

Performance UPS BROCHURE

JUNHO 2013

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PROTECT 1.

THREE PHASE INPUT /
SINGLE PHASE OUTPUT UPS SYSTEM

Uninterruptible Power Supply

3-Phase Input; 1-Phase Output

10 – 20 kVA power supply



Online UPS systems for networks and data centers

Protect 1. offers you a high-power UPS system for all critical business applications. Among other fields of use, Protect 1. is suitable for networks, data centers, cash desk systems or building technology.

The VFI topology of Protect 1. protects reliably against all network problems.

Switchable in parallel

A compact parallel switch panel ensures the flexible and easy development of a parallel system.

Up to 3 devices can be switched in parallel. Hence, a power increase up to 60 kVA is possible in addition to the combination of power improvement and redundancy.

Control and monitoring

The clearly structured screen provides detailed information on all important operating conditions and events.

Data is transmitted through an RS232 interface.

With the extension slot, devices such as SNMP (PRO) adapter cards or potential-free contacts can be retrofitted. This supports remote monitoring via web browser and multi-server shutdown.

The special AEG shutdown software "CompuWatch" is included.

Main characteristics

- » VFI topology (online/double conversion) protects against all network problems
- » Static bypass switch (SBS) and foolproof maintenance bypass
- » 10, 15 or 20 kVA with space-efficient, modern design
- » n+x technology for active redundancy and/or performance increase
- » Performance increase up to 60 kVA through parallel operation of up to 3 devices
- » RS232 interface, extension slot e.g. for SNMP adapter card
- » Battery systems with an expected lifespan of 10–12 years, according to EUROBAT, are available
- » State-of-the-art technology for maximum reliability (DSP, CAN-Bus) and maximum efficiency (high-frequency IGBT)
- » 36-month warranty with replacement service in advance (free registration required)

Classification VFI SS 111 acc. to IEC 62040-3	Protect. 1.100	Protect. 1.150	Protect. 1.200
n+x - technology scalable (parallel switching capacity up to 3 units)			
Power type rating	10 kVA	15 kVA	20 kVA
	7 kW	10.5 kW	14 kW
Part number (UPS without battery)	600 000 4434	600 000 4435	600 000 4436
Part number (battery pack 1.100BP)	600 000 5097		
Part number (battery pack 1.BP20)	100 000 1991	100 000 1991	100 000 1991
UPS INPUT			
Input voltage	400 / 230 V AC (3 ph~ /N/PE)		
Voltage range without battery mode	304 – 478 V AC (Bypass: 176 – 261 V AC)		
Frequency (automatic selection)	50 Hz / 60 Hz ±4 Hz		
Mains current (system reaction)	λ ≥0.95		
Current consumption at nominal load (max.)	13 A / 46 A (bypass)	19 A / 68 A (bypass)	25 A / 91 A (bypass)
UPS OUTPUT			
Rated output voltage (adjustable)	220 V AC / 230 V AC (default) / 240 V AC ±1 %		
Frequency in battery mode	50 Hz / 60 Hz ±0.1 %		
Output current (at 230 V AC)	43.4 A	65.2 A	86.9 A
Transfer time at mains outage	0 ms (without interruption)		
Voltage waveform	Sinusoidal, distortion THD <2 %		
Overload response	<130 % for 10 min. / 130 % for 1 s, then automatic transfer to bypass mode: 0 ms (without interruption)		
Crest factor	3 : 1		
Short circuit response	Short circuit proof (2.5 x I _N for 100 ms)		
BATTERY			
Rated voltage (linked)	240 V DC		
Charging characteristics	IU – characteristic curve (charging voltage 274 V DC / charging current max. 4.2 A)		
Autonomy time	Expandable with external battery modules		
Overload/deep discharge protection	Yes		
COMMUNICATION			
Interfaces	RS232 (with status display and data values) Communication slot (for potential free contact, SNMP)		
Shutdown software (on CD)	5 network licenses for all common OS (e.g. Windows, Linux, Mac, Unix, Sun etc.)		
Failure indicators (acoustic/visual)	Mains failure, overload, battery charging, battery replacement, failure LED bar graph for summary / battery capacity		
GENERAL DATA			
Efficiency AC – AC (at nominal load)	>90 %		
Audible noise (1 m distance)	<55 dB(A)	<60 dB(A)	
Operating temperature range	0° – 40°C		
Humidity	0 – 95 % (without condensation)		
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	260 x 720 x 670 plus interception unit (90)		
Dimensions approx. W x H x D (mm) battery extension unit	260 x 720 x 670 (Protect 1.100 BP)		
	260 x 720 x 810 (Protect 1. BP 20)	260 x 720 x 810 (Protect 1. BP 20)	260 x 720 x 810 (Protect 1. BP 20)
Weight approx. UPS	39 kg	55 kg	55 kg
Weight approx. battery extension unit	135 kg (Protect 1.100 BP)		
	170 kg (Protect 1. BP20)	170 kg (Protect 1. BP20)	170 kg (Protect 1. BP20)
Shipment	Parallel connection cable, communication cable, UPS management software “CompuWatch” (CD), operating instructions		
Conformity	CE		

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
- » 36-month warranty with replacement service in advance (free registration required)

Classification VFI SS 111 acc. to IEC 62040-3	Protect 1.040	Protect 1.M
	UPS Module	System cabinet (max. 6 x 4 kVA)
Power type rating	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	λ ≥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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