

User Manual · Conqueror Pro Series

EN

On-line double-conversion Uninterruptible Power Supply. This range protects critical equipment against outages, brownouts and mains disturbances, continuously regenerating a clean, stable pure sine wave.

PH 8010
1000 VA / 900 W

PH 8020
2000 VA / 1800 W

PH 8030
3000 VA / 2700 W

Read this manual carefully before installing the equipment and keep it for future reference. Follow all the warnings and instructions given here. Do not operate the UPS without having first read all the safety information.

1. Important safety information

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1.1. Transport

- Always transport the UPS in its original packaging to protect it from knocks and impacts.

1.2. Preparation

- Condensation may form when the UPS is moved from a cold environment to a warm one. Allow the equipment to acclimatise for at least two hours and make sure it is completely dry before installing it.
- Do not install the UPS near water or in damp environments.
- Do not expose it to direct sunlight or place it near heat sources.
- Do not obstruct the UPS ventilation grilles.

1.3. Installation

- Do not connect loads to the UPS output that could overload it (for example, laser printers or hairdryers).
- Route the cables so that they cannot be stepped on or cause tripping.
- Connect the UPS only to an earthed socket-outlet that is easily accessible and close to the equipment.
- Use only VDE- and CE-approved power cables, both for connecting the UPS to the mains (with earth) and for connecting the loads to the UPS.
- Make sure that the combined leakage current of the UPS and the connected equipment does not exceed 3.5 mA.
- This equipment may be operated by anyone; no prior experience is required.

1.4. Operation

- Do not disconnect the UPS power cable: doing so cancels the earth protection of the unit itself and of all its loads.
- The UPS has an internal power source (batteries). Voltage may be present at the output sockets or terminals **even when the UPS is not connected to the mains**.
- To switch the UPS off completely, press the OFF/Enter button.
- Prevent liquids or foreign objects from entering the unit.

1.5. Maintenance and repair

Caution — Risk of electric shock. The UPS works with hazardous voltages. Even when disconnected from the mains, the internal wiring remains connected to the battery and retains a hazardous voltage. Any repair must be carried out exclusively by qualified personnel.

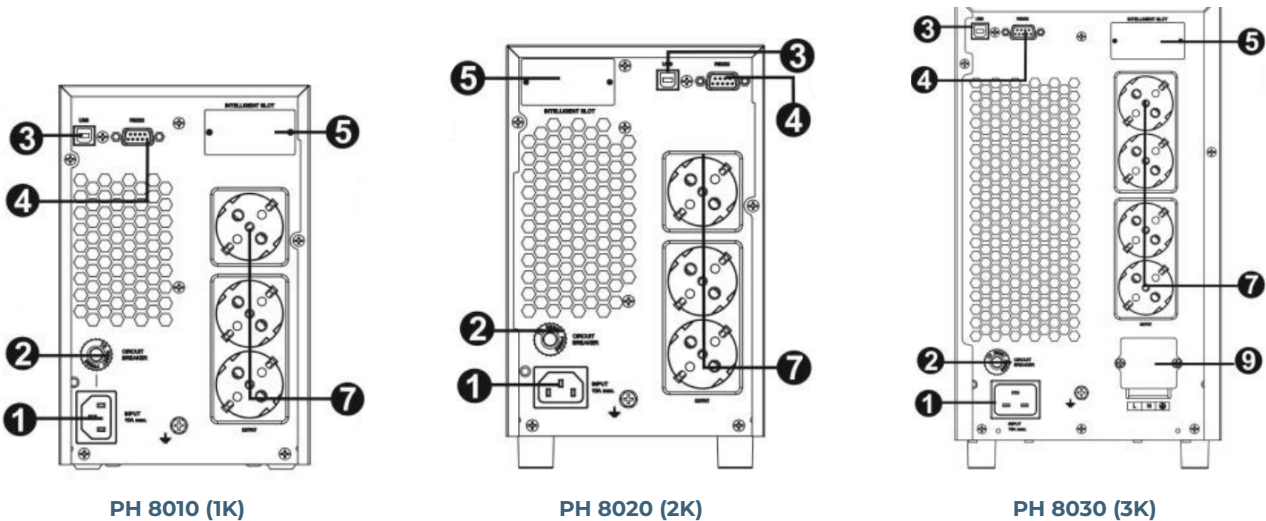
- Before any intervention, disconnect the batteries and confirm that no voltage is present, including any charge stored in the high-capacity capacitors.
- The battery is not isolated from the input circuit: hazardous voltages may exist between the battery terminals and earth. Always confirm the absence of voltage before touching any component.
- Only authorised personnel taking the appropriate precautions should handle or replace the batteries.
- When handling batteries, remove watches, rings and metal objects and use only tools with insulated handles.
- Replace the batteries with others of the **same quantity and type**.
- Do not dispose of the batteries in household waste or burn them: they could explode. Do not open or destroy them; the electrolyte is toxic and harms skin and eyes.
- Replace the fuse only with another of the same type and rating, to avoid a fire hazard.
- Do not dismantle the UPS under any circumstances.

Note: before installation, inspect the unit and check that the contents of the packaging are undamaged. Keep the original packaging in a safe place for future use.

2. Installation and setup

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2.1. Rear panel view



No.	Item	No.	Item
1	AC mains input	6	External battery connection (L model only)
2	Input circuit breaker	7	Output sockets
3	USB communication port	8	Output terminal
4	RS-232 communication port	9	Output circuit breaker
5	SNMP smart slot (optional card)		

2.2. UPS setup

Step 1 • Input connection

- Connect the UPS to a two-pole socket-outlet with three conductors and an earth. Avoid extension leads.
- The input cable is supplied with the equipment.

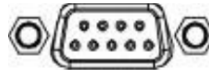
Step 2 • Output connection

- **Socket-type outputs:** connect the devices directly to the socket-outlets.
- **Terminal-type outputs** (models so equipped): remove the terminal-block cover, complete the wiring — AWG14 or 2.1 mm² is recommended for the 3 kVA models—, check that the conductors are securely fastened and refit the cover.

Step 3 • Communication connectors



USB port



RS-232 port



Smart slot

To control the UPS from a PC, connect the communication cable between the computer and the UPS USB or RS-232 port. With the control software installed you can schedule UPS power-on and power-off and monitor its status. The smart slot accepts SNMP cards that add advanced communication and monitoring options.

Note: the USB and RS-232 ports cannot operate simultaneously.

Step 4 • Power on

Press and hold the front-panel ON/Mute button for 2 seconds to switch the UPS on.

Note: the battery charges fully within the first 5 hours of normal operation. Do not run discharge tests during this period and do not expect the rated runtime during the initial charge.

Step 5 • Software installation

For optimal system protection, install the **ViewPower** control software on your PC and set up the safe shutdown of the UPS. You can install it from the supplied CD or download it from:

- <https://phasak.com/viewpower-software/>

Download the version for your operating system and follow the on-screen instructions. After restarting the PC, the ViewPower icon will appear in the notification area, next to the clock.

3. Operation

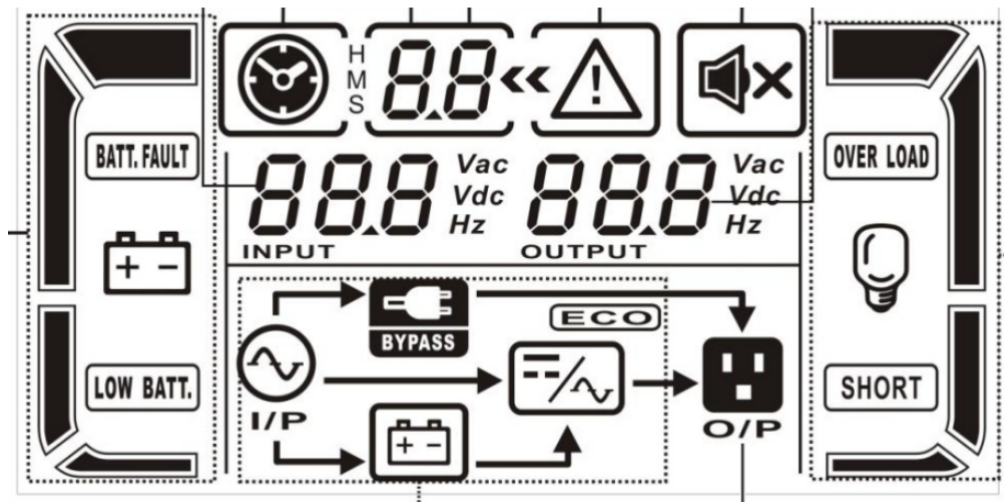
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3.1. Operating buttons

Button	Function
ON/Mute	Hold 2 s: switches the UPS on. In battery mode, hold 5 s to enable or mute the audible alarm (not applicable for faults or warnings). In configuration mode it acts as the «up» key. Hold 5 s in AC/ECO/converter mode to start the self-test.
OFF/Enter	Hold 2 s: switches the UPS off (to standby with normal mains, or to bypass if permitted). In configuration mode it confirms the selection.
Select	Cycles the LCD information (input voltage and frequency, battery voltage, output voltage and frequency); returns to the default view after 10 s. Hold 5 s in standby or bypass to enter configuration mode. In configuration it acts as the «down» key.

Button	Function
ON/Mute + Select	In normal AC mode, hold both for 5 s to switch to bypass mode (not available if the input voltage is out of range).

3.2. LCD panel



Display area	Function
Runtime	Shows the remaining runtime with an analogue or digital clock (H hours / M minutes / S seconds).
Error / warning	Warning triangle and numeric code of the warning or fault (see 3.7 and 3.8).
Alarm muted	The crossed-out speaker icon indicates that the audible alarm is disabled.
Input / output and battery voltage	Shows Vac (voltage), Vdc (battery) and Hz (frequency), in the INPUT and OUTPUT blocks.
Load level	Shows the connected load level (0-25 / 26-50 / 51-75 / 76-100 %), as well as OVER LOAD (overload) and SHORT (short circuit at the output or load).
Battery level	Shows the battery level in the same ranges, plus BATT. FAULT (battery fault) and LOW BATT. (low battery).
Operating mode	Shows the active flow: mains (I/P), battery, bypass, ECO, inverter and output (O/P).

3.3. Audible alarm

Status	Audible signal
Battery mode	One beep every 4 seconds
Low battery	One beep every second
Overload	Two beeps every second
Fault	Continuous tone
Bypass mode	One beep every 10 seconds

3.4. Display indications

Abbreviation	Meaning	Abbreviation	Meaning
ENA	Enabled	BAT	Battery
DIS	Disabled	CF	Converter
ESC	Exit	TP	Temperature
HLS	High voltage loss	CH	Battery charging
LLS	Low voltage loss	FU	Unstable bypass frequency
EE	EEPROM error		

3.5. UPS configuration menu

With the UPS in standby or bypass, press and hold **Select** for 5 seconds to enter the menu. Use ON/Mute (up) and Select (down) to navigate and OFF/Enter to confirm.

No.	Parameter	Options / default value
01	Output voltage	200 / 208 / 220 / 230 / 240 Vac — default 230 Vac.
02	Frequency converter	CF ENA (enabled) / DIS CF (disabled) — default disabled.
03	Output frequency	In battery mode: BAT 50 / BAT 60 Hz. In converter mode: CF 50 / CF 60 Hz.
04	ECO mode	ENA / DIS — default disabled.
05	ECO voltage range	HLS (high limit): +7 V to +24 V (default +12 V). LLS (low limit): -7 V to -24 V (default -12 V), relative to the nominal voltage.
06	Bypass with UPS off	ENA / DIS — default disabled.
07	Bypass voltage range	HLS: 230-264 Vac (default 264). LLS: 170-220 Vac (default 170).
08	Runtime limit	0-999 min for the general sockets in battery mode. «0» = only 10 s of backup; «999» = limit disabled (default).
00	Exit configuration	—

3.6. Operating modes

Mode	Description
Online	With the input voltage within range, the UPS delivers a clean, stable AC output and, at the same time, charges the battery.
ECO (saving)	With the input voltage within range, the UPS runs in bypass and delivers the same input voltage to save energy.
Frequency conversion	With the input frequency between 40 and 70 Hz, the UPS can deliver a constant output frequency of 50 or 60 Hz. In this mode it continues to charge the battery.
Battery	If the input voltage goes out of range or there is a power cut, the UPS supplies the load from the battery and beeps every 4 s, until the runtime is exhausted.
Bypass	With acceptable input voltage but the UPS overloaded (or set this way), the load is supplied directly from the mains through the bypass. The UPS beeps every 10 s.
Standby	With the UPS off, the output is not powered but the battery continues to charge.

3.7. Fault codes

No.	Fault cause	No.	Fault cause
01	Does not switch on	13	Low inverter voltage
02	High input voltage	14	Inverter output short circuit (SHORT)
03	Low input voltage	27	High battery voltage (BATT. FAULT)
04	Unbalanced input	28	Low battery voltage (BATT. FAULT)
11	Inverter start-up error	41	Overheating
12	High inverter voltage	43	Overload (OVER LOAD)

3.8. Warning indicators

Warning	Icon	Alarm
Low battery	LOW BATT. + Δ	One beep every second
Overload	OVER LOAD + Δ	Two beeps every second
Battery not connected	Δ + battery icon	One beep every second
UPS overloaded	Δ + load level	One beep every second
Battery fault	BATT. FAULT + Δ	One beep every second
Unstable bypass frequency	FU + Δ	One beep every second
EEPROM error	EE + Δ	One beep every second
Overheating	tP + Δ	One beep every second
Battery charging error	CH + Δ	One beep every second
Out of bypass voltage range	Δ + bypass	One beep every second

4. Troubleshooting

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If the UPS does not work correctly, use the table below before contacting the support service.

Symptom	Probable cause	Solution
No indication or alarm, even with normal mains.	The mains input is not properly connected.	Check that the input cable is connected to the mains.
	The mains is connected to the UPS output.	Connect the input cable to the UPS AC input.
Δ and battery icon flash; alarm every second.	The batteries (internal or external) are not properly connected.	Check that all batteries are properly connected.
Code 27; BATT. FAULT flashes; continuous alarm.	Battery voltage too high or charger failure.	Contact the support service.
Code 28; BATT. FAULT flashes; continuous alarm.	Battery voltage too low or charger failure.	Contact the support service.

Symptom	Probable cause	Solution
⚠ and OVER LOAD flash; alarm twice per second.	The UPS is overloaded; the loads are supplied from the mains through bypass. After repeated overloads it may lock in bypass.	Remove the excess load connected to the UPS; then switch the unit off and restart it.
Code 43; OVER LOAD flashes; continuous alarm.	The UPS has switched off due to output overload.	Remove the excess load, switch the UPS off and restart it.
Code 14; SHORT flashes; continuous alarm.	The UPS has switched off due to a short circuit at the output.	Check the wiring and whether the connected loads are short-circuited.
Codes 1, 2, 3, 4, 11, 12, 13 or 41; continuous alarm.	Internal UPS fault.	Contact the support service.
Runtime is shorter than rated.	The battery is not fully charged, or is damaged.	Charge the battery for at least 5 h and check again. If it persists, contact the support service to replace it.

5. Storage and maintenance

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The UPS contains non-reusable parts. The battery has a service life of **3 to 5 years** at an ambient temperature of 25 °C. When it needs replacing, contact the support service. Always hand the used battery in at an authorised recycling point.

If you are going to store the equipment, first charge the battery for 5 hours and keep the UPS protected, in an upright position and in a cool, dry place. During storage, recharge the battery according to this table:

Storage temperature	Recharge frequency	Charge duration
-25 °C to 40 °C	Every 3 months	1-2 hours
40 °C to 45 °C	Every 2 months	1-2 hours

6. Technical specifications

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Reference	PH 8010	PH 8020	PH 8030
Power	1000 VA / 900 W	2000 VA / 1800 W	3000 VA / 2700 W
Phase	Single phase with earth		
Input			
Nominal voltage	208 / 220 / 230 / 240 Vac		
Voltage range	120-300 Vac (50 % bat.) ~ 180-300 Vac (100 % bat.)		
Frequency	40 Hz ~ 70 Hz		
Power factor	≥ 0.99 at nominal voltage (100 % load)		
Output			
Nominal voltage	208 / 220 / 230 / 240 Vac ± 1 %		
Frequency (synchronised)	57 ~ 63 Hz		
Frequency (battery)	60 Hz ± 0.5 Hz		

Reference	PH 8010	PH 8020	PH 8030
Crest factor	3:1		
Harmonic distortion	≤ 3 % THD (linear load) · ≤ 6 % THD (non-linear load)		
Waveform (battery)	Pure sine wave		
Transfer time AC → DC / inverter-bypass	Zero / 4 ms		
Efficiency AC / battery	88 % / 83 %	89 % / 85 %	90 % / 88 %
Battery			
Battery voltage	12 V	12 V	12 V
Battery type	9 Ah	9 Ah	9 Ah
Battery quantity	2	4	6
Charge time (90 %)	4 h	4 h	4 h
Properties			
Dimensions W × H × D (mm)	282 × 145 × 220	397 × 145 × 220	421 × 190 × 318
Weight (kg)	9.8	17	27.6
Environment			
Humidity / temperature	0 ~ 50 % RH non-condensing		
Noise level	< 50 dBA at 1 m		
Management			
Smart RS-232 / USB	Windows 2000/2003/XP/Vista/2008/7/8, Linux, Unix, Mac		
SNMP (optional)	Power management via SNMP manager and web browser		

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