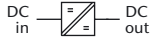


**Features**

- DC input: 10 - 800 V
- AC input: 1 or 3-phase, 47 - 400 Hz
- DC output: 5 / ... / 400 V
- Continuous short circuit protection
- Overvoltage protection with auto restart
- Thermal shutdown with auto restart
- Industrial grade components
- Compact and robust design



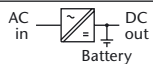
**DC / DC Converters**

▶ 900 W		▶ 1200 W		▶ 1600 W									
Input VDC												Output VDC	
10–16 VDC	Output Amps	20–32 VDC	Output Amps	40–64 VDC	50–80 VDC	80–160 VDC	160–320 VDC	320–380 <sup>1)</sup> VDC	320–640 <sup>3)</sup> VDC	450–800 <sup>3)</sup> VDC	Output Amps	Adj.	Range
C 4501	60	C 4521	90	C 4531	C 4541	C 4551	C 4571	C 4581 Z	C 4571 G	C 4571 K	110	9	8– 10
C 4502	50	C 4522	80	C 4532	C 4542	C 4552	C 4572	C 4582 Z	C 4572 G	C 4572 K	96	12	11– 13
C 4503	42	C 4523	65	C 4533	C 4543	C 4553	C 4573	C 4583 Z	C 4573 G	C 4573 K	80	15	14– 16
C 4504	32	C 4524	45	C 4534	C 4544	C 4554	C 4574	C 4584 Z	C 4574 G	C 4574 K	56	24	23– 26
C 4505	28	C 4525	40	C 4535	C 4545	C 4555	C 4575	C 4585 Z	C 4575 G	C 4575 K	50	28	26– 30
C 4509	16	C 4529	22	C 4539	C 4549	C 4559	C 4579	C 4589 Z	C 4579 G	C 4579 K	30	48	45– 55
C 4506	14	C 4526	18	C 4536	C 4546	C 4556	C 4576	C 4586 Z	C 4576 G	C 4576 K	24	60	58– 68
C 4507	7.2	C 4527	10	C 4537	C 4547	C 4557	C 4577	C 4587 Z	C 4577 G	C 4577 K	13	110	100– 130
C 4507 J	4.4	C 4527 J	6	C 4537 J	C 4547 J	C 4557 J	C 4577 J	C 4587 ZJ	C 4577 GJ	C 4577 KJ	8	200	190– 200
C 4508	3.6	C 4528	5	C 4538	C 4548	C 4558	C 4578	C 4588 Z	C 4578 G	C 4578 K	6.5	220	200– 250
C 4508 J	2.2	C 4528 J	3	C 4538 J	C 4548 J	C 4558 J	C 4578 J	C 4588 ZJ	C 4578 GJ	C 4578 KJ	4	400	380– 400



**AC / DC Converters**

▶ 1600 W								
Input VAC, 1-Phase			Input VAC, 3-Phase			Output Amps	Output VDC	
115 ±20%	230 <sup>+15%</sup> / <sub>-20%</sub>	115 ±20% / <sup>+15%</sup> / <sub>-20%</sub> 230	3x200 <sup>+15%</sup> / <sub>-20%</sub>	3x400 <sup>+15%</sup> / <sub>-20%</sub>	3x480 <sup>+10%</sup> / <sub>-15%</sub>		Adj.	Range
C 4561	C 4581	C 4591	C 4561 V	C 4581 V	C 4591 V	110	9	8– 10
C 4562	C 4582	C 4592	C 4562 V	C 4582 V	C 4592 V	96	12	11– 13
C 4563	C 4583	C 4593	C 4563 V	C 4583 V	C 4593 V	80	15	14– 16
C 4564	C 4584	C 4594	C 4564 V	C 4584 V	C 4594 V	56	24	23– 26
C 4565	C 4585	C 4595	C 4565 V	C 4585 V	C 4595 V	50	28	26– 30
C 4569	C 4589	C 4599	C 4569 V	C 4589 V	C 4599 V	30	48	45– 55
C 4566	C 4586	C 4596	C 4566 V	C 4586 V	C 4596 V	24	60	58– 68
C 4567	C 4587	C 4597	C 4567 V	C 4587 V	C 4597 V	13	110	100– 130
C 4567 J	C 4587 J	C 4597 J	C 4567 VJ	C 4587 VJ	C 4597 VJ	8	200	190– 200
C 4568	C 4588	C 4598	C 4568 V	C 4588 V	C 4598 V	6.5	220	200– 250
C 4568 J	C 4588 J	C 4598 J	C 4568 VJ	C 4588 VJ	C 4598 VJ	4	400	380– 400



**Battery Chargers**

▶ 1600 W								
Input VAC, 1-Phase			Input VAC, 3-Phase			Output Amps	Output VDC	
115 ±20%	230 <sup>+15%</sup> / <sub>-20%</sub>	115 ±20% / <sup>+15%</sup> / <sub>-20%</sub> 230	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 4561	B 4581	B 4591	B 4561 V	B 4581 V	B 4591 V	80	12	12– 16
B 4562	B 4582	B 4592	B 4562 V	B 4582 V	B 4592 V	46	24	24– 32
B 4564	B 4584	B 4594	B 4564 V	B 4584 V	B 4594 V	25	48	48– 64
B 4566	B 4586	B 4596	B 4566 V	B 4586 V	B 4596 V	20	60	60– 80
B 4567	B 4587	B 4597	B 4567 V	B 4587 V	B 4597 V	12	110	110– 145
B 4568	B 4588	B 4598	B 4568 V	B 4588 V	B 4598 V	6	220	220– 290

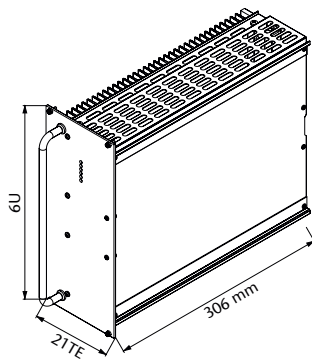
**Assistance in table use:**

- 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.

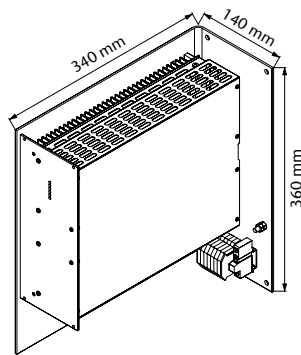
**For example:**

- 1 input voltage = 60 VDC
- 2 output voltage = 15 VDC @ 70 A
- 3 results in a C 4543 module.

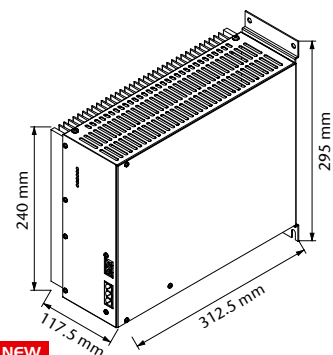
<sup>1)</sup> input supply from PFC also suitable  
<sup>3)</sup> suited for wall-mount, alternatives upon request



**Eurocassette / approx. 6.5 kg**  
(pluggable module for 19" sub-rack)



**Wall mount / approx. 10.0 kg**



**NEW**  
**Chassis mount / approx. 7.5 kg**

## Specifications

### Input

Voltage range . . . . . see table, unit switches off at under- and overvoltage

No-load input power. . . . . 5 - 6 W

Switch-on time . . . . . 1 - 2 s

Inrush current . . . . . AC input: limited by thermistor

Hold-up time . . . . . AC input: 10 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  $\pm 1\%$  . . . . . 2 - 3 ms

Turn-on rise time . . . . . Soft-start, 100 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

Remote sense. . . . . standard for C series, up to 10 % of  $U_{\text{nom}}$  for output < 60 VDC, up to 6 V for output > 60 VDC

### General

Efficiency . . . . . 70 - 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 . . . . . natural convection (external fan recommended)

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. 100,000 h @  $40\text{ }^{\circ}\text{C}$  acc. to MIL - HDBK - 217 E (notice 1)

Connector for eurocassette - std. design . . . . H15 and high current connector for  $I > 50\text{ A}$

Marking . . . . . CE

## Options

### Input

- Inrush current limiting for DC input
- Reverse polarity protection for DC input
- Autoranging for 115 / 230 VAC input

### Output

- Parallel operation
- Redundant operation
- Inhibit (remote on / off)

### 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 card RS232 or IEEE488 (external)

### Battery charger

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

### Monitoring

- Input / output voltage or current via
  - analog signal
  - interface card RS232 or IEEE488 (external)

### Mechanics / environment:

- 19" sub-rack for eurocassette
- Wall mount
- Chassis mount
- Increased mechanical strength
- Tropical protection
- Extended temperature range to  $-40\text{ }^{\circ}\text{C}$