

# Profitec SN1 BROCHURE

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# PROFITEC SN1

SOFTWARE – FREE RECTIFIER

**Input:**

380/400/415/500/690 V 3-phase

**DC-Output:**

24 V 100 – 2500 A

60 V 63 – 630 A

110 V 63 – 630 A

220 V 40 – 1250 A

**The Power Plant Charger**



## Engineering is our business

Power supply systems from AEG Power Solutions ensure the continuous availability of all global requirements in oil & gas, power generation, transportation and other heavy industries.

With more than 50 years of experience in nuclear power technologies and with customers around the world, AEG PS is a truly global player and one of the premier suppliers of equipment for nuclear and fossil power generation.

## Main features:

- » 100 % analog controlled charger
- » No software or programmable devices
- » Seismic-proofed technology
- » Forced or natural air cooling
- » Secure DC supply in any case of input voltage variation
- » Top or bottom entry
- » Maximum reliability
- » High availability/MTBF
- » Design lifetime >30 years
- » Designed for use in harsh environments
- » Easy maintenance via diagnostic device
- » 160 % input overvoltage threshold

# PROFITEC SN1 SOFTWARE – FREE RECTIFIER



## Highlight

The Profitec SN1 is a 100% analog charger. All regulation and monitoring PCBs (built up in SMD method) contain no software and no programmable components or devices. The invention of a 100% free-of-software rectifier is due to the security of DC power supply and new requirements for safety and qualification processes.

## Options

### » Overvoltage limiter (Forsmark-event)

In case of input voltage variation, independent of the input voltage gradient, the duration and its maximum value, the patented overvoltage limiter reduces the value of the DC output voltage to less than 115% of the nominal DC voltage. The overvoltage detection is a self-acknowledging fault.

### » Parallel mode (for output current extension or redundancy)

### » Diagnostic device for annual checks as required by NPPs

### » Forced cooling for ambient temperatures up to 50° without de-rating

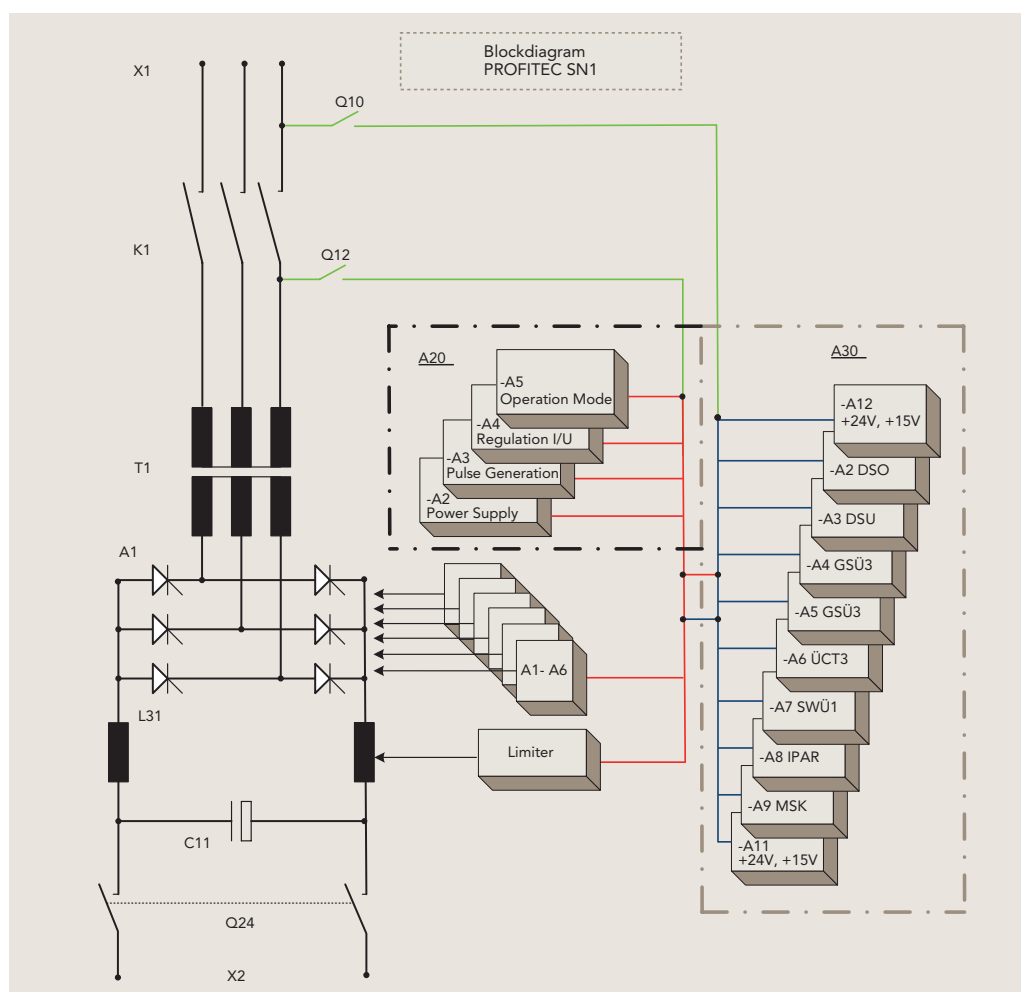
### » Design as +/- system

### » Higher IP rating

### » Battery feeder cubicles, seismic-proofed

### » Battery symmetry monitoring

### » Battery charging circuit monitoring





### PROFITEC SN1

Rectifier type		D 400G .../... BWLrug							
Connected voltage*		3 x 400 V ±10% / 50 Hz with N conductor							
Type series		24 V / 60 V / 110 V / 220 V							
Overall efficiency	24 V unit		60 V unit		110 V unit		220 V unit		
	approx. 85%		approx. 88%		approx. 91%		approx. 93%		
Power factor cos φ	24 V unit		60 V unit		110 V unit		220 V unit		
	approx. 0.72				approx. 0.78				
Type of battery and number of cells	24 V unit		60 V unit		110 V unit		220 V unit		
	11 – 13	18 – 20	27 – 30	43 – 46	50 – 55	80 – 85	100 – 110	160 – 170	
	Cells Pb	Cells NiCd	Cells Pb	Cells NiCd	Cells Pb	Cells NiCd	Cells Pb	Cells NiCd	
Characteristic line		IU to DIN 41 773							
Thyristor circuit*		6-pulse circuit							
		24 V unit		60 V unit		110 V unit		220 V unit	
Voltage ripple		5 % SS without parallel battery							
Spurious emissions		to EN 61000-6-4 interference to EN 55011 class “A”							
Noise immunity		to EN 61000-6-2							
Design		Steel cabinet with front door, seismic-proofed Double door cabinet width from 1200 mm Top or bottom entry							
Cabinet protection*		IP20 (standard) to EN 60529 / IEC 529							
Cooling system*		Air natural cooling							
Noise level		≤65 dB(A)							
Ambient temperature		0°C to +40°C (+50°C forced air cooling)							
Color*		RAL 7035, structured (powder coated)							

\*Different input voltages and frequency, higher IP rating, forced cooling, different color or different thyristor circuit on request.

# PROTECT SN1

TECHNICAL DATA

Rated current (A)	Type	3-phase power input		Losses (kW)	Weight (kg)	Dimensions		
		Current (A)	Power (kVA)			W (mm)	D (mm)	H (mm)
RATED VOLTAGE 24 V								
100	D400G24/100 BWLrug	6.6	4.6	0.5	150	600	600	2200
160	D400G24/160 BWLrug	10.5	7.2	0.8	220	600	600	2200
200	D400G24/200 BWLrug	13	9.0	1.0	280	600	600	2200
315	D400G24/315 BWLrug	21	14.5	1.6	410	600	600	2200
400	D400G24/400 BWLrug	27	18.6	2.0	500	900	600	2200
500	D400G24/500 BWLrug	33	22.8	2.5	620	900	800	2200
630	D400G24/630 BWLrug	42	29.0	3.2	700	900	800	2200
800	D400G24/800 BWLrug	52	36	3.8	800	900	800	2200
1000	D400G24/1000 BWLrug	65	45	4.7	1000	900	800	2200
1250	D400G24/1250 BWLrug	80	55	5.9	1200	900	800	2200
1600	D400G24/1600 BWLrug	104	72	7.6	1500	1200	800	2200
2000	D400G24/2000 BWLrug	130	90	9.5	1700	1200	800	2200
2500	D400G24/2500 BWLrug	163	112	11.9	2000	1800	800	2200
RATED VOLTAGE 60 V								
63	D400G60/63 BWLrug	8.8	6.1	0.6	175	600	600	2200
125	D400G60/125 BWLrug	17	11.7	1.2	300	600	600	2200
160	D400G60/160 BWLrug	22	15.2	1.6	400	600	600	2200
200	D400G60/200 BWLrug	27.5	19.0	1.9	450	600	600	2200
315	D400G60/315 BWLrug	43	29.7	3.0	600	900	600	2200
400	D400G60/400 BWLrug	55	38.0	3.8	800	900	800	2200
500	D400G60/500 BWLrug	68	46.9	4.8	950	900	800	2200
630	D400G60/630 BWLrug	87	60.0	6.0	1100	1200	800	2200
RATED VOLTAGE 110 V								
63	D400G106/63 BWLrug	15.7	10.8	0.8	250	600	600	2200
100	D400G106/100 BWLrug	25	17.3	1.3	400	600	600	2200
125	D400G106/125 BWLrug	31	21.4	1.6	500	600	600	2200
200	D400G106/200 BWLrug	50	34.5	2.5	600	900	600	2200
315	D400G106/315 BWLrug	77	53.1	4.0	930	900	800	2200
400	D400G106/400 BWLrug	100	69.0	4.9	1100	900	800	2200
500	D400G106/500 BWLrug	123	84.9	6.2	1250	1200	800	2200
630	D400G106/630 BWLrug	155	107	7.9	1400	1200	800	2200
RATED VOLTAGE 220 V								
40	D400G212/40 BWLrug	20	13.8	0.7	280	600	600	2200
63	D400G212/63 BWLrug	31	21.4	1.1	360	600	600	2200
100	D400G212/100 BWLrug	49	33.8	1.8	450	900	600	2200
125	D400G212/125 BWLrug	61	42.1	2.3	650	900	600	2200
160	D400G212/160 BWLrug	78	53.8	2.9	750	900	800	2200
200	D400G212/200 BWLrug	98	67.6	3.6	880	900	800	2200
315	D400G212/315 BWLrug	155	107	5.7	1000	1200	800	2200
400	D400G212/400 BWLrug	195	135	7.2	1100	1200	800	2200
500	D400G212/500 BWLrug	245	169	9.0	1250	1200	800	2200
630	D400G212/630 BWLrug	308	213	11.4	1500	1200	800	2200
800	D400G212/800 BWLrug	390	269	14.5	1600	1200	800	2200
1000	D400G212/1000 BWLrug	488	337	18.0	2400	2 x 1200	800	2200
1250	D400G212/1250 BWLrug	610	420	22.6	2600	2 x 1200	800	2200

Values all approx. Depending on options and other factors

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