

# Ease of use

## Protect C.

High performance UPS-system for IT and electronic data processing in medium-sized companies.

Due to true online / double-conversion technology Protect C. is well suited for mission-critical applications such as sensitive networks, small computer centers, Intranet and Internet servers, telecom applications as well as for industrial applications. The Protect C. employs VFI topology to protect loads against all public grid disturbances. On the input side sine wave shape current consumption is achieved for all load conditions. High integrated circuits reduce the number of electric connections and components as well as a robust IGBT module, the result: less and more robust components increasing reliability. An automatic bypass provides security during overload.

### Maximum control:

Bar displays UPS load and battery capacity and the clearly organized pictogram also informs the operator about the most important aspects of the operating status. Important UPS data can be transmitted via RS232 interface.

Web browser remote monitoring and multi-server shutdown are all possible with an optional SNMP adapter. "CompuWatch" shutdown and reboot software is included for implementing these features.

### Parallel operations:

Protect C. 6000 and C. 10000 are also able to be switched parallel. Demand for greater availability by providing an active redundancy as well as a need for increased output power is met here. The combined power increase in connection with active redundancy can be achieved by the parallel switch having the ability to switch a maximum of 3 devices. The key factors are meeting the highest requirements for safety and availability as well as maintaining a cost efficient implementation.



### Intelligent functions, high level protection:

- VFI-topology (double-conversion): Protects against all mains power disturbances
- Microprocessor control / DSP guarantees highest availability
- Sine wave shaped current consumption (High frequency PWM with IGBTs)
- Automatic bypass, additional integrated service bypass at 6 and 10 kVA (tower)
- Redundancy due to n+x configuration at 6 and 10 kVA; increase in power output / safety and availability
- Expansion slot for extension cards SNMP / relay-card / USB / potential free contacts



AEG Protect C.  
Available as Tower or for 19"  
rack mounting.



## Protect C: technical specifications

Classification VFI SS 211 acc. to IEC 62040-3	C. 1000	C. 2000	C. 3000	C. 6000	C. 10000
Classification VFI SS 111 acc. to IEC 62040-3					
Type rating	1000 VA	2000 VA	3000 VA	6000 VA	10000 VA
	700 W	1400 W	2100 W	4200 W	7000 W
	Parallel operations (n+x)				

### UPS-Input

Input voltage	220 Vac / 230 Vac / 240 Vac				
Input voltage range without battery mode	160 – 300 Vac			176 – 276 Vac	
Frequency	50 Hz / 60 Hz ± 4 Hz				
Power factor	≥ 0.96			≥ 0.98	
Current consumption (max.)	7 A	10 A	16 A	31 A	50 A

### UPS-Output

Rated output voltage	220 Vac / 230 Vac / 240 Vac ± 2 %			± 1 %	
Frequency in battery mode	50 Hz / 60 Hz ± 0.2 %			± 0.1 %	
Output current (at 230 Vac)	4.3 A	8.7 A	13 A	26 A	43.4 A
Transfer time at mains outage	0 ms (zero transfer)				
Voltage waveform	Sinusoidal, THD < 4%				
Overload response (online mode)	140 % 30 s / 150 % 300 ms			125 % 10 min / 130 % 1 s	
	subsequent, transfer to bypass mode				
Crest factor	3				
Short-circuit response	Short-circuit-proof				

### Battery

Type	Sealed, maintenance free				
Rated voltage	36 Vdc	96 Vdc		240 Vdc	
Autonomy time (full load / half load)	6 min./20 min.	10 min./30 min.	5 min./16 min.	8 min./ 25 min.	5 min./15 min.
	Runtime extension with scalable external battery packs				
Overload / deep discharge protection	Yes	Yes	Yes	Yes	Yes
Recharge time (to 90 % of rated capacity)	5 h	5 h	5 h	5 h	7 h

### Communication

Interfaces	RS232 for UPS configuration, status and measurement levels, SNMP, AS 400, USB optional				
Shutdown software	Included for all typical operating systems (e.g. Windows, Mac, Linux, Unix, Sun, etc), single licence CompuWatch with a 5 fold network licence				
Failure indicators (acoustical / optical)	LED bar graph for UPS load and battery capacity, indicators for mains failure, overload, battery discharge, battery replace, failure				

### General data

Efficiency total	≥ 85 %		≥ 88 %	> 90 %	
Audible noise (1 m distance)	< 45 dB (A)		< 50 dB (A)	< 55 dB (A)	
Operating temperature range	0° – 40°C				
EMC immunity	EN 50091-2, EN 61000-3-2			EN 50091-2	
EMC emission	EN 61000-6-3 Class B			EN 61000-6-3 > 25 A	
Data lines protection	RJ11 (Phone, Fax, Modem) / RJ45 (Ethernet 10 Mbit/s / 100 Mbit/s)				
Humidity	0 – 90 % (non condensing)				
Installation height	Up to 1000 m, at nominal load				
Number of outlets	Tower	4 x IEC 320 C13	6 x IEC 320 C13	4 x IEC 320 C13	Terminal block
				+ 1 x IEC 320 C19	
	Rack	4 x IEC 320 C13		1 x IEC 320 C13	Groundline
				+ 1 x IEC 320 C19	+ 4 x IEC 320 C13
					-
Equipment colour	Blackline				
Size appr.W x H x D (mm)	Tower	145 x 220 x 400	192 x 340 x 460	260 x 717 x 570	
	Battery	integrated	integrated	integrated	
	Rack	482.6 x 88 x 450	482.6 x 88 x 450	482.6 x 132 x 600	-
	Battery	integrated	482.6 x 88 x 450	482.6 x 132 x 600	-
Weight appr. (kg)	Tower	15 kg	34 kg	35 kg	90 kg
	Rack	16.5 kg	10 kg + 29 kg	11 kg + 29 kg	18 kg + 64 kg
Shipment	Mains-Cord, 3 load-cords (type C.1000, C.2000, C.3000), communication cable, management software "CompuWatch", user-manual				
Certification	CE				

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PERFECT IN FORM AND FUNCTION

**AEG**