

PROTECT^{PLUS} M600 Advanced version

Modular 3-phase UPS
30 – 900 kVA



Compatible with LI-ION



Protect^{PLUS} M600 is a modular UPS system that combines high AC/AC efficiency values with a compact footprint and a flexible and scalable architecture.

Thanks to modularity and to its hot-swappable functionality, Protect Plus M600 can start with a basic configuration of just 30 kVA up to 900 kVA.

Protect^{PLUS} M600 models offer input PF > 0.99 and input THDi < 3 %, even when a low percentage of load is applied. The system can reach the highest AC/AC efficiency levels available, up to 99 % in ECO Mode.

The flat efficiency curve from 35 % of load will ensure maximum energy savings at every percentage of load.

Typical applications

For this UPS the typical market applications are:

- Data centers
- Transportation
- Retail and light industrial applications

As well as all other critical applications where power reliability is essential and power consumption is also a key factor.

FEATURES

- Double conversion (VFI-SS-11)
- Transformer-less architecture: lower space and weight
- Excellent power capability, up to 900 kVA without additional tools
- 30 kVA hot-swappable power modules for predictive power management and lowest MTTR
- AC/AC Efficiency in double conversion up to 95 %
- ECO Mode, up to 99 % efficiency
- Idle Mode
- Output PF = 1
- 10.4" color Touch Screen
- Intelligent and innovative Self Aging Test

BENEFITS

- **High efficiency** leads to lowest cost of ownership of its category
- **Unity output PF:** 1 kVA = 1 kW
- **Scalability** optimizing CAPEX and limiting OPEX
- **Modular and scalable architecture** to maximize savings in terms of footprint (m²), installed power (kVA), electrical system (cabling and protection devices), availability and reliability (MTTR and MTBF), power management (kW vs cost)
- **Hot swappable power modules** for predictive power management and lowest MTTR rate
- **Independent hardware and controllability** for each power module, able to operate and coordinate with others within the system
- **Control of power modules** connected in parallel decentralized in the single 30 kVA frame

Specifications

M600 FRAME	180 kVA advanced	300 kVA advanced	600 kVA advanced
Article number	30005008	30007560	30007573
Rated power (kVA / kW)	180	300	600
Maximum number of power modules connected	6	10	20
Parallel operation	Up to 3 frames		not supported
Dimensions W x D x H (mm)	600 x 1100 x 1600	600 x 1100 x 2000	2000 x 1050 x 2000
Classification	VFI-SS-11		
Weight (kg)	165	220	660
Color of the frame	RAL 7021		
IP protection degree	IP20		
POWER MODULE			
Article number	30005007		
Dimensions W x D x H (mm) / Weight (kg)	460 x 790 x 134 / 34		
Rated power (kVA / kW)	30		
CHARGING MODULE			
Article number	30000498		
Dimensions W x D x H (mm) / Weight (kg)	460 x 790 x 134 / 34		
Charging current (A)	50 A @ 480 VDC (adjustable range 1-50 A)		
MAINS INPUT LINE (RECTIFIER)			
Phases	3 Ph + N + G		
Rated input voltage (V)	380 / 400 / 415		
Voltage range (V) (ph-n / ph-ph)	304 to 478 full load, 228 to 304 reduced load		
Frequency (Hz)	50 / 60		
Frequency range (Hz)	40 ÷ 70		
Input power factor	0,99 (100 % rated resistive load, rated voltage and frequency)		
Input THDi	< 3% (full linear load)		
OUTPUT LINE (INVERTER)			
Rated output voltage (V) (ph-n / ph-ph)	380 / 400 / 415		
Rated output frequency (Hz)	50 / 60		
Phases	3 Ph + N		
Output THDv (according to IEC EN 62040 – 3)	< 1% (linear load), < 5,5% (non-linear load)		
Output power factor	1		
Overload capacity through inverter line (online mode)	110 %, 60 min, 125 %, 10 min, 150 %, 1 min, > 150 %, 200 ms		
EFFICIENCY			
Online mode (VFI)	95 %		
Battery mode	95 %		
ECO mode	up to 99 %		
BATTERY LINE			
Nominal DC voltage (V)	480 (± 240)		
Number of batteries in series	40 default (settable in range 32 ÷ 44)		
Temperature compensations (mv/ cell / °C)	-3.0 (selectable: 0 to -5.0)		
USER INTERFACE AND COMMUNICATIONS			
Display	10,4" LCD + LED, Color touch screen + Keyboard		
Standard communication ports	RS232; RS485, Dry contacts, USB		
Optional connectivity cards	SNMP, Expansion Dry contact card		
ENVIRONMENT			
Operating temperature (° C)	0 ÷ 40		
Storage temperature (° C)	- 40 ÷ 70		
Relative humidity	0 % ÷ 95 % (non-condensing)		
Noise at 1 m distance (dB)	< 65dB (@ 100% load), < 62dB (@ 45% load)		
STANDARDS AND CERTIFICATIONS			
Safety, EMC, testing and performance	IEC EN 62040 – 1, IEC EN 62040 – 2, IEC EN 62040 – 3		

AEG Power Solutions

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