMU AVB 2XHVV	Double heavyweight metal frame	400x640x545	11
2x BTC SMU 240V BB L2	Complete Battery Cabinet Rack for SMU 10000	2x [482.6 (19")x640x131 (3U)]	112
KIT SMU AVB 2XHVV	Double heavyweight metal frame	400x640x545	11
2x SMU 6000 ER DVA	Sentinel Dual Marine SMU 6000 VA ER	2x [482.6 (19")x640x131 (3U)]	40
KIT SMU AVB 2XMED	Double mediumweight metal frame	400x640x545	11

DETAILS



DI = DUAL INPUT
ER = EXTENDED RECHARGE

MODELS	SMU 6000 LA PDIST DVA	SMU 6000 ER DVA	SMU 10000 DI ER DVA
INPUT			
Dual Input	no		yes
Rated voltage [V]	220 / 230 / 240		
Voltage tolerance [V]	230 ±20%		
Minimum voltage [V]	184		
Rated frequency [Hz]	50 / 60 ±5		
Power factor	>0.98		
Current distortion	≤2%		
BYPASS			
Voltage tolerance [V]	180 / 264 (selectable in ECO Mode or SMART ACTIVE Mode)		
Frequency tolerance	Selected frequency ±5% (selectable by user)		
Overload Times	<110% continuous, 130% for 1 h, 150% for 10 min, over 150% for 3 s		
OUTPUT			
Nominal power [VA]	6000	6000	10000
Active power [W]	6000	6000	10000
Rated voltage [V]	220 / 230 / 240 selectable		
Voltage distortion	<1% with linear load / <3% with non-linear load		
Frequency [Hz]	50 / 60 selectable		
Static variation	1.5%		
Dynamic variation	≤5% in 20 ms		
Waveform	Sinusoidal		
Crest factor [I _{peak} /I _{rms}]	3:1		
BATTERIES			
Type	VRLA AGM maintenance-free lead based, Long life, UL94-V0		
Recharge time	4-6 h		
OVERALL SPECIFICATIONS			
Net weight [kg]	46	20	21
Gross weight [kg]	54	28	25
Dimensions (WxDxH) [mm]	131x640x448		
Packaging dimensions (WxDxH) [mm]	800x600x(240+120)	2x (800x600x240) + 120 ER version 800x600x(240+120)	
Efficiency	up to 95% ON LINE Mode, 98% ECO Mode		
Protections	Overcurrent - short circuit - overvoltage - undervoltage - temperature - excessive low battery		
Parallel Operation	Optional Parallel Card		
Communications	USB / RS232 / slot for communications interface / R.E.P.O. + Input contact		
Input Connection	Terminal board		
Output sockets	Terminal board + 2x IEC 320 C13 (10 A) + 3x IEC 320 C19 (16 A)		
Standards	European directives: LV 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111 DNV Type Approval according to DNV-CG-0339 July 2025 (Certificate No. TAE 00004YU)		
Ambient temp. for the UPS	0 °C - +45 °C		
Recommended temperature for battery life	+20 °C - +25 °C		
Range of relative humidity	5-95% non-condensing		
Colour	RAL 9006		
Noise level at 1 m (ECO Mode) [dBA]	<48		
Standard equip. provided	USB cable; handles kit		

The information in this document is subject to change without notice. Riello UPS assumes no responsibility for any errors that may appear in this document. DATSMUAY26EREN