

AEG

Power supply systems

PROTECT 2.33

UPS designed for the future
ideal for mission-critical applications
10-40 kVA; 3-phases



Built on tomorrow's security today

As a future-secure UPS, the new PROTECT 2. draws such pure sine wave current that is well below the limits acc. to IEC / EN 61000-3-12 by far. And that is notably PROTECT 2. is ready now for tomorrow's power sources, such as: fuel cells, Super-Caps, micro turbines, flywheels,...

Nothing but the best in online technology

Due to its proven double conversion technology (true online technology), the PROTECT 2. output voltage tolerances are given a triple first-class rating: VFI SS 111.

Because of its excellent scalability - the PROTECT 2. can be configured up to 8 units in parallel - it is ideally suited to meet future increases in power requirements or for use in a N+1 configuration to meet higher availability requirements.

Even single units achieve a remarkable high level of security through "internal redundancy". Since it is 100 % digital, the unit is very robust against EMI influences and meets industrial standards.

Make a big cut in your operational costs now - components in the PROTECT 2. UPS have been selected on the basis of "long-life-design".

The active rectifier reduces power consumption by 20 % → less installation & cabling and smaller GenSet units - 40 % less space requirement - easy to maintain construction.

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Uniquely innovative

AEG's exclusive **Battery Management (AeBM)** that ensures gentle, yet truly balanced battery charging (Ah), and does this while positively preventing over or under charging. The battery will be recharged by the primary rectifier in a quick and temperature compensated manner - in other words, optimally. Two battery tests and a capacity test complete the **AeBM** concept. These precisely tuned and complementary functions provide perfect care for the battery - to assure their maximum service life.

Communication

PROTECT 2. is 100 % digital and that's why communicative, i.e. all captured values can be displayed, either directly on the screen or at any other location of your choice via modem. The **CompuWatch** (high performance UPS management and shutdown software) package makes the central management of networks possible on the basis of any operating system. The alarm management system allows UPS units and systems to be monitored on-site or remotely via telephone lines.

Key features

- **Integrated Battery**
- **Real online technology VFI SS 111**, triple first-class
- **Active rectifier with sine wave input current**, better than IEC / EN 61000-3-12
- **Low operating costs**, 20 % lower input power
- **Future-secure UPS**: prepared for new energy sources
- **Excellent 99.999 % availability** in N+1 configuration
- **Unique AeBM battery management system** that maintains the battery
- **Automatic shutdown and reboot features** for all EDP systems
- **Battery test with feedback to the mains**
- **CE - compliant**

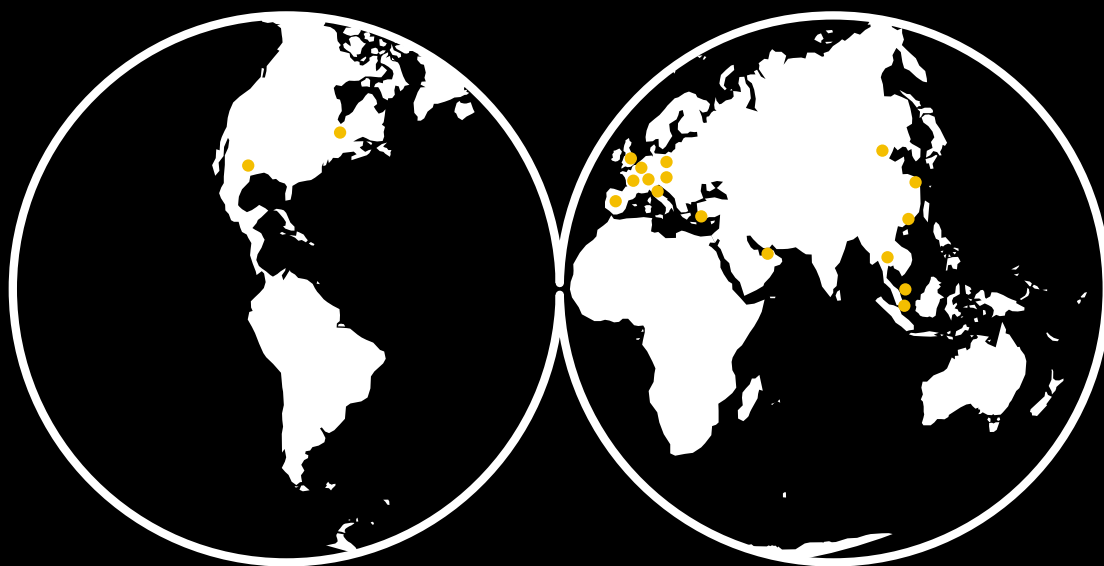
SPECIFICATION

Type power at cos ϕ 0,8 lag. in kVA	10	20	30	40
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RECTIFIER UNIT

Nominal voltage in V	3 x 400			
Operating range min./max. in V	340 / 460			
Frequency in Hz	45 - 66			
Input current in A at nominal load	13	26	39	52
Input current in A at nominal load + battery charging	15	30	45	60
Charging characteristic acc. IEC 478-10	IU			
Nominal DC voltage	264 / 456	264 / 456	384 / 456	384 / 456
Max. charging voltage in V	547			
Total harmonic distortion standard / option (pulse)	sinus			

Type power at cos φ 0,8 lag. in kVA	10	20	30	40
INVERTER UNIT				
Nominal DC voltage min./max. in V	211 / 547	211 / 547	307 / 547	307 / 547
Nominal AC voltage in V	3 x 400			
Adjustable min./max. in V	380 / 415			
Static response	< $\pm$ 1 %			
Dynamic response	< $\pm$ 5 %			
Correction time	2 ms			
Frequency in Hz	50 / 60			
Frequency tolerance without mains	$\pm$ 0,1 %			
Frequency synchronisation range	$\pm$ 1 %			
Power factor range cos φ	cap-1-ind			
Output phase current in A	14	29	43	58
Voltage wave form	sinus			
Voltage distortion	$\leq$ 3 %			
Crest factor	max. 3			
Overload response for 1 min.	150 %			
Overload response for 10 min.	125 %			
Short circuit response of I_{nom} typical	270 %			
STATIC BYPASS SWITCH				
AC voltage min. / nominal / max. in V	3 x 380 / 400 / 415			
Frequency in Hz	50 / 60			
Nominal power in kVA	10	20	30	40
Overload	500 %			
GENERAL DATA				
Autonomy-time at full load	10 min	10 min	12 min	7,5 min
Autonomy-time at half load	25 min	30 min	35 min	22 min
Efficiency total up to	91 %			
Noise level in dB(A) depending on type	> 65			
EMC compatibility acc. EN 60040-2	C 2			
Air cooling with redundant / monitored fans	yes			
Operating-temperature range min. / max. in $^{\circ}\text{C}$	- 5 / + 40			
Storage-temperature range min. / max. in $^{\circ}\text{C}$	- 30 / + 75			
Installation height NN	1000 m			
Protection degree acc. IEC 529 / EN 60529	IP20			
Equipment colour	RAL 7032			
DIMENSIONS				
Height standard device in mm	1510	1510	1910	1910
Height with max. options in mm	1615	1615	2015	2015
Width in mm	600	600	600	600
Depth in mm	860	860	860	860
Weight in kg	240 kg w/o Battery / 490 kg with Batt. 320 kg w/o Battery / 720 kg with Batt.			



Power Systems

Whenever wherever whatever

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Saft power systems

Harmer+Simmons

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