

Series C / CP / B / BP I300

Features

- DC input: 10 - 380 V
- AC input: 115 / 230 V, 47 - 400 Hz or with PFC, 47 - 65 Hz
- DC output: 5 / ... / 250 V
- Continuous short circuit protection
- Overvoltage protection with auto restart
- Industrial grade components
- Compact and robust design



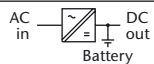
DC / DC Converters

| ▶ 250 W | | ▶ 300 W | | ▶ 400 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 ¹⁾ VDC | Output Amps | Adj. | Range |
| C 1300 | 35 | C 1320 | 45 | C 1330 | C 1340 | C 1350 | C 1370 | C 1380 Z | 50 | 5 | 4.5– 5.5 |
| C 1301 | 24 | C 1321 | 30 | C 1331 | C 1341 | C 1351 | C 1371 | C 1381 Z | 35 | 9 | 8– 10 |
| C 1302 | 20 | C 1322 | 25 | C 1332 | C 1342 | C 1352 | C 1372 | C 1382 Z | 30 | 12 | 11– 13 |
| C 1303 | 16 | C 1323 | 21 | C 1333 | C 1343 | C 1353 | C 1373 | C 1383 Z | 25 | 15 | 14– 16 |
| C 1304 | 10 | C 1324 | 13 | C 1334 | C 1344 | C 1354 | C 1374 | C 1384 Z | 15 | 24 | 23– 26 |
| C 1305 | 8.5 | C 1325 | 11 | C 1335 | C 1345 | C 1355 | C 1375 | C 1385 Z | 13 | 28 | 26– 30 |
| C 1309 | 5 | C 1329 | 6 | C 1339 | C 1349 | C 1359 | C 1379 | C 1389 Z | 7.3 | 48 | 45– 55 |
| C 1306 | 4 | C 1326 | 5 | C 1336 | C 1346 | C 1356 | C 1376 | C 1386 Z | 6 | 60 | 58– 68 |
| C 1307 | 2 | C 1327 | 2.5 | C 1337 | C 1347 | C 1357 | C 1377 | C 1387 Z | 3 | 110 | 100– 130 |
| C 1308 | 1 | C 1328 | 1.25 | C 1338 | C 1348 | C 1358 | C 1378 | C 1388 Z | 1.5 | 220 | 200– 250 |



AC / DC Converters

| ▶ 400 W | | | | | | | | |
|-----------------------|----------|-------------------------------------|--|-------------|------------|----------|--|--|
| Input VAC, 1-Phase | | | | | Output VDC | | | |
| 100–240 ±10% with PFC | 115 ±20% | 230 ^{+15%} _{-20%} | 115 ±20% / 230 ^{+15%} _{-20%} | Output Amps | Adj. | Range | | |
| CP 1390 | C 1360 | C 1380 | C 1390 | 50 | 5 | 4.5– 5.5 | | |
| CP 1391 | C 1361 | C 1381 | C 1391 | 35 | 9 | 8– 10 | | |
| CP 1392 | C 1362 | C 1382 | C 1392 | 30 | 12 | 11– 13 | | |
| CP 1393 | C 1363 | C 1383 | C 1393 | 25 | 15 | 14– 16 | | |
| CP 1394 | C 1364 | C 1384 | C 1394 | 15 | 24 | 23– 26 | | |
| CP 1395 | C 1365 | C 1385 | C 1395 | 13 | 28 | 26– 30 | | |
| CP 1399 | C 1369 | C 1389 | C 1399 | 7.3 | 48 | 45– 55 | | |
| CP 1396 | C 1366 | C 1386 | C 1396 | 6 | 60 | 58– 68 | | |
| CP 1397 | C 1367 | C 1387 | C 1397 | 3 | 110 | 100– 130 | | |
| CP 1398 | C 1368 | C 1388 | C 1398 | 1.5 | 220 | 200– 250 | | |



Battery Chargers

| ▶ 400 W | | | | | | | | |
|-----------------------|----------|-------------------------------------|--|-------------|----------------------|----------|--|--|
| Input VAC, 1-Phase | | | | | Output VDC | | | |
| 100–240 ±10% with PFC | 115 ±20% | 230 ^{+15%} _{-20%} | 115 ±20% / 230 ^{+15%} _{-20%} | Output Amps | Nom. Battery Voltage | Range | | |
| BP 1391 | B 1361 | B 1381 | B 1391 | 25 | 12 | 12– 16 | | |
| BP 1392 | B 1362 | B 1382 | B 1392 | 12 | 24 | 24– 32 | | |
| BP 1394 | B 1364 | B 1384 | B 1394 | 6 | 48 | 48– 64 | | |
| BP 1396 | B 1366 | B 1386 | B 1396 | 4.5 | 60 | 60– 80 | | |
| BP 1397 | B 1367 | B 1387 | B 1397 | 2.7 | 110 | 110– 145 | | |
| BP 1398 | B 1368 | B 1388 | B 1398 | 1.4 | 220 | 220– 290 | | |

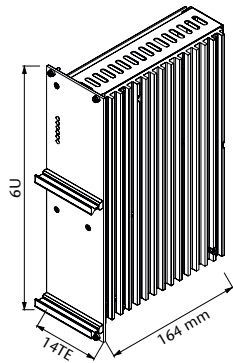
Assistance in table use:

- 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.

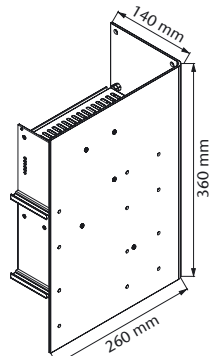
For example:

- 1 input voltage = 110 VDC
- 2 output voltage = 24 VDC @15 A
- 3 results in a C 1354 module.

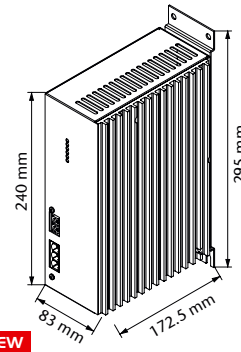
¹⁾ input supply from PFC also suitable



Eurocassette / approx. 2.0 kg
(pluggable module for 19" sub-rack)



Wall mount / approx. 5.0 kg



NEW
Chassis mount / approx. 2.4 kg

Specifications

Input

Voltage range see table, unit switches off at under- and overvoltage
 No-load input power. 5 - 6 W
 Switch-on time 500 ms
 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

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. 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 - 92 %
 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
 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. 120,000 h @ 40°C acc. to MIL - HDBK - 217 E (notice 1)
 Connector for eurocassette - std. design H 15
 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 (external)

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 °C