

# PROTECT 4

Protect 4.33 three phase output  
160 – 1000kVA

3x400VAC input  
400VAC output

The "Multi Purpose High Power" UPS



## Engineering is our business

AEG Power Solutions UPS systems assure the permanent availability of all your global applications including oil, gas & petrochemical, power generation, transportation and other infrastructures.

## Designed for all applications

The Protect 4 is a highly reliable solution with a very long track record in system availability and use, providing safe and uninterrupted power back-up. It is a compact ready to install unit, with a maximum single unit capacity of up to 1000kVA, ensuring the safe operation of your critical loads.

It allows you to benefit from a proven design. The robust and easy to operate UPS has excellent overload capability, superior dynamic response and is easy to maintain. Tailoring to specific requirements is possible due to the high level of customization available. Operational expenditure is optimized with a complete and cost effective life cycle.

## Robust and reliable design

Protect 4 is designed to meet the toughest application requirements and offers high reliability with efficient 12 pulse rectifier technology for sinusoidal input current and for reduced input current harmonic distortion (THDi). The Protect 4 can be used in parallel operation with up to 8 units. This increases the power capacity and allows for even greater safety via N+1 redundancy.

## Other key features

- » Short circuit proof
- » Intelligent battery charging management
- » Remote servicing
- » Redundant fans
- » Comprehensive service support
- » Highest operating safety
- » Optimum efficiency, even in the partial load range
- » Fully loadable neutral conductor
- » Integrated logbook function with real-time clock

# PROTECT 4

SPECIFICATION

Type power at $\cos \varphi$ 0,8 lag. in kVA	160	220	300	400	500	600	800	1000
<b>RECTIFIER UNIT</b>								
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	259	357	486	649	811	973	1300	1624
Input current in A at nominal load + battery charging	328	451	615	820	1025	1230	1600	2000
Charging characteristic acc. IEC 478-10	IU							
Nominal DC voltage	384							
Max. charging voltage in V	461							
Total harmonic distortion standard/option (pulse)	6/12	12	12	12	12	12	12	12
<b>INVERTER UNIT</b>								
Nominal DC voltage min./max. in V	307/461							
Nominal AC voltage in V	3 x 400							
Adjustable min./max. in V	380/415							
Static response	< $\pm 1\%$							
Dynamic response 0%-100%-0%	< $\pm 5\%$							
Correction time	2ms							
Frequency in Hz	50/60							
Frequency tolerance without mains	$\pm 0,1\%$							
Frequency synchronisation range	$\pm 1\%$							
Power factor range $\cos \varphi$	cap-1-ind							
Output phase current in A	231	318	434	578	723	867	1156	1445
Voltage wave form	sinus							
Voltage distortion	$\leq 3\%$							
Crest factor	max. 3							
Overload response	150% for 1min, 125% for 10min							
Short circuit response of $I_{nom}$ typical	300%							
<b>STATIC BYPASS SWITCH</b>								
AC voltage min./nominal/max. in V	3x380/400/415							
Frequency in Hz	50/60							
Nominal power in kVA	160	220	300	400	500	600	800	1000
Overload	500%							
<b>GENERAL DATA</b>								
Efficiency total up to	94%							
ECOp <sup>x</sup>	up to 98%							
Noise level in dB(A) depending on type	> 69							
EMC compatibility acc. EN 60040-2	C 2							
Air cooling with redundant/monitored fans	yes							
Temperature range min./max. in °C	-5/+40 Operating, -30/+75 Storage							
Installation height NN	1000m							
Protection degree acc. IEC 529/EN 60529	IP 20							
Equipment colour	RAL 7035							
<b>DIMENSIONS</b>								
Height standard device in mm	1910	1915	1925	1915	1915	1960	2210	2210
Height with max. options in mm	2015	2210	2210	2210	2210	2210	2210	2210
Width in mm	1200	1200	1500	2100	2100	2400	4050	4875
Depth in mm	960	960	960	960	960	960	1060	1060
Weight in kg	1670	1950	2030	3200	3480	3800	5700	7000

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