

POWER SUPPLY 1-PHASE, 48 V DC DIMENSION C SERIES

CPS20.481

POWER SUPPLY 48VDC 480W 10A

- Output current of 10 A
- Up to 94% efficiency
- Active PFC
- High short-circuit currents
- Hiccup Plus



PRODUCT DESCRIPTION

Puls Dimension C-series stands for cost optimization without compromising quality, reliability or performance. CPS20.481 high efficiency over a wide load range, which results in reduced power consumption and longer life regardless of load current. An average efficiency is 92.8% with a peak value of 93.9%. In addition, power losses very low at idle, only 2.4 W at 230 V ac.

Short-circuit currents. CPS20 can leave short-circuit currents which is 4 times the nominal current for 15 ms, which helps secondary fuses and achieve selectivity.

Hiccup^{Plus}.

With new pulse short circuit protection you get optimum protection. The unit leaves a very high short circuit that solves fuses and provides sufficient starting current for example dc motors. If the output voltage drops below 25 V DC will be left 2x rated current for 2 seconds, then close the unit by the end to make a new restart attempts after about 18 seconds. This feature ensures a high short-circuit/overload current while avoiding a constant high current that can lead to heat and component damage.

Technical advantages. CPS20 has active power factor correction (PFC) and active power inrush protection that effectively reduces start currents which are ideal if several units are connected in the same phase or if the supply is current limited through example. AC UPS. The protection is always active, regardless of the temperature. DC-OK output, wide temperature range, a large number of approvals and transient filter which ensures operation in störrik electrical environment makes the unit suitable for virtually all installations.

For approved cooling, we recommend free space of 40 mm above. 20 mm under and 5 mm on the sides. (15 mm if there is another power supply)

| | | | | |
|----------------------|----------------------|---------------------|---------------------|---------------------|
| Stripping sec. fuses | | | | |
| | 0.75 mm ² | 1.0 mm ² | 1.5 mm ² | 2.5 mm ² |
| C-2A | 74 m | 98 m | 134 m | 198 m |
| C-3A | 57 m | 74 m | 106 m | 168 m |
| C-4A | 43 m | 56 m | 73 m | 114 m |
| C-6A | 11 m | 16 m | 23 m | 33 m |
| C-8A | 1 m | 1 m | 2 m | 3 m |
| B-6A | 19 m | 36 m | 51 m | 82 m |
| B-10A | 9 m | 12 m | 18 m | 27 m |
| B-13A | 7 m | 10 m | 16 m | 24 m |

SPECIFICATIONS

| | |
|--|------------|
| Type Power Supply | AC-DC |
| Input voltage range | Wide-range |
| Power Consumption At 120 V AC | 4,36 A |
| Input voltage AC | 100-240 V |
| Input voltage ac min | 100 V AC |
| Input voltage ac max | 264 V AC |
| Input current at 230 V ac typical | 7 A |
| Number of phases | 1 |
| Power Consumption At 230 V AC | 2,33 A |
| Supply Frequency | 50-60 ±6 % |
| Inrush current at 120 V ac typical | 9 A |
| Power Factor at 120 V AC, full load. Typical | 0,99 |
| Power Factor at 230 V AC, full load. Typical | 0,95 |
| Ripple. max | 50 mV pp |
| Output voltage min | 48 V DC |
| Power Reduction Of 60 To 70 ° C | 12 W/°C |
| Temperature Range Without Derating From | -25 °C |
| Output voltage | 48 V DC |

| | |
|---|--|
| Output voltage max | 56 V DC |
| Effect | 480 W |
| Output Current | 10 A |
| Temperature Range Without Derating To | 60 °C |
| Lifetime at 120 V ac, full load and +40 ° C | 70000 h |
| MTBF (IEC 61709) 230 V AC, Maximum Load, 40 ° C | 537000 h |
| Efficiency At 230 V AC, full load. Typical | 93,9 % |
| Efficiency At 230 V AC. Typical | 92,8 % |
| Lifetime at 230 V ac, full load and +40 ° C | 87000 h |
| Efficiency At 120 V AC, full load. Typical | 92,6 % |
| Weight | 1 kg |
| Depth | 117 mm |
| Width | 65 mm |
| Height | 124 mm |
| Clamp type | Screw |
| IP Class | IP20 |
| DC relay output | Yes |
| Hold-up time at 120 V AC, full load. Typical. | 26 ms |
| Series | Dimension C |
| Hold-up time at 230 V AC, full load. Typical. | 26 ms |
| Approvals | ABS, ATEX, CB, CE, CSA US, cRUus, cULus, GL, IECEx |
| Material Protection | Aluminium |
| Active Transient | Yes |

Fig. 6-3 Short-circuit on output, Hiccup^{PLUS} mode, typ.

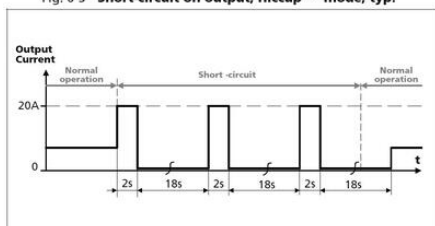
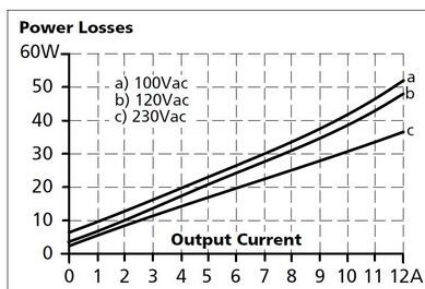


Fig. 9-2 Losses vs. output current at 48V, typ.



Maximal wire length¹⁾ for a fast (magnetic) tripping:

| | 0.75mm ² | 1.0mm ² | 1.5mm ² | 2.5mm ² |
|-------|---------------------|--------------------|--------------------|--------------------|
| C-2A | 74m | 98m | 134m | 198m |
| C-3A | 57m | 74m | 106m | 168m |
| C-4A | 43m | 56m | 73m | 114m |
| C-6A | 11m | 16m | 23m | 33m |
| C-8A | 1m | 1m | 2m | 3m |
| B-6A | 19m | 36m | 51m | 82m |
| B-10A | 9m | 12m | 18m | 27m |
| B-13A | 7m | 10m | 16m | 24m |

Fig. 15-1 **Output current vs. ambient temp.**

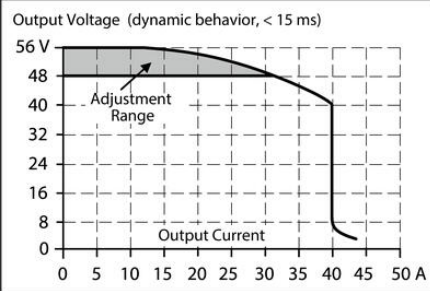
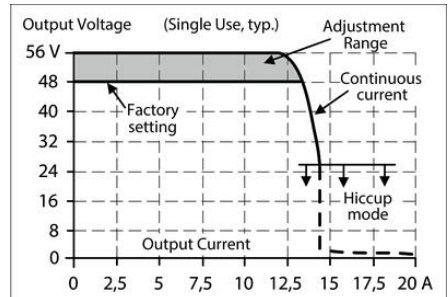
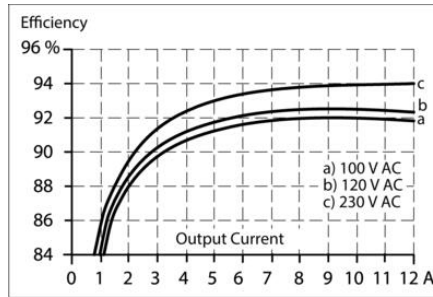
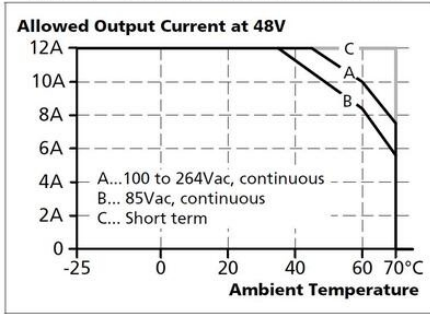
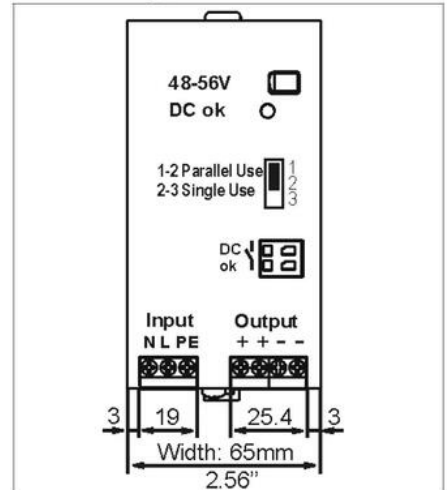


Fig. 13-1 **Front side**



Fig. 20-1 **Front view**



Side view

