# POWER SUPPLY 1-PHASE, 36 V DC DIMENSION C SERIES

CPS20.361
SPÄNN.AGG.115/230V, 36VDC/13A


- Output current of 13.3 A
- Up to 94.2% accuracy
- Active PFC
- High short-circuit currents
- Hiccup Plus

## PRODUCT DESCRIPTION

Puls Dimension C-series stands for cost optimization without compromising quality, reliability or performance. CPS20.361 high efficiency over a wide load range, which results in reduced power consumption and longer life regardless of load current. An average efficiency is 93.2% with a peak value of 94.3%. In addition, power losses very low at idle, only 2.8 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 20 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 interference prone electrical environment makes the unit suitable for virtually all installations.

For good ventilation, we recommend a clearance of 40 mm over 20 mm below and 5 mm on the sides. (15 mm on the sides of adjacent product is a heat source, such as another power supply.)

| Stripping sec. fuses | | | | |
|---|---|---|---|---|
| | 0.75 $mm^2$ | 1.0 $mm^2$ | 1.5 $mm^2$ | 2.5 $mm^2$ |
| C-2A | 51 m | 69 m | 100 m | 153 m |
| C-3A | 43 m | 57 m | 83 m | 128 m |
| C-4A | 32 m | 44 m | 64 m | 99 m |
| C-6A | 8 m | 13 m | 19 m | 31 m |
| C-8A | 3 m | 5 m | 7 m | 10 m |
| C-10A | 2 m | 4 m | 6 m | 8 m |
| C-13A | - | 1 m | 2 m | 5 m |
| B-6A | 29 m | 39 m | 54 m | 79 m |
| B-10A | 8 m | 11 m | 19 m | 24 m |
| B-13A | 7 m | 9 m | 14 m | 23 m |
| B-16A | 1 m | 1 m | 2 m | 4 m |

## SPECIFICATIONS

| | |
|---|---|
| **Input voltage range** | Wide-range |
| **Number of phases** | 1 |
| **Input voltage AC** | 100-240 V |
| **Input voltage ac min** | 100 V AC |
| **Input voltage ac max** | 264 V AC |
| **Inrush current at 120 V ac typical** | 9 A |
| **Input current at 230 V ac typical** | 7 A |
| **Power Factor at 120 V AC, full load. Typical** | 0.99 |
| **Power Factor at 230 V AC, full load. Typical** | 0.95 |
| **Supply Frequency** | 50-60 ±6 % |
| **Power Consumption At 120 V AC** | 4.36 A |
| **Power Consumption At 230 V AC** | 2.33 A |
| **Type Power Supply** | AC-DC |

| | |
|---|---|
| **Output voltage** | 36 V DC |
| **Output voltage min** | 36 V DC |
| **Output voltage max** | 42 V DC |

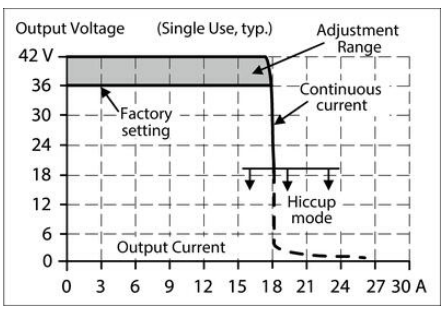
| | |
|---|---|
| **Output Current** | 13.3 A |
| **Effect** | 480 W |
| **Power Reduction Of 60 To 70 ° C** | 12 W/°C |
| **Ripple. max** | 100 mV pp |
| **Temperature Range Without Derating From** | -25 °C |
| **Temperature Range Without Derating To** | 60 °C |

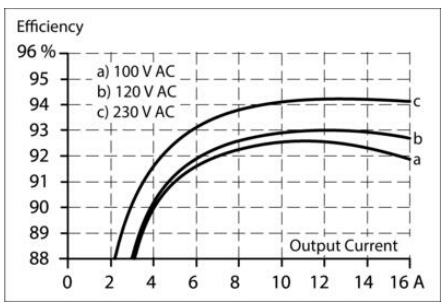
| | |
|---|---|
| **Efficiency At 120 V AC, full load. Typical** | 93 % |
| **Efficiency At 230 V AC. Typical** | 93.2 % |
| **Efficiency At 230 V AC, full load. Typical** | 94.3 % |
| **Lifetime at 120 V ac, full load and +40 ° C** | 85000 h |
| **Lifetime at 230 V ac, full load and +40 ° C** | 101000 h |
| **MTBF (IEC 61709) 230 V AC, Maximum Load, 40 ° C** | 537000 h |

| | |
|---|---|
| **Width** | 65 mm |
| **Height** | 124 mm |
| **Depth** | 127 mm |
| **Weight** | 1 kg |

| | |
|---|---|
| **Clamp type** | Screw on |

| | |
|---|---|
| **Series** | Dimension C |
| **Approvals** | ABS, ATEX, CB, CE, CSA US, cRUus, cULus, GL, IECEx |
| **DC relay output** | Yes |
| **Material Protection** | Aluminium |
| **Hold-up time at 120 V AC, full load. Typical.** | 26 ms |
| **Hold-up time at 230 V AC, full load. Typical.** | 26 ms |
| **IP Class** | IP20 |
| **Active Transient** | Yes |



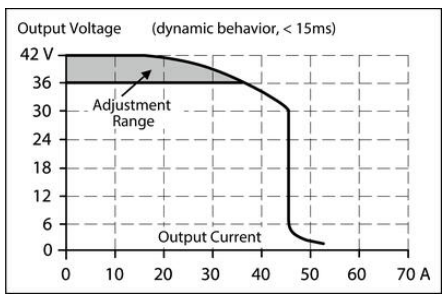



Fig. 15-1 **Output current vs. ambient temp.**

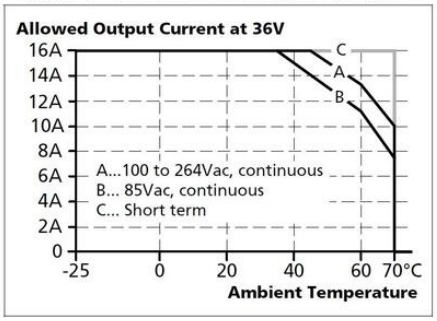
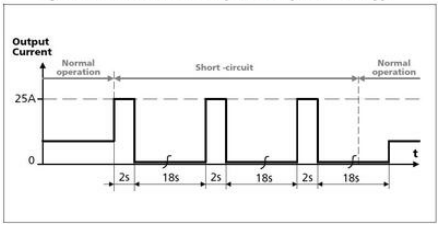



Fig. 6-3 **Short-circuit on output, Hiccup$^{PLUS}$ mode, typ.**




Maximal wire length*) for a fast (magnetic) tripping:

| | 0.75mm² | 1.0mm² | 1.5mm² | 2.5mm² |
|---|---|---|---|---|
| **C-2A** | 51m | 69m | 100m | 153m |
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| **C-13A** | - | 1m | 2m | 5m |
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Fig. 9-2 **Losses vs. output current at 36V, typ.**

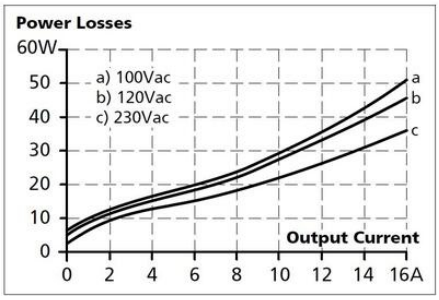



Fig. 13-1 **Front side**

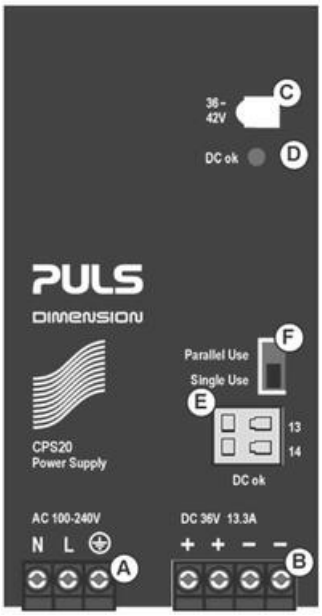
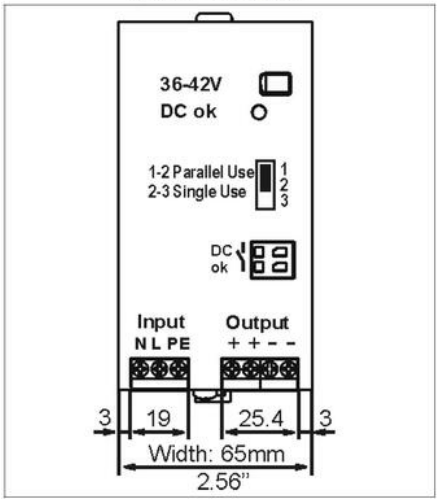
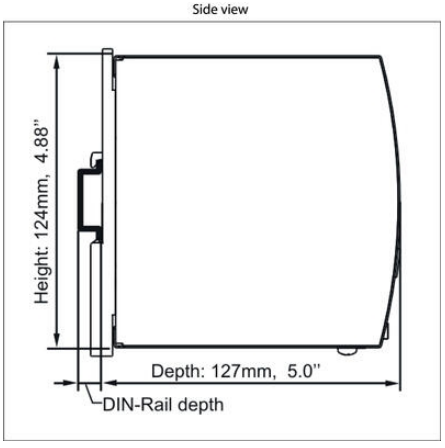
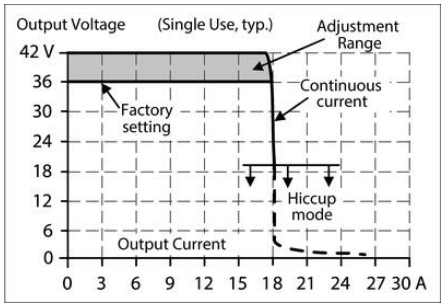
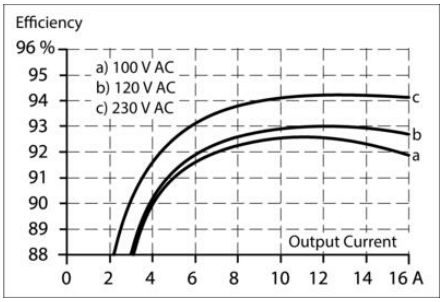



Fig. 20-1 **Front view**



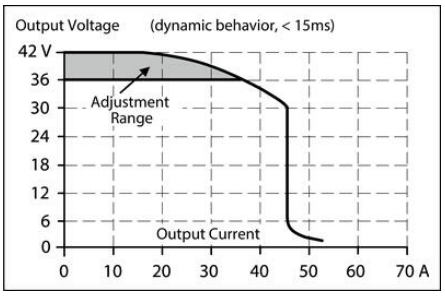
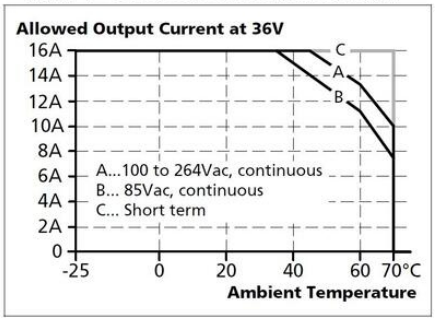



Fig. 15-1 **Output current vs. ambient temp.**

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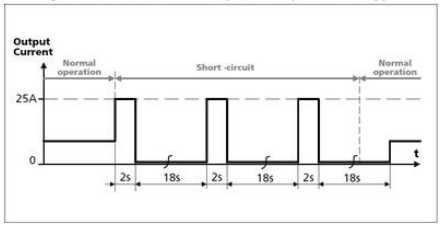


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Fig. 9-2 **Losses vs. output current at 36V, typ.**

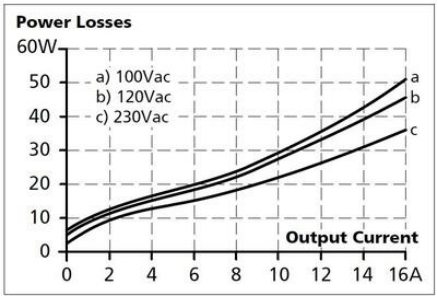



Fig. 13-1 **Front side**

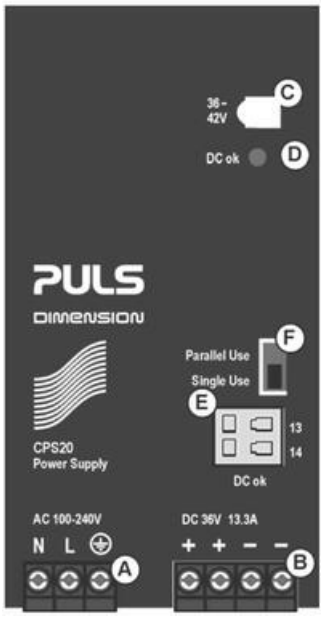
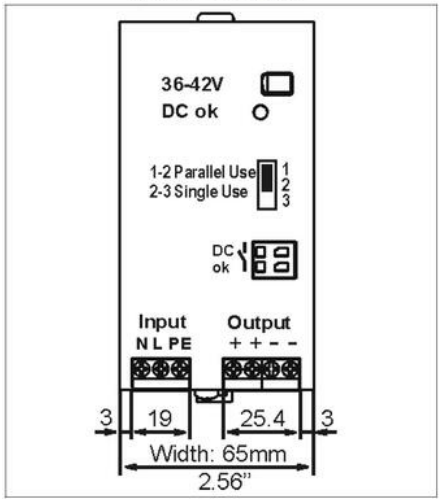



Fig. 20-1 **Front view**




Side view