

Features

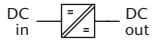
- DC input: 320 - 800 V
- AC input: 3-phase, 47 - 63 Hz
- DC output: 48 / ... / 800 V
- Continuous short circuit protection
- Overvoltage protection
- Thermal shutdown with auto restart
- Industrial grade components
- High efficiency through ZVS topology
- High power density
- Compact and robust design



front view



rear view



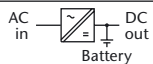
DC / DC Converters

▶ 30 KW					
Input VDC			Output VDC		
320–640 ¹⁾ VDC	450–800 VDC	Output Amps	Adj.	Range	
CW 6679 G	CW 6679 K	450	48	45– 55	
CW 6676 G	CW 6676 K	442	60	58– 68	
CW 6677 G	CW 6677 K	231	110	100– 130	
CW 6677 Gj	CW 6677 Kj	150	200	190– 200	
CW 6678 G	CW 6678 K	120	220	200– 250	
CW 6678 Gj	CW 6678 Kj	75	400	380– 400	
CW 6677 GH	CW 6677 KH	50	tba ²⁾	570– 600	
CW 6678 GH	CW 6678 KH	38	tba ²⁾	760– 800	



AC / DC Converters

▶ 30 KW					
Input VAC, 3-Phase			Output VDC		
3x400 ^{+15%} _{-20%}	3x480 ^{+10%} _{-15%}	Output Amps	Adj.	Range	
CW 6689 V	CW 6699 V	450	48	45– 55	
CW 6686 V	CW 6696 V	442	60	58– 68	
CW 6687 V	CW 6697 V	231	110	100– 130	
CW 6687 Vj	CW 6697 Vj	150	200	190– 200	
CW 6688 V	CW 6698 V	120	220	200– 250	
CW 6688 Vj	CW 6698 Vj	75	400	380– 400	
CW 6687 VH	CW 6697 VH	50	tba ²⁾	570– 600	
CW 6688 VH	CW 6698 VH	38	tba ²⁾	760– 800	



Battery Chargers

▶ 30 KW					
Input VAC, 3-Phase			Output VDC		
3x400 ^{+15%} _{-20%}	3x480 ^{+10%} _{-15%}	Output Amps	Nom. Battery Voltage	Range	
BW 6684 V	BW 6694 V	386	48	48– 64	
BW 6686 V	BW 6696 V	275	60	60– 80	
BW 6687 V	BW 6697 V	208	110	110– 145	
BW 6688 V	BW 6698 V	104	220	220– 290	

Assistance in table use:

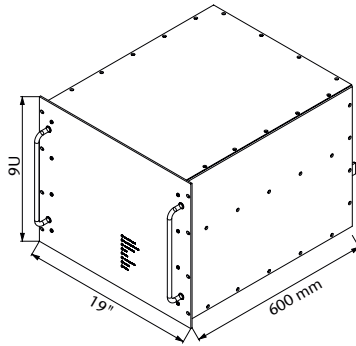
- 1 Select the column for input voltage range.
- 2 Select the row for the appropriate output voltage.
- 3 The intersection of both results in the module required.

For example:

- 1 input voltage = 3 x 400 VAC
- 2 output voltage = 220 VDC @ 120 A
- 3 results in a CW 6688 V module.

¹⁾ for input voltage < 400 VDC the output power needs to be reduced by 20%

²⁾ tba = to be advised



19" Plug-in module / approx. 106 kg

Specifications

Input

Voltage range narrowing of input voltage range optimizes the efficiency (pls. specify), unit switches off at under- and overvoltage

No-load input power. 30 W typical

Switch-on time < 1 s

Hold-up time AC input: 5 ms typical

Immunity

- ESD. acc. to DIN / EN 61000-4-2 level 3

- Fast transients acc. to DIN / EN 61000-4-4 level 3

- Surges acc. to DIN / EN 61000-4-5 level 3

Output

Line regulation ($\pm 10\%$) 0.1 %

Load regulation (10-90 %) 0.2 %

Load transient (10-90-10 %) 6 % typical

Response time to $\pm 1\%$ 10 ms typical

Turn-on rise time Soft-start, 300 ms typical

Ripple. 0.5 % rms

Overload protection current limited to 105 - 110 % of I_{nom}

Overvoltage protection. OVP switches off module with automatic return to operation, after 5 seconds, the unit will remain latched off

Remote sense. standard for CW series up to 150 V output, compensation up to 6 V

General

Efficiency 90 - 95 %

Operating temperature. -20 to $+75$ °C

Load derating 2.5 % / °C from $+55$ °C

Storage temperature -40 to $+85$ °C

Humidity up to 95 % RH, non-condensing

Cooling with water

Temperature coefficient 0.02 % / °C typical

Safety / Construction. acc. to DIN / EN 60950-1: 2003

Protection category. IP 20, others or NEMA upon request

EMI. acc. to EN 55022, class A, optionally class B

MTBF approx. 70,000 h @ 40 °C

Connector terminals / bolts / bars

Marking CE

Options

Input

- Inrush current limiting
- Reverse polarity protection for DC input

Output

- Parallel operation
- Redundant operation
- Inhibit (remote on / off)
- Reducing of current limiting at high ambient temperature

Signals

via open collector or relay contacts

- Power ok (input)
- DC ok (output)
- Sys-reset

Programming

- Output voltage or current via
 - potentiometer
 - analog signal
 - interface RS232 or IEEE488

Battery charger

- Temperature compensated charging voltage
- Automatic / manual selection of charging characteristic

Monitoring

- Input / output voltage or current via
 - analog signal
 - interface RS232 or IEEE488

Mechanics / environment:

- Digital V- and A-meter (see photo)
- Tropical protection
- Extended temperature range to -40 °C