

Series C / CP / B / BP 4700

Features

- DC input: 10 - 800 V
- AC input: 1 or 3-phase, 47 - 400 Hz or with PFC, 47 - 65 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



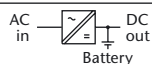
DC / DC Converters

▶ 1200 W		▶ 1700 W		▶ 2500 W			▶ 2500 W							
Input VDC													Output VDC	
10–16 VDC	Output Amps	20–32 VDC	Output Amps	40–64 VDC	50–80 VDC	Output Amps	80–160 VDC	160–320 VDC	320–380 ¹⁾ VDC	320–640 ³⁾ VDC	450–800 ³⁾ VDC	Output Amps	Adj.	Range
C 4700	100	C 4720	160 ³⁾	C 4730	C 4740	180 ³⁾	C 4750	C 4770	C 4780 Z	C 4770 G	C 4770 K	180 ³⁾	5	4.5– 5.5
C 4701	80	C 4721	110	C 4731	C 4741	140	C 4751	C 4771	C 4781 Z	C 4771 G	C 4771 K	150	9	8– 10
C 4702	68	C 4722	95	C 4732	C 4742	120	C 4752	C 4772	C 4782 Z	C 4772 G	C 4772 K	130	12	11– 13
C 4703	58	C 4723	80	C 4733	C 4743	100	C 4753	C 4773	C 4783 Z	C 4773 G	C 4773 K	110	15	14– 16
C 4704	46	C 4724	60	C 4734	C 4744	75	C 4754	C 4774	C 4784 Z	C 4774 G	C 4774 K	80	24	23– 26
C 4705	40	C 4725	50	C 4735	C 4745	65	C 4755	C 4775	C 4785 Z	C 4775 G	C 4775 K	70	28	26– 30
C 4709	22	C 4729	30	C 4739	C 4749	38	C 4759	C 4779	C 4789 Z	C 4779 G	C 4779 K	40	48	45– 55
C 4706	18	C 4726	25	C 4736	C 4746	31	C 4756	C 4776	C 4786 Z	C 4776 G	C 4776 K	33	60	58– 68
C 4707	10	C 4727	13	C 4737	C 4747	18	C 4757	C 4777	C 4787 Z	C 4777 G	C 4777 K	20	110	100– 130
C 4707 J	6	C 4727 J	7	C 4737 J	C 4747 J	10	C 4757 J	C 4777 J	C 4787 ZJ	C 4777 GJ	C 4777 KJ	10	200	190– 200
C 4708	5	C 4728	7	C 4738	C 4748	10	C 4758	C 4778	C 4788 Z	C 4778 G	C 4778 K	10	220	200– 250
C 4708 J	3	C 4728 J	3.5	C 4738 J	C 4748 J	5	C 4758 J	C 4778 J	C 4788 ZJ	C 4778 GJ	C 4778 KJ	5	400	380– 400



AC / DC Converters

▶ 1700 W		▶ 2500 W							
Input VAC, 1-Phase					Input VAC, 3-Phase			Output Amps	Output VDC
100–240 ±10% with PFC	Output Amps	115 ±20%	230 ^{+15%} _{–20%}	115 ±20% / 230 ^{+15%} _{–20%}	3x200 ^{+15%} _{–20%}	3x400 ^{+15%} _{–20%}	3x480 ^{+10%} _{–15%}		Adj. Range
CP 4790	180 ³⁾	C 4760	C 4780	C 4790	C 4760 V	C 4780 V	C 4790 V	180 ³⁾	5 4.5– 5.5
CP 4791	150	C 4761	C 4781	C 4791	C 4761 V	C 4781 V	C 4791 V	150	9 8– 10
CP 4792	120	C 4762	C 4782	C 4792	C 4762 V	C 4782 V	C 4792 V	130	12 11– 13
CP 4793	100	C 4763	C 4783	C 4793	C 4763 V	C 4783 V	C 4793 V	110	15 14– 16
CP 4794	70	C 4764	C 4784	C 4794	C 4764 V	C 4784 V	C 4794 V	80	24 23– 26
CP 4795	60	C 4765	C 4785	C 4795	C 4765 V	C 4785 V	C 4795 V	70	28 26– 30
CP 4799	35	C 4769	C 4789	C 4799	C 4769 V	C 4789 V	C 4799 V	40	48 45– 55
CP 4796	25	C 4766	C 4786	C 4796	C 4766 V	C 4786 V	C 4796 V	33	60 58– 68
CP 4797	14	C 4767	C 4787	C 4797	C 4767 V	C 4787 V	C 4797 V	20	110 100– 130
CP 4797 J	7	C 4767 J	C 4787 J	C 4797 J	C 4767 VJ	C 4787 VJ	C 4797 VJ	10	200 190– 200
CP 4798	7	C 4768	C 4788	C 4798	C 4768 V	C 4788 V	C 4798 V	10	220 200– 250
CP 4798 J	3.5	C 4768 J	C 4788 J	C 4798 J	C 4768 VJ	C 4788 VJ	C 4798 VJ	5	400 380– 400



Battery Chargers

▶ 1700 W		▶ 2500 W							
Input VAC, 1-Phase					Input VAC, 3-Phase			Output Amps	Output VDC
100–240 ±10% with PFC	Output Amps	115 ±20%	230 ^{+15%} _{–20%}	115 ±20% / 230 ^{+15%} _{–20%}	3x200 ^{+15%} _{–20%}	3x400 ^{+15%} _{–20%}	3x480 ^{+10%} _{–15%}		Nom. Battery Voltage Range
BP 4791	100	B 4761	B 4781	B 4791	B 4761 V	B 4781 V	B 4791 V	110	12 12– 16
BP 4792	56	B 4762	B 4782	B 4792	B 4762 V	B 4782 V	B 4792 V	70	24 24– 32
BP 4794	28	B 4764	B 4784	B 4794	B 4764 V	B 4784 V	B 4794 V	35	48 48– 64
BP 4796	22	B 4766	B 4786	B 4796	B 4766 V	B 4786 V	B 4796 V	30	60 60– 80
BP 4797	12	B 4767	B 4787	B 4797	B 4767 V	B 4787 V	B 4797 V	18	110 110– 145
BP 4798	6	B 4768	B 4788	B 4798	B 4768 V	B 4788 V	B 4798 V	9	220 220– 290

Assistance in table use:

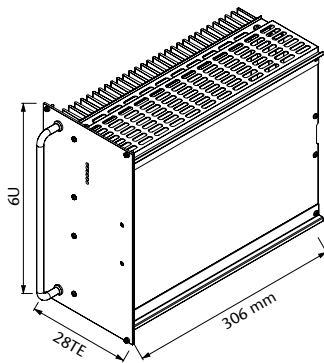
- 1 Select the column for input voltage range.
- 2 Select the row for the appropriate output voltage.
- 3 The intersection of both results in the module required.

For example:

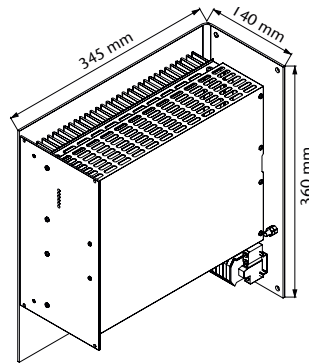
- 1 input voltage = 3 x 400 VAC
- 2 output voltage = 220 VDC @ 10 A
- 3 results in a C 4788 V module.

¹⁾ input supply from PFC also suitable

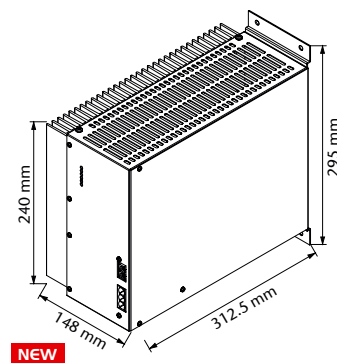
³⁾ suited for wall-mount, alternatives upon request



Eurocassette / approx. 9.0 kg
(pluggable module for 19" sub-rack)



Wall mount / approx. 13.0 kg



Chassis mount / approx. 10.0 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
Power factor correction for CP and BP series,
acc. to EN 61000-3-2 class D

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_{nom}
Overvoltage protection OVP switches off module
with automatic return to operation
Remote sense standard for C and CP series, up to
10 % of U_{nom} for output < 60 VDC,
up to 6 V for output > 60 VDC

General

Efficiency 70 - 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 natural convection
(external fan recommended)
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. 100,000 h @ 40 °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
- 19" sub-rack for eurocassette version
- Increased mechanical strength
- Tropical protection
- Extended temperature range to -40 °C