

Inverter 2.5 - 5.0 kVA



- Different output frequencies and voltages available
- High overload ability
- Parallel and three-phase-operation possible (option)
- Wall cabinet

The PWS inverter family is equipped with a low-frequency isolation transformer following a primary side pulse-width modulation stage and is available as 19"-compatible rack or wall mounted cabinet. These inverters are especially suited for applications in power plant, industrial, railroad, and shipping AC power supplies up to 40 kVA output power.

The combination of rugged mechanical construction, high overload ability, nearly all usual output frequency, and high isolation between input and output, offers a very high flexibility in system configuration. The inverters can be operated as single unit or in parallel connection to provide power increase or further improved reliability by (n+1)-redundancy.

The inverters are equipped with an internal DC input filter according to CCITT-A, analogue measurement instruments for output voltage and current, and an internal output fuse. The connectors are located on the rear panel providing „hot-plug-in“-possibility.

The PWS inverter family is designed for Stand-alone operation as well as for single or parallel operation with a static bypass switch (UNB). Additional functional and monitoring equipment is available in a great variety.

TYPE LISTING

Type	PWSx-2.5	PWSx-3.0	PWSx-4.0	PWSx-5.0
Mat.-No. x=24 V	C10-3005	C10-3006	—	—
Mat.-No. x=108 V	C10-3035	C10-3036	C10-3038	C10-3039
Mat.-No. x=216 V	C10-3045	C10-3046	C10-3048	C10-3049
Category	Primary Switch Sine Wave Inverter			

DC INPUT

Nominal voltage	24 / 108 / 216 V DC			
Voltage range	+20 / -15 %, extension possible			
Nominal current	96.9 A DC 20.4 A DC 10.2 A DC	116.3 A DC 24.2 A DC 12.1 A DC	— 32.2 A DC 16.1 A DC	— 39.9 A DC 20.0 A DC
Efficiency	86 % 91 % 91 %	86 % 91 % 91 %	— 91 % 91 %	— 91 % 91 %
Inrush current	≤ nominal current			
Fusing (external)	125 A 25 A 16 A	125 A 35 A 16 A	— 50 A 20 A	— 50 A 25 A

AC OUTPUT

Nominal voltage	230 V AC ± 0.5 %, sinusoidal			
Rated output power (cos φ =0.8)	2500 VA	3000 VA	4000 VA	5000 VA
Accuracy	± 0.5 % static			
Recovery time	< 0.3 ms for load transients 10% - 90% - 10%			
Frequency	50 Hz ± 0.05 %			
Synchronis. range	45-65 Hz			
Total harm. distortion	≤ 3 % for linear load			
Crest factor	≤ 2.5			
Power factor range	0 ind. - 1 - 0 cap.			
Permissible overload	160 % for 1 min, 130 % for 10 min without shut down			
Parallel operation	Max. 12 pieces (Option)			
Fusing	16 A	16 A	20 A	25 A
Short circuit behav.	Continuously short circuit proof, 2-2.5 x I _{nom} for appr. 2.5 s			

STANDARD FEATURES

LED indicators	Standby, U _{OUT} , U _{IN} >, U _{IN} <, overload, over temperature, general fault
Remote signals	Relay contact "General Fault"
Protection	Input under voltage shut down Input over voltage shut down Over temperature shut down Output voltage O.K. Overload without shut down Short circuit shut down

ENVIRONMENT

Ambient temperature	Operation: -10°C to +40°C Storage: -30°C to +50°C
Climatic conditions	IEC 721-3-3 class 3K3/3Z1/3B1/3C2/3S2/3M2
Humidity class	F
Dust	< 1 mg / m ³
Altitude	≤ 1000 m a.s.l., extension possible
Audible noise	< 40 dB (A) at 1m distance

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MECHANICAL CONSTRUCTION				
Construction	Wall cabinet			
Dimensions (without options) W / H / D [mm]	600 / 800 / 300 400 / 600 / 210 400 / 600 / 210	600 / 800 / 300 400 / 600 / 210 400 / 600 / 210	— 600 / 800 / 300 600 / 800 / 300	— 600 / 800 / 300 600 / 800 / 300
Weight (without options)	42 kg 42 kg 42 kg	47 kg 47 kg 47 kg	— 58 kg 58 kg	— 64 kg 64 kg
Cooling	Speed controlled fan with overtemperature monitoring			
Protection class	IP20 (mech.); 1 acc. to EN 60950 (electr.)			
Surfaces	Front panel: powder coating RAL 7032, constructive parts: anodized metal			

COMPLIANCES	
Conducted and radiated emissions EN 50081-1	EN 55011 / EN 55022 class B
Safety	EN 60950 ; VDE 0100 part 410; VDE 0110, EN 50178, EN 60146
Interference Immunity EN 50082-2	Case: Electrostatic discharge: EN 61000-4-2 (6 kV contact, 8 kV air discharge) Radiated radio frequency: EN 61000-4-3 (10V/m, 30 MHz - 1 GHz) Power line: EN 61000-4-4 (2 kV, other 2 kV) EN 61000-4-5 (4 kV unsymmetrical, 2 kV symmetrical, others: 2 kV unsymmetrical) Control line EN 61000-4-4 (2 kV) EN 61000-4-5 (2 kV unsymmetrical)

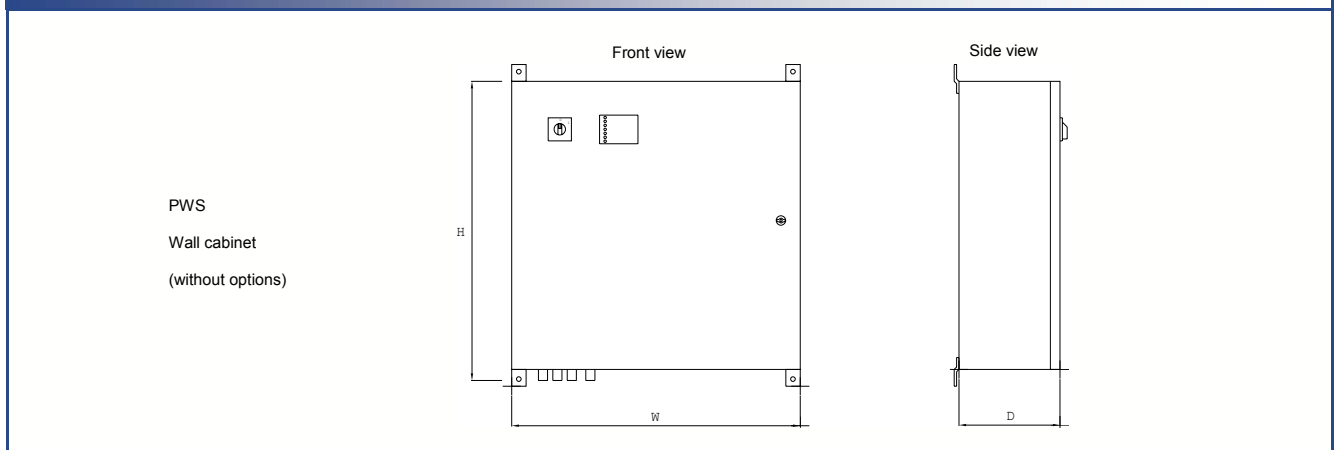
Options:

- Overload protection OLP: 120 % for 30 s with automatic shut down, latching
- PO: parallel operation, max. 12 inverters, load sharing appr. 5 % I_{nom}
- DCF: 24 V DC input filter (acc. to CCITT-A)
- UJA: analogue measurement instruments for U_{OUT} and I_{OUT}
- NSF: customized output frequency
- NSV: customized output voltage
- ECR: customized temperature / climatic range



The modules PWS are also available as 19" racks, suitable for mounting in cabinets, for example in parallel operation or for AC power supply systems. The illustration shows a cabinet with such 19" inverters.

MECHANICAL DIMENSIONS / CONNECTION VIEW



Additional Information

Full information, drawings, manuals and application notes and advice to any of the wide range of CP Kontakt AB's products are available on request.

CP Kontakt AB reserve the right to change the specification, product design and parameters at any time, without notice.

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