AEG

POWER SOLUTIONS

PROTECTPLUS S300

3/3 transformer-less IGBT based UPS
From 10 to 200 kVA
Performance, compactness and reliability

ProtectPLUS S300 is the new transformer-less UPS from AEG Power Solutions. Thanks to the high AC/AC efficiency values (> 95,6 % in double conversion and up to 98 % in Eco Mode), the flexibility in all its configurations as well as the wide range of available options, it is the ideal solution for small and medium sized critical applications where power consumption, space and system reliability are key parameters.

The combination of high-level performance, with integrated battery solutions, or (as an alternative), the inbuilt galvanic isolation, the compact footprint and the wide range of options make ProtectPLUS S300 the best solution for the power quality of any critical load.

Typical applications

- IT
- Industry 4.0
- Finance and retail
- Healthcare
- Transportation

FEATURES

The UPS is based on a highly efficient transformer-less double conversion technology, ensuring the lowest OPEX on the market in its category. Best in class for energy consumption; the system has a very low Total Cost of Ownership (TCO).

- Compact foot-print, with integrated batteries or isolation transformer up to 80 kVA
- 3-level IGBT technology
- Transformer-less architecture
- AC/AC efficiency up to 95.6 % (VFI) and 98 % in VFD*
- Input PF > 0.99 and THDi < 3 %*
- Output PF up to unity (without derating)
- Up to 8 units in parallel connection
- Static and maintenance bypass switches included
- Back-feed protection included
- Cold start (battery start) function
- 4.3" touch screen display
- Wide range of options

BENEFITS

- **Easy installation, operation and maintenance:** all models have front access, for easy maintenance or inspection.
- **Maximized savings** in terms of footprint (m^2), power installed (kVA), electrical system (cabling and protection devices), security (MTTR and MTBF) and power management (kW and cost).
- **Easy upgradeable architecture** with reduced CAPEX and optimized OPEX. ProtectPLUS S300 offers a low input THDi and almost unity input PF, even when a low percentage of load is applied: no additional power-consuming filter.
- **Wide range of options** such as a load-synchronization tool, top cable entry, up to IP41 protection degree, battery temperature probes as well as all connectivity devices (SNMP, Modbus, RS232).
- **4.3" touch screen display:** all the main parameters of the UPS are always under control.

* Conditions apply

Specifications

POWER RATING MODEL (KVA)	10	15	20	30	40	60	80	100	120	160	200
Nominal active power up to 40 °C (kW)	9	13.5	18	27	36	54	72	100	120	160	200
Dimensions W x D x H (mm)	400 x 815 x 1040				515 x 855 x 1440			475 x 890 x 1440			
Weight without batteries/transformer (kg)	87	87	91	100	173	197	209	210	220	262	270
MAINS INPUT LINE (RECTIFIER)											
Phase	3Ph + N + G										
Nominal voltage (V)	380 / 400 / 415										
Voltage range (V)	-20 % / +15 %										
Frequency (Hz)	50 / 60										
Frequency range (Hz)	40 – 70										
Power factor	> 0.99										
Input THDi (at rated voltage and THDv <0.5 %)	< 3 % (with full linear load)										
BYPASS INPUT LINE											
Nominal bypass input voltage (V)	380 / 400 / 415										
Bypass input voltage range	± 20 % (with full load)										
Bypass input frequency (Hz)	50/60										
Bypass frequency range (Hz)	Nominal: ± 3 % (adjustable)										
Overload capacity through bypass line	Up to 150 % continuously Up to 180 % @ 1 min Up to 1000 % @ 100 ms										
OUTPUT LINE (INVERTER)											
Voltage (V)	380 / 400 / 415										
Output THDv (according to IEC EN 62040-3)	< 2 % (with linear load); < 5 % (with non linear load)										
Transient response	± 2 % for dynamic step load (20 % – 100 % – 20 %)										
Transient recovery (after step load)	< 20 ms										
Output PF (up to 40 °C)	Up to 0.9							Up to 1			
Crest factor	3:1										
Frequency (Hz)	50 / 60										
Slew rate (Hz/s)	0.5 to 5 (adjustable)										
Overload capacity through inverter line	Up to 105 % for long time operation < 110 % with transfer to bypass after 60 minutes < 125 % with transfer to bypass after 10 minutes < 150 % with transfer to bypass after 60 seconds > 150 % with transfer to bypass after 100 ms										
Short circuit current (through inverter line)	> 180 % with output VAC < 22 V rms (O/P current is limited for max. 180 ms; if continues, the UPS will shut down)										
AC/AC efficiency in VFI @ nominal linear load	> 93.0 %	> 93.0 %	> 93.0 %	> 93.3 %	> 93.3 %	> 94.5%	> 94.8 %	> 94.8 %	> 95.6 %	> 94.5 %	> 95.3 %
AC/AC efficiency in VFD	> 98 % (at nominal load)										
BATTERY LINE											
Nominal DC voltage (VDC)	± 360 (with + / N / - connections)										
Quantity of lead acid batteries (12 V each)	60 (settable from 60 to 64 blocks)										
Recharge power	20 % of nominal power										
USER INTERFACE											
Display	LCD Touch Screen Display (4.3")										
Standard communication ports	RS232, USB										
Optional communication ports	SNMP, dry contact relay card, Modbus										
GENERAL											
Protection degree	IP20 (standard); other values upon request (up to IP41)										
Color	RAL 9005										
Operating temperature (°C)	0 to 40										
Storage temperature (°C)	-15 to 70										
Relative humidity	0 to 95 %										
Altitude (above sea level) (m)	< 1000 (with power derating of 0.5 % every 100 m up to 3000 m, according to IEC EN 62040-3)										
Noise at 1 m distance (dB)	< 57				< 62			< 64		< 68	
STANDARDS AND CERTIFICATIONS											
Marking and certifications	CE										
Safety	IEC EN 62040-1										
EMC	IEC EN 62040-2										
Test and performance	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