

DATA SHEET

POWERLINE RT PRO

1000/2000/3000 VA

PF=1
VA=W**VFI**
true
on-lineEPO (EMERGENCY POWER OFF)
DISCONNECT POWER
IN CASE OF FIREEXTENDABLE
BACK-UP TIME
(up to 4 Battery Modules)

A series of hi-tech, **on-line (VFI)** UPS units (uninterruptible power system), designed with double conversion topology, whose **active output power reaches the value of apparent power**. The POWERLINE RT PRO UPS units protect sensitive equipment and systems from common problems such as power outages, spikes and drops in the mains, surges and other harmonic interferences. POWERLINE RT PRO units have been designed mainly to protect **network devices, servers, workstations**, but also **electrical, electronic and IT equipment**.

FEATURES

- **On-line** operation with **real double conversion**, sine wave output voltage (ensuring top quality VFI-SS-111 parameters),
- Active output power is equal to apparent power (**PF=1**)!
- **ECO mode** reducing losses,
- **Rack / Tower** enclosure,
- **Back-up time prediction** - for determining the UPS autonomous operation in real time, through PowerSoft,
- Wide range of input voltage,
- Manageable outputs (1 section),
- Cold start,
- **EPO (Emergency Power Off)** function for disconnecting power to receivers connected to the UPS output in emergency situations (e.g. a fire)
- **The ability to configure the minimum battery charge level before re-enabling the output** (after a prior discharge) using PowerSoft software,
- Extendable back-up time by connecting external battery modules (up to 4 modules),
- Autodetection EBM
- **Free PowerSoft** monitoring and management software (downloadable from: www.ever.eu/powersoft).

COMMUNICATION

- USB and RS232 communication interface,
- Modbus TCP as standard,
- Dry Contacts as standard (IN (1), OUT (1)),
- SNMP / HTTP network management or Dry Contacts card (optional)

SERVICE

- Door-to-door service,
- 2-year warranty for the UPS unit's electronics,
- 2-year warranty for the batteries,
- Repairs done within 5 business days



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TECHNICAL DATA

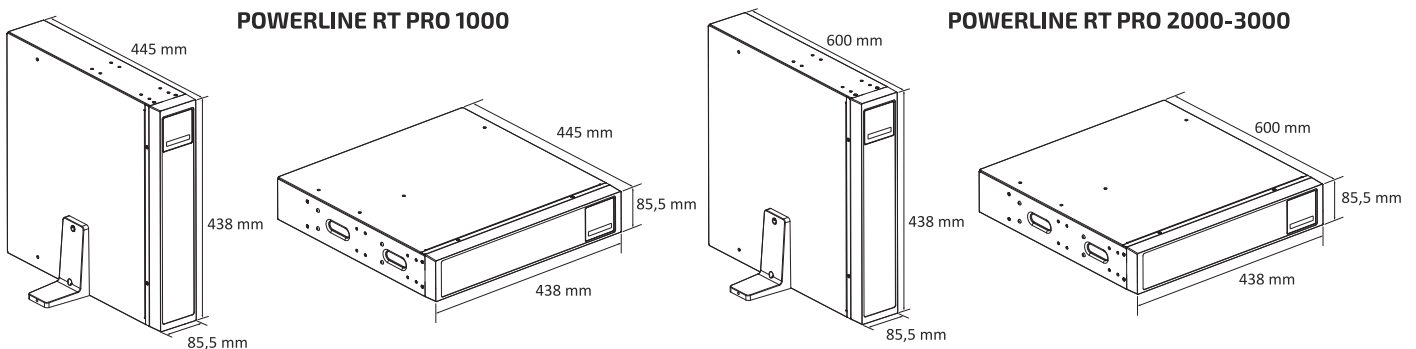
PARAMETERS \ TYPE	POWERLINE RT		
	POWERLINE RT PRO 1000	POWERLINE RT PRO 2000	POWERLINE RT PRO 3000
Part number	T/PWPRRT-111K00/00	T/PWPRRT-112K00/00	T/PWPRRT-113K00/00
Output Power (Apparent / Active) ¹⁾	1000 VA / 1000 W	2000 VA / 2000 W	3000 VA / 3000 W
GENERAL DATA AND ENVIRONMENTAL			
Topology	VFI (on-line, VFI-SS-111)		
Number of phases (in/out)	1 / 1		
Housing Type ²⁾	Rack / Tower		
Max efficiency (double conversion mode)	89%	93 %	
Max efficiency (ECO mode)	96 %	97 %	
Operating temperature ³⁾	0 ÷ +40 °C		
Storage temperature	0 ÷ +40 °C		
Relative humidity during operation	< 95% (non-condensing)		
Relative humidity during storage	< 95% (non-condensing)		
Operating elevation ⁴⁾	< 3000 m		
Protection level	IP20		
Environment of installation	Office / industrial rooms with low level of pollution		
Cooling	Forced, internal fans		
Temperature of the cooling air	< 25°C		
Quantity of heat released for nominal work conditions	< 430 BTU / h	< 520 BTU / h	< 780 BTU / h
INPUT			
Nominal input voltage	230 V AC		
Input voltage range and tolerance ⁵⁾	110 ÷ 300 V AC ± 2%		
Rated current	5,5 A	10,7 A	15,6 A
Input voltage rated frequency	50 / 60 Hz		
Input voltage frequency range and tolerance	45 ÷ 55 / 54 ÷ 66 ±1 Hz		
Input Power Factor	≥0,99		
Input current distortion (THDi)	< 5 %		

Note: The manufacturer reserves the right to modify the above parameters without prior notification.

Notes:

- 1) For standard operation, the load applied to the output must not exceed 80% of the value in the table. The power margin is necessary to ensure continuous work of the connected devices in the case of instantaneous surges of the load.
- 2) The rack kit available as an option.
- 3) Constant exposure of the battery to temperatures of +25°C reduces the battery life. Recommended working temperature: 15 – 25 °C.
- 4) The permitted maximum load of the power supply unit decreases with the height above the sea level above the limit specified above (the load derating 1% every up 100m @ 1000-3000m).
- 5) The range of input voltage depends on the load:
Load 0 – 50%: input voltage 110 – 300 V AC
Load 50 – 100%: input voltage 160 – 300 V AC

DIMENSIONS



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Output Power (Apparent / Active) ¹⁾	1000 VA / 1000 W	2000 VA / 2000 W	3000 VA / 3000 W
OUTPUT			
Nominal output voltage	230 V AC		
Output voltage range and tolerance - normal mode ⁶⁾	200 V AC / 208 V AC / 220 V AC / 230 V AC / 240 V AC ± 2 % (Output voltage value set with LCD panel and software. Default 230 V AC)		
Output voltage range and tolerance - battery mode ⁶⁾	200 V AC / 208 V AC / 220 V AC / 230 V AC / 240 V AC ± 2 % (Output voltage value set with LCD panel and software. Default 230 V AC)		
Rated current	4,4 A	8,7 A	13 A
Shape of output voltage (battery mode / normal mode)	sine-wave / sine-wave		
Output voltage rated frequency	50 / 60 Hz		
Output frequency range and tolerance – mains operation mode	50 / 60 Hz ± 0,1 Hz (The same as the input or selected in mode frequency conversion. If there is power reduction of 40%)		
Output frequency range and tolerance – battery mode	50 / 60 Hz ± 0,1 Hz (The same as the input or selected in mode frequency conversion. If there is power reduction of 40%)		
Output voltage regulation	± 1%		
Output voltage distortion THDu	< 1 % for Pmax (line) < 5 % (non-line by PN-EN 62040-3)		
Crest Factor CF	3:1		
Transfer time to battery mode	0 ms		
Transfer time to normal mode	0 ms		
Overload capability ⁷⁾	100 % ÷ 105 % - continuous 105 % ÷ 125 % - 5 minutes 125 % ÷ 150 % - 30 seconds > 150 % - 500 ms		
BATTERIES AND TYPICAL RUNTIME			
Internal Batteries	12 V / 9 Ah VRLA	12 V / 9 Ah VRLA	
Number of internal batteries	1 x 3	1 x 6	
Maximum overall internal batteries capacity	9 Ah		
External battery modules (EBM)	Yes		
Maximum number of EBMs	4		
Backup time – internal batteries (100 % / 80 % / 50 % Pmax)	6 / 8 / 14 min	6 / 8,5 / 16 min	3,5 / 5 / 10 min
Backup time – internal batteries + EBM (100%/80%/50%Pmax)	24 / 32 / 57 min	27 / 37 / 62 min	17 / 23 / 40 min
Nominal voltage DC circuit	36 V DC	72 V DC	
Internal batteries maximum charging time – after discharging at 80 % Pmax	≤ 3 h		
Maximum charging current	1,5 A		

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Notes:

6) Set by user software or LCD display. For 200 V AC the load level will be derating to 80%. For 208 V AC the load level will be derating to 90%.

7) With long-term operation of the load of the recommended values.

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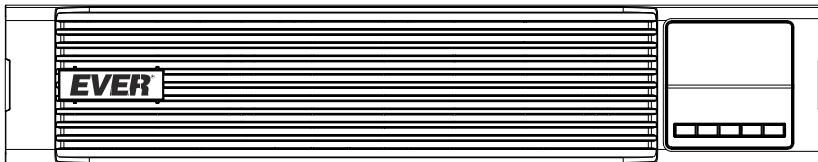
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Output Power (Apparent / Active) ¹⁾	1000 VA / 1000 W	2000 VA / 2000 W	3000 VA / 3000 W
MECHANICAL SPECIFICATIONS			
Dimensions (H x W x D)	86 (2U) x 438 x 445 mm	86 (2U) x 438 x 600 mm	
Net Weight ⁸⁾	15,5 kg	25,7 kg	26,2 kg
Gross Weight ⁸⁾	18,5 kg	29,7 kg	30,4 kg
Transport Dimensions (H x W x D)	240 x 498 x 585 mm	240 x 580 x 780 mm	
Position in which devices transported	Horizontal		
PROTECT			
Input over current protection	Surge Protection		
Output over current protection	Inverter working – electronic short-circuit and overload protection		
ACCESSORY AND EXTRA FUNCTIONS			
Power supply connection	1 x IEC 320 C14 (10 A)	1 x IEC 320 C20 (16 A)	
Output connection (number and type of sockets)	Controllable	4 x IEC 320 C13 (10A)	4 x IEC 320 C13 (10A)
	Uncontrolled	4 x IEC 320 C13 (10A)	4 x IEC 320 C13 (10A) 1 x IEC 320 C19 (16A)
EPO (RPO) ⁹⁾	Yes (NC)		
Signalling	Acoustic and optical; LCD graphic display, LED		
Communications interfaces	RS232, USB (2.0) HID, dry contacts: input (1), output (1), Ethernet port (RJ45 for IoT functions), MODBUS TCP HDMI port for connecting a Wi-Fi wireless card (for IoT functions), Port RJ45 – EBM detection, network management card SNMP / HTTP – optional, AS 400 card – optional		
Software	PowerSoft Professional		
CERTIFICATION			
Declarations	CE		
Standards	PN-EN 62040-1:2009, PN-EN 62040-2:2008		

Notes:

8) Weight for the typical battery.

9) Possibility to change NC to NO configuration using PowerSoft software.

FRONT PANNEL

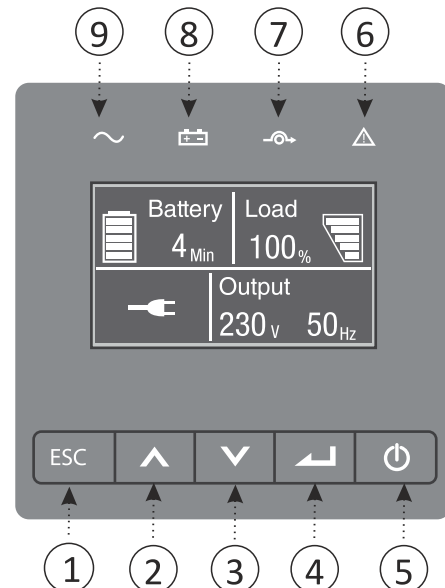


Function buttons

1. Exit the present menu
2. Scroll up
3. Scroll down
4. Enter menu
5. Turn on / Turn off

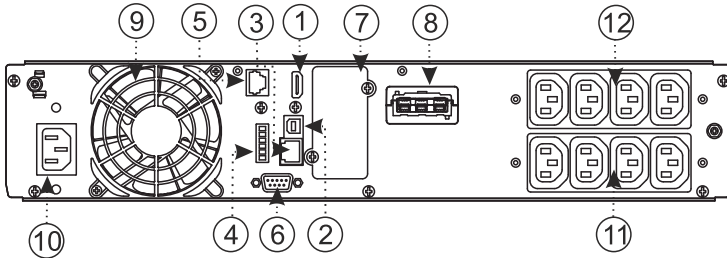
Signaling

6. Fault indicator
7. Bypass mode indicator
8. Battery mode indicator
9. Online mode indicator

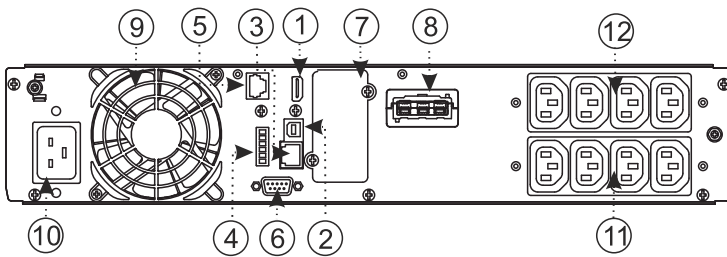




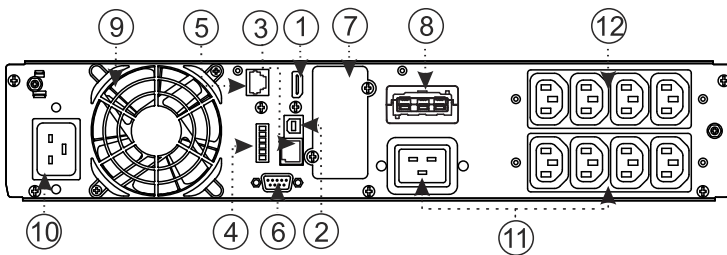
REAR PANEL



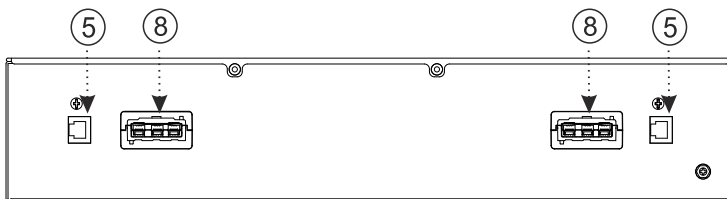
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BATTERY MODULE FOR POWERLINE RT PLUS 1000 / 2000-3000

1. HDMI port for connecting a Wi-Fi wireless adapter (for IoT functions)
2. USB HID communication port
3. RJ45 Ethernet port (for IoT functions)
4. RPO (EPO) / Dry in / Dry out,
5. EBM autodetection (RJ45)
6. RS232 communication port
7. Slot card (network card, dry contacts card),
8. External battery modules connector
9. Fan
10. Input Socket:
 - IEC 320 C14 (10 A)-
POWERLINE RT PRO 1000
 - IEC 320 C20 (16 A)
POWERLINE RT PRO 2000 / 3000
11. Output Socket:
 - IEC 320 C13 (10 A) -POWERLINE RT PRO 1000 / 2000
 - IEC 320 C13 (10A) + IEC 320 C19 (16A)
POWERLINE RT PRO 3000
12. Programmable Output Socket
 - IEC 320 C13 (10 A)