

# Series C / B 5200

## Features

- DC input: 80 - 800 V
- AC input: 3-phase, 47 - 400 Hz
- DC output: 5 / ... / 400 V
- Continuous short circuit protection
- Overvoltage protection
- Thermal shutdown with auto restart
- Industrial grade components
- High efficiency through ZVS topology
- Compact and robust design



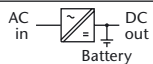
## DC / DC Converters

▶ 4 kW			▶ 5 kW						
Input VDC							Output VDC		
80–160 VDC	Output Amps	160–320 VDC	320–380 <sup>1)</sup> VDC	320–640 VDC	450–800 VDC	Output Amps	Adj.	Range	
C 5250	350	C 5270	C 5280 Z	C 5270 G	C 5270 K	350	5	4.5– 5.5	
C 5251	350	C 5271	C 5281 Z	C 5271 G	C 5271 K	350	9	8– 10	
C 5252	305	C 5272	C 5282 Z	C 5272 G	C 5272 K	350	12	11– 13	
C 5253	250	C 5273	C 5283 Z	C 5273 G	C 5273 K	310	15	14– 16	
C 5254	154	C 5274	C 5284 Z	C 5274 G	C 5274 K	192	24	23– 26	
C 5255	133	C 5275	C 5285 Z	C 5275 G	C 5275 K	167	28	26– 30	
C 5259	73	C 5279	C 5289 Z	C 5279 G	C 5279 K	91	48	45– 55	
C 5256	59	C 5276	C 5286 Z	C 5276 G	C 5276 K	74	60	58– 68	
C 5257	31	C 5277	C 5287 Z	C 5277 G	C 5277 K	39	110	100– 130	
C 5257 J	20	C 5277 J	C 5287 ZJ	C 5277 GJ	C 5277 KJ	25	200	190– 200	
C 5258	16	C 5278	C 5288 Z	C 5278 G	C 5278 K	20	220	200– 250	
C 5258 J	10	C 5278 J	C 5288 ZJ	C 5278 GJ	C 5278 KJ	12.5	400	380– 400	



## AC / DC Converters

▶ 5 kW					
Input VAC, 3-Phase			Output Amps	Output VDC	
3x200 <sup>+15%</sup> <sub>-20%</sub>	3x400 <sup>+15%</sup> <sub>-20%</sub>	3x480 <sup>+10%</sup> <sub>-15%</sub>		Adj.	Range
C 5260 V	C 5280 V	C 5290 V	350	5	4.5– 5.5
C 5261 V	C 5281 V	C 5291 V	350	9	8– 10
C 5262 V	C 5282 V	C 5292 V	350	12	11– 13
C 5263 V	C 5283 V	C 5293 V	310	15	14– 16
C 5264 V	C 5284 V	C 5294 V	192	24	23– 26
C 5265 V	C 5285 V	C 5295 V	167	28	26– 30
C 5269 V	C 5289 V	C 5299 V	91	48	45– 55
C 5266 V	C 5286 V	C 5296 V	74	60	58– 68
C 5267 V	C 5287 V	C 5297 V	39	110	100– 130
C 5267 VJ	C 5287 VJ	C 5297 VJ	25	200	190– 200
C 5268 V	C 5288 V	C 5298 V	20	220	200– 250
C 5268 VJ	C 5288 VJ	C 5298 VJ	12.5	400	380– 400



## Battery Chargers

▶ 5 kW					
Input VAC, 3-Phase			Output Amps	Output VDC	
3x200 <sup>+15%</sup> <sub>-20%</sub>	3x400 <sup>+15%</sup> <sub>-20%</sub>	3x480 <sup>+10%</sup> <sub>-15%</sub>		Nom. Battery Voltage	Range
B 5261 V	B 5281 V	B 5291 V	310	12	12– 16
B 5262 V	B 5282 V	B 5292 V	160	24	24– 32
B 5264 V	B 5284 V	B 5294 V	80	48	48– 64
B 5266 V	B 5286 V	B 5296 V	62	60	60– 80
B 5267 V	B 5287 V	B 5297 V	34	110	110– 145
B 5268 V	B 5288 V	B 5298 V	17	220	220– 290

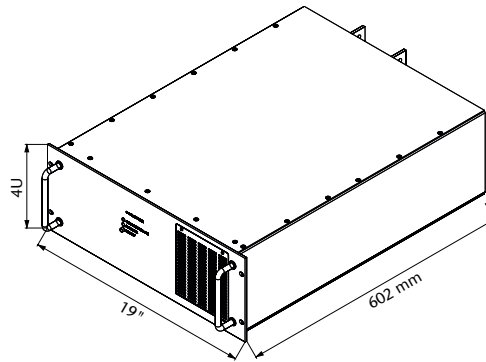
### Assistance in table use:

- 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 = 200 VDC @ 25 A
- 3 results in a C 5287 VJ module.

<sup>1)</sup> input supply from PFC also suitable



19" Plug-in module / 40.0 - 55.0 kg

## Specifications

### Input

Voltage range . . . . . narrowing of input voltage range optimizes the efficiency (pls. specify), punit switches off at under- and overvoltage  
 No-load input power. . . . . 30 W typical  
 Switch-on time . . . . . 0.5 s typical  
 Inrush current . . . . . AC input: limited by thermistor  
 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. . . . .  $\leq 1\% + 30\text{ mV}_{\text{p-p}}$   
 Overload protection . . . . . current limited to 105 - 110 % of  $I_{\text{nom}}$   
 Overvoltage protection . . . . . OVP switches off module with automatic return to operation, after 5 seconds, the unit will remain latched off  
 Remote sense. . . . . standard for C series up to 150 V output, up to 10 % of  $U_{\text{nom}}$  for output < 60 VDC, up to 6 V for output > 60 VDC

### General

Efficiency . . . . . 80 - 95 %  
 Operating temperature. . . . .  $-20$  to  $+75\text{ }^\circ\text{C}$   
 Load derating . . . . .  $2.5\%$  /  $^\circ\text{C}$  from  $+55\text{ }^\circ\text{C}$   
 Storage temperature . . . . .  $-40$  to  $+85\text{ }^\circ\text{C}$   
 Humidity . . . . . up to 95 % RH, non-condensing  
 Cooling . . . . . with fans  
 Temperature coefficient . . . . .  $0.02\%$  /  $^\circ\text{C}$  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 @  $40\text{ }^\circ\text{C}$   
 acc. to MIL - HDBK - 217 E (notice 1)  
 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
- Cooling via temperature-controlled fans
- Increased mechanical strength
- Tropical protection
- Extended temperature range to  $-40\text{ }^\circ\text{C}$