

PROTECT D^{LI-ION}

Single phase in/out UPS system

1000 – 3000 VA power supply
with integrated lithium-ion batteries



Efficient high-performance UPS

With a high power factor of 1 the Protect D series exceeds the power of conventional UPS systems by 10%. Efficiency is significantly increased during normal operation as well as in the energy-efficient ECO operating modes.

Compact and flexible

The height of the UPS electronics and battery together is only 2 U. The autonomy times can be increased with additional battery packs; connected battery packs are automatically detected. Our advanced battery charging technology allows for short charging times and battery-preserving charging characteristics at the same time.

A real-time event logger ensures careful observation and analysis of events as they occur. In addition, a regular automated battery test can be planned.

Typical applications

- IT rooms and other rack applications
- Industry 4.0
- Edge Computing
- IoT

FEATURES

- VFI topology (online/double conversion) protects against all network problems
- Maximum output power factor is 1, VA=W
- Level 3 built-in lithium battery connection, synchronization with UPS (SOC, SOH, behavior, external balancing)
- Compact design: 2U UPS + 1U per battery
- Long backup time with up to 4 optional battery packs and automatic detection
- Rack/tower dual set-up with rotatable LCD panel
- USB, RS232 port, dry contacts, RPO & ROO connectors, optional SNMP/Modbus
- Maintenance bypass accessory with load segment control
- Certification: UN38.3, UL1973, IEC62019, CE, IEC62040

BENEFITS

- Wide capacity range from 1 kVA to 3 kVA including internal battery and up to 4 additional external battery packs
- Extended battery lifetime thanks to lithium-ion technology, lower TCO than lead-acid solutions
- The UPS comes with advanced monitoring and management capabilities, enabling real-time visibility into power usage, battery health, and performance statistics
- Advanced fault detection mechanisms, ensuring early identification of potential issues and preemptive actions to prevent downtime.
- May also be used as a frequency converter
- Usable as rack or tower version

Specifications

PROTECT D 1000 LI-ION, D 1500 LI-ION, D 2000 LI-ION, D 3000 LI-ION				
CLASSIFICATION VFI SS ACC. TO IEC 62040-3	D 1000 LI-ION	D 1500 LI-ION	D 2000 LI-ION	D 3000 LI-ION
Power type rating	1000 VA	1500 VA	2000 VA	3000 VA
	1000 W	1500 W	2000 W	3000 W
Part number UPS	300 05 308	300 02 309	300 05 310	300 05 321
Part number battery pack	300 05 322		300 05 323	
UPS INPUT				
Input voltage	110-300 VAC			
Frequency	45-55 Hz / 54-66 Hz			
Input power factor / (THDi)	0.99 (THDi < 5%)			
Current consumption at nominal load (max.)	5 A	7 A	9 A	14 A
UPS OUTPUT				
Rated output voltage (adjustable)	200 VAC / 208 VAC / 220 VAC / 230 VAC (default) / 240 VAC ± 1%			
Frequency in battery / frequency converter mode	50 Hz / 60 Hz ± 0.2 Hz			
Nominal output current (at 230 VAC)	4.3 A	6.5 A	8.7 A	13 A
Transfer time at mains outage	0 ms			
Voltage waveform	Pure Sine Wave, distortion THDv < 1% @ linear load and < 5% @ non-linear load			
Overload response (double conversion mode)	105 – 125 % for 5 min / 125% – 150% for 30 s / > 150% for 500 ms			
Crest factor	3 : 1			
Short circuit response	Inverter limits the current within 100ms			
BATTERY				
Type	Li-Ion (LiFePo4), integrated, hot swappable, 8-10 years service life			
Rated voltage	48 VDC		76.8 VDC	
Battery management	SOC and SOH prediction, multi-level protection, automatic battery capacity test			
Battery packs (external)	up to 4 units, 1U each			
Backup time in minutes (internal battery) full / half load	10 / 20	10 / 15	13 / 25	10 / 20
Backup time in minutes (external battery) full / half load	34 / 66	25 / 49	32 / 63	22 / 45
COMMUNICATION				
Interfaces (dual monitoring)	RS232, USB HID, communication slot (can be used in parallel with RS232 / USB), Ethernet port, Input contact for emergency shutdown, programmable dry in and out contact			
Shutdown software	CompuWatch incl. 5 network licenses for all common OS			
Failure indication (acoustic / visual)	Failure indicators (acoustic / visual), detailed indication via LCD display (alarms: at mains failure, overload, battery charging, battery replacement, fan fault, event data log – with clear text display incl. date and time history)			
GENERAL DATA				
Efficiency (ECO mode)	96%		97%	
Efficiency at nominal load (double conversion mode)	89%		93%	
Audible noise (1m distance)	<40 dB(A)		<45 dB(A)	
Operating temperature range	0 – 40 °C			
Humidity	0 – 95 % (without condensation)			
Operation altitude	Up to 1000 m (without derating), up to 3000 m			
EMC conformity	EN 62040-2 Class C1, EN 61000-3-2, EN 61000-3-3			
Product safety	IEC 60950-1 / IEC 62040-1-1			
Number of outputs (switchable)	8 x IEC 320 C13		8 x IEC 320 C13	8 x IEC 320 C13 + 1 x IEC 320 C19
Dimensions approx. W x H x D (mm) UPS	438 (19") x 85.5 (2 U) x 445		438 (19") x 85.5 (2 U) x 608	
Dimensions approx. W x H x D (mm) battery	439 (19") x 43 (1 U) x 445		439 (19") x 43 (1 U) x 608	
Weight approx. UPS incl. integrated battery	15.5 kg	16 kg	22 kg	23 kg
Weight approx. battery extension unit	12 kg	12 kg	17.5 kg	17.5 kg
Shipment	Mains input cord (EU), communications USB cable, operating & safety instructions, 2 x IEC device connection cables, rack mounting brackets, tower base feet			
Conformity	CE; IEC 62040			

AEG Power Solutions

Approach your local AEG Power Solutions representative for further support. Contact details can be found on: www.aegps.com