

PROTECT C

SINGLE PHASE IN / OUT UPS SYSTEM

Uninterruptible Power Supply

1-Phase Input; 1-Phase Output

1000–10000 VA power supply
with integrated batteries



Uninterruptible security for applications in the SMB sector

Real VFI / double conversion online technology suitable for safe supply application-critical consumers in the IT environment such as workstations, servers, storage systems, as well as in the area of sensitive switching and control systems.

The new Protect C models in the performance levels in 1000, 2000 and 3000 VA range represent consistent further development of the well-proven and highly reliable series.

With the lag increased to 0.8, the power factor was taken into account for the demand for higher performance active consumers. The ECO and frequency inverter for operation mode highlights the requirements for a modern versatile UPS.

Optimal control and information

“Dual-monitoring” enabled interfaces extend communication opportunities. The universally usable communication slot also allows for the integration of SNMP network interface cards that allow for monitoring and management options, particularly multi-server shutdown. The AEG “CompuWatch” shutdown software is always included.

The multilingual graphical LCD display provides all the important operating states and values that can be stored and retrieved in addition to real-time data storage in plain text.

Main characteristics

- » VFI topology (online / double conversion) protection against all mains network problems
- » Extremely wide input voltage window of 110 VAC to 300 VAC without stress on the internal battery system and with a stable output voltage
- » ECO and frequency operating voltage possible
- » Expansion slot for SNMP, potential free contacts, remote display
- » Graphic LCD display with interactive multilingual user interface
- » Configuration options (password protected) via the operator terminal
- » Internal hardware data logger with plain text display and date / time stamp
- » Emergency power off on terminal block (potential-free)

Classification VFI SS 111* acc. to IEC 62040-3	C. 1000	C. 2000	C. 3000
Power type rating	1000 VA	2000 VA	3000 VA
	800 W	1600 W	2400 W
Part number (UPS including integrated battery system)	600 001 6103	600 001 6104	600 001 6105
Part number (additional battery pack)	600 001 6106	600 001 6107	
UPS INPUT			
Input voltage	220 VAC / 230 VAC / 240 VAC		
Voltage range without battery mode (load dependent)	110 – 300 VAC		
Frequency (auto selection)	50 Hz / 60 Hz \pm 10 Hz		
Mains current (system reaction)	$\lambda \geq 0.99$ (THDi <5%)		
Current consumption at nominal load (max.) (at 230 VAC incl. max. battery charging current)	4.6 A	8.5 A	12.5 A
UPS OUTPUT			
Rated output voltage (adjustable)	200 VAC / 208 VAC / 220 VAC / 230 VAC (default setting) / 240 VAC \pm 2 %		
Frequency in battery / frequency converter mode	50 Hz / 60 Hz \pm 0.2 Hz		
Nominal output current (at 230 VAC)	4.3 A	8.7 A	13 A
Transfer time at mains outage	0 ms (without interruption)		
Voltage waveform	Sinusoidal, distortion <3 %		
Overload response (double conversion & battery mode)	<110 % for 60 s / 110 % up to <125 % for 30s / 125 % up to 150 % for 10s Subsequent, transfer to bypass mode (if bypass available)		
Crest factor	3 : 1		
Short circuit response	Short circuit proof (3 x I _N for 100 ms)		
BATTERY			
Type	Sealed, maintenance-free (proprietary brand), integrated		
Rated voltage (linked)	36 VDC	96 VDC	
Battery management	Exhaustive discharge protection / Protection against excess load Automatic battery test (daily, weekly, monthly)		
Charging time (to 90 % rated capacity)	5 h		
COMMUNICATION			
Interfaces (dual monitoring)	RS232, USB, communication slot (can be used parallel with RS232 / USB), input contact for emergency power off		
Shutdown software (on CD)	5 network licenses for all common OS (e.g. Windows, Linux, Mac, Unix)		
User interface / failure indication (acoustic/visual)	3 LED's with traffic light display, detailed indication via LCD display (alarms: at mains failure, overload, battery charging, battery replacement, fan fault data logger – with clear text display incl. Date and time history)		
GENERAL DATA			
Efficiency (ECO mode)	>93 %	>94 %	
Efficiency at nominal load (double conversion mode)	>87%	>88 %	
Audible noise (1 m distance)	\leq 44 dB(A)	\leq 49 dB(A)	
	with intelligent fan speed control and fan monitoring		
Temperature range	0 – 45 %		
Humidity	0 – 95 % (no condensation)		
Operation altitude	Up to 1000 m at nominal load		
EMC conformity	EN 62040-2 Class C1, EN 61000-3-2, EN 61000-3-3		
Product safety	EN 62040-1		
Mains input	IEC 320 C14		IEC 320 C20
Number of outputs	4 x IEC 320 C13	6 x IEC 320 C13	4 x IEC 320 C13 1 x IEC 320 C19 + terminal
Equipment color	Blackline with silver colored front cover		
Dimensions approx. W x H x D (mm) UPS	145 x 220 x 400	190 x 345 x 460	
Dimensions approx. W x H x D (mm) battery	Integrated (additional battery pack same dimensions as UPS)		
Weight approx. UPS	13 kg	31 kg	
Weight approx. battery	19 kg	52 kg	
Shipment	Mains input cord, 2 device cords, communication cable (USB), management software "CompuWatch" (CD), incl. 5 network licences, operating instructions		
Conformity	CE		

* excl. ECO / Bypass mode

PROTECT C. 6000/10000



High-performance UPS system for IT applications

Thanks to genuine VFI technology (online/double conversion), Protect C is suitable for all critical business applications.

The proven VFI topology of Protect C protects against all network problems as a matter of principle. A sinus-shaped power feed is achieved under all load conditions at the input.

Highly integrated switches and a robust IGBT module reduce the number of electrical connections and components and therefore provide for increased reliability. A Static Bypass Switch (SBS) and/or an automated bypass ensure additional safety in case of overload.

Maximum control

The bar displays for UPS load and battery capacity, as well as the clear pictogram of the system components provide information on the essential operating conditions.

Data is transmitted through an RS232 interface. With an optional SNMP (PRO) adapter, remote monitoring via a web browser and multi-server shutdown are possible.

The special AEG shutdown software "CompuWatch" is of course included.

Switchable in parallel

Protect C. 6000 and C. 10000 offer the possibility of parallel operation. Both active redundancy and higher availability are achieved with higher power requirements being taken into account.

Also, the combination of power increase and active redundancy is possible, as up to 3 devices can be switched in parallel.

Protect C meets the highest security and availability requirements and allows for an economical implementation.

Main characteristics

- » VFI topology (online/double conversion) protects against all network problems
- » Micro processor control/digital signal processors for maximum availability
- » Sinus-shaped power feed (high-frequency pulse width modulation with IGBTs)
- » n+x technology for redundancy and performance increase
- » Extension slot for SNMP, potential-free contacts, remote panel
- » Also available as an S-version with reinforced charging rectifier
- » Space saving design with integrated battery system
- » Integrated fault operation security for manual bypass switch

Classification VFI SS 111 acc. to IEC 62040-3	C. 6000	C. 10000
Power type rating	6000 VA	10000 VA
	4200 W	7000 W
	Parallel connection	Parallel connection
Part number (UPS including integrated battery system)	600 000 5877	600 000 5878
Part number (battery pack)	600 000 5879	600 000 5880
Part number (UPS S-version)	600 000 4340	600 000 4341
UPS INPUT		
Input voltage	220 VAC / 230 VAC / 240 VAC	
Voltage range without battery mode	176 – 276 VAC	
Frequency (auto selection)	50 Hz / 60 Hz \pm 4 Hz	
Mains current (system reaction)	$\lambda \geq 0.98$	
Current consumption at nominal load (max.)	31 A	50 A
UPS OUTPUT		
Rated output voltage (adjustable)	220 VAC / 230 VAC (default) / 240 VAC \pm 1 %	
Frequency in battery mode	50 Hz / 60 Hz \pm 0.1 %	
Output current (at 230 VAC)	26 A	43.4 A
Transfer time at mains outage	0 ms (without interruption)	
Voltage waveform	Sinusoidal, distortion THD <4 %	
Overload response (online operation)	<130 % for 10 min. / 130 % for 1 s Subsequent, transfer to bypass mode	
Crest factor	3 : 1	
Short circuit response	Short circuit proof (3 x I _N for 140 ms)	
BATTERY		
Type	Sealed, maintenance free, integrated (proprietary brand)	
Rated voltage (linked)	240 VDC	
Overload/deep discharge protection	Yes	
Charging time (to 90 % rated capacity)	7 h	
COMMUNICATION		
Interfaces	RS232 (with status display and data), communications slot for SNMP, potential free relay contact	
Shutdown software (on CD)	5 network licenses for all common OS (e.g. Windows, Linux, Mac)	
Failure indicators (acoustic/visual)	LED display for UPS summary /battery capacity display, status display Indicators for mains failure, overload, battery charging, battery replacement, failure	
GENERAL DATA		
Efficiency AC – AC (at nominal load)	≥ 90 %	
Audible noise (1 m distance)	<55 dB(A)	
Operating temperature range	0° – 40°C	
Humidity	0 – 90 % (without condensation)	
Operation altitude	Up to 1000 m at nominal load	
EMC conformity	EN 62040-2 Class C3	
Product safety	EN 62040-1	
Mains input	Secured terminal block	
Consumer outputs	Secured terminal block	
Equipment color	Blackline with silver colored front cover	
Dimensions approx. W x H x D (mm) UPS	260 x 720 x 570	
Dimensions approx. W x H x D (mm) battery	Integrated (not S-version battery pack same dimensions as UPS)	
Weight approx. UPS	90 kg	93 kg
Weight approx. battery	65 kg	68 kg
Shipment	Parallel connection cable, management software "CompuWatch" (CD), communications cable, operating instructions	
Conformity	CE	

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