

PROTECT 1.M

SINGLE OR THREE PHASE INPUT /
SINGLE PHASE OUTPUT UPS SYSTEM

Uninterruptible Power Supply

1- or 3-Phase Input; 1-Phase Output

4 – 24 kVA power supply



Modular high-performance UPS for the IT sector

Protect 1.M is a UPS system with maximum reliability and power. The VFI topology of Protect 1.M protects its systems reliably against all network problems.

Modular structure

The compact module structure of Protect 1.M allows you to flexibly upgrade the UPS power up to 24 kVA. The individual 4 kVA modules are hot-swappable, connected modules are automatically detected.

In this way, you can perform system extensions during runtime.

Each individual module is a separate UPS and works independently of a central control mechanism.

Intelligent control and monitoring

The powerful communication module of Protect 1.M collects information from the self-sufficient UPS modules. The clearly designed screen informs you about all important operating conditions.

You can also retrieve and control all technical parameters with the included AEG software "CompuWatch".

Main characteristics

- » High power reserves through a total performance of max. 24 kVA
- » Wide security margins through n+x technology
- » Static bypass switch (SBS) and foolproof maintenance bypass
- » 3- or 1-phase connection of the entire installation with an automated detector, 1-phase output
- » Long autonomy periods available in case of power failure
- » Battery cabinets in the Protect 1.M range supplied with 10- to 12-year battery life according to EUROBAT
- » Intelligent battery management
- » Hot-swappable module for easy replacement during operation
- » Module structure to be plugged into a compact tower, assembly in 19" rack possible
- » Communication module with LCD, "Dual Monitoring" interface with expansion slot

Classification VFI SS 111 acc. to IEC 62040-3	Protect 1.040	Protect 1.M
Power type rating	UPS Module	System cabinet (max. 6 x 4 kVA)
	4 kVA	24 kVA
	2.8 kW	16.8 kW
	n+x technology	
Part number	600 000 3928	600 000 3930
UPS INPUT		
Input voltage (auto. detection)	230 V AC (1 ph~/N/PE) or 400 / 230 V AC (3 ph~/N/PE)	
Voltage range without battery mode	160 – 300 V AC (1 ph~) or 277 – 520 V AC (3 ph~)	
Frequency	50 Hz / 60 Hz ±4 Hz	
Current consumption (max.)	22 A (1 ph~) or 7.3 A (3 ph~)	132 A (1 ph~) or 44 A (3 ph~)
Power factor	$\lambda \geq 0.98$	
UPS OUTPUT		
Rated output voltage (adjustable)	220 V AC / 230 V AC / 240 V AC ±2 %	
Frequency in battery mode	50 Hz / 60 Hz ±0.2 Hz	
Output current	17.4 A	104.4 A
Transfer time at mains outage	0 ms (without interruption)	
Voltage waveform	Sinusoidal, distortion THD <3 %	
Overload response (online mode)	125 % for 30 s / 130 % for 2 s, then automatic transfer to bypass mode: 0 ms (without interruption)	
Crest factor	3 : 1	
Short circuit response	Short circuit proof (3 x I _n for 100 ms)	
BATTERY		
Rated voltage (linked)	120 V DC	
Charging characteristics	IU – characteristic curve (charging voltage 137 V DC / charging current max. 3.5 A/ module)	
Autonomy time	Freely selectable and expandable with external battery modules (available modules with 28, 42 or 65 Ah) Service life: 10 – 12 years acc. to EUROBAT	
Overload/ deep discharge protection	Yes	
COMMUNICATION		
Interfaces (dual monitoring)	RS232 / RS485 (with status display and data values) communication slot (for potential free contacts, SNMP)	
Shutdown software (on CD)	5 network licenses for all common OS (e.g. Windows, Linux, Mac, Unix, Sun etc.)	
Failure indicators (acoustic/visual)	Graphical LCD display with digital display of the input and output parameters (voltage, frequency, capacity etc.), battery parameters incl. password protected detailed failure diagnostics, LED display for status notification / central failure display	
GENERAL DATA		
Efficiency AC – AC (at nominal load)	>89 %	>88 %
Audible noise (1 m distance)	<55 dB (A)	<62 dB(A)
Operating temperature range	0° – 40°C	
Humidity	20 % – 90 %	
Operation altitude	Up to 1000 m at nominal load	
EMC conformity	EN 62040-2 Class C3	
Product safety	EN 62040-1	
Equipment color	Blackline	
Dimensions approx. W x H x D (mm) UPS	442 x 965 x 700 (chassis) / module each: 405 x 87 x 530	
Dimensions approx. W x H x D (mm) battery extension unit	442 x 965 x 700	
Weight approx. UPS	75 kg (chassis) + 15 kg per module	
Weight approx. battery cabinet	1.M BP28: 160 kg, 1.M BP42: 200 kg, 1.M BP56: 255 kg, 1.M BP65: 270 kg, 1.M BP84: 335 kg	
Shipment	Communications cable, UPS management- software "CompuWatch" (CD), operating instructions	
Conformity	CE	

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AEG Power Solutions

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

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