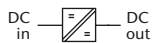


# Series C / B I600

## Features

- DC input: 10 - 380 V
- AC input: 115 / 230 V, 47 - 400 Hz
- DC output: 5 / ... / 400 V
- Continuous short circuit protection
- Overvoltage protection with auto restart
- Industrial grade components
- Compact and robust design



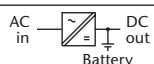
## DC / DC Converters

▶ 750 W		▶ 1000 W		▶ 1200 W								
Input VDC										Output VDC		
10-16 VDC	Output Amps	18-36 VDC	Output Amps	36-75 VDC	45-90 VDC	80-160 VDC	160-320 VDC	320-380 <sup>1)</sup> VDC	Output Amps	Adj.	Range	
C 1600	80	C 1620	120	C 1630	C 1640	C 1650	C 1670	C 1680 Z	160 <sup>2) 3)</sup>	5	4.5- 5.5	
C 1601	50	C 1621	76	C 1631	C 1641	C 1651	C 1671	C 1681 Z	95	9	8- 10	
C 1602	48	C 1622	66	C 1632	C 1642	C 1652	C 1672	C 1682 Z	82	12	11- 13	
C 1603	40	C 1623	50	C 1633	C 1643	C 1653	C 1673	C 1683 Z	67	15	14- 16	
C 1604	28	C 1624	36	C 1634	C 1644	C 1654	C 1674	C 1684 Z	46	24	23- 26	
C 1605	26	C 1625	30	C 1635	C 1645	C 1655	C 1675	C 1685 Z	40	28	26- 30	
C 1609	14	C 1629	16	C 1639	C 1649	C 1659	C 1679	C 1689 Z	20	48	45- 55	
C 1606	11	C 1626	13	C 1636	C 1646	C 1656	C 1676	C 1686 Z	17	60	58- 68	
C 1607	6	C 1627	6.6	C 1637	C 1647	C 1657	C 1677	C 1687 Z	9	110	100- 130	
C 1607 J	3.5	C 1627 J	5	C 1637 J	C 1647 J	C 1657 J	C 1677 J	C 1687 ZJ	6	200	190-200	
C 1608	3	C 1628	3.2	C 1638	C 1648	C 1658	C 1678	C 1688 Z	5	220	200-250	
C 1608 J	1.8	C 1628 J	2.5	C 1638 J	C 1648 J	C 1658 J	C 1678 J	C 1688 ZJ	3	400	380-400	



## AC / DC Converters

▶ 1200 W						
Input VAC, 1-Phase				Output VDC		
115 ±20%	230 <sup>+15%</sup> <sub>-20%</sub>	115 ±20% / 230 <sup>+15%</sup> <sub>-20%</sub>	Output Amps	Adj.	Range	
C 1660	C 1680	C 1690	160 <sup>2) 3)</sup>	5	4.5- 5.5	
C 1661	C 1681	C 1691	95	9	8- 10	
C 1662	C 1682	C 1692	82	12	11- 13	
C 1663	C 1683	C 1693	67	15	14- 16	
C 1664	C 1684	C 1694	46	24	23- 26	
C 1665	C 1685	C 1695	40	28	26- 30	
C 1669	C 1689	C 1699	20	48	45- 55	
C 1666	C 1686	C 1696	17	60	58- 68	
C 1667	C 1687	C 1697	9	110	100- 130	
C 1667 J	C 1687 J	C 1697 J	6	200	190-200	
C 1668	C 1688	C 1698	5	220	200-250	
C 1668 J	C 1688 J	C 1698 J	3	400	380-400	



## Battery Chargers

▶ 800 W						
Input VAC, 1-Phase				Output VDC		
115 ±20%	230 <sup>+15%</sup> <sub>-20%</sub>	115 ±20% / 230 <sup>+15%</sup> <sub>-20%</sub>	Output Amps	Nom. Battery Voltage	Range	
B 1661	B 1681	B 1691	67	12	12- 16	
B 1662	B 1682	B 1692	38	24	24- 32	
B 1664	B 1684	B 1694	18	48	48- 64	
B 1666	B 1686	B 1696	14	60	60- 80	
B 1667	B 1687	B 1697	8	110	110- 145	
B 1668	B 1688	B 1698	4	220	220- 290	

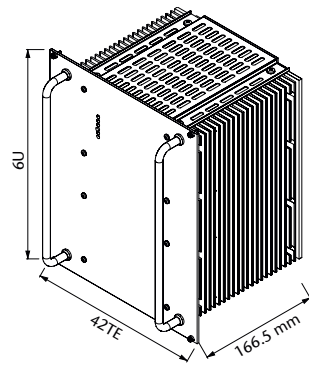
### Assistance in table use:

- 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.

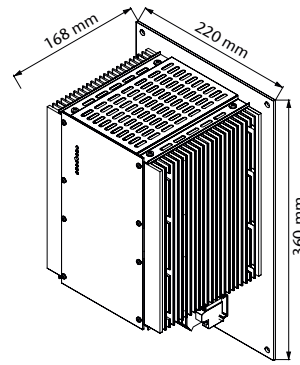
### For example:

- 1 input voltage = 12 VDC
- 2 output voltage = 110 VDC @ 6 A
- 3 results in a C 1607 module.

- 1) input supply from PFC also suitable
- 2) external fan recommended
- 3) suited for wall-mount, alternatives upon request



**Eurocassette / approx. 6.0 kg**  
(pluggable module for 19" sub-rack)



**Wall mount / approx. 8.5 kg**

## Specifications

### Input

Voltage range . . . . . see table, unit switches off at under- and overvoltage  
 No-load input power. . . . . 10 - 12 W  
 Switch-on time . . . . . 500 ms  
 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. . . . .  $\leq 1\% + 30\text{ mV}_{p-p}$   
 Overload protection . . . . . current limited to 105 - 110 % of  $I_{nom}$   
 Overvoltage protection. . . . . OVP switches off module with automatic return to operation  
 Remote sense. . . . . standard for C series, up to 10 % of  $U_{nom}$  for output < 60 VDC, up to 6 V for output > 60 VDC

### General

Efficiency . . . . . 70 - 90 %  
 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  
 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  
 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
- Increased mechanical strength
- Tropical protection
- Extended temperature range to  $-40\text{ }^\circ\text{C}$