

POWER SUPPLY 1-PHASE WITH BUILT IN REDUNDANCY, 24 V DC DIMENSION C SERIES, GENERATION 2

CP20.241-R1

Redundant PSU 100-240 V AC/24 V DC, 20 A

- Output current of 10 or 20 A
- Efficiency up to 95.2%
- 20% power reserves
- Built-in decoupling mosfet for 1+1 and n+1 redundancy
- Hot-Swap



PRODUCT DESCRIPTION

Click below link to download the white paper

[Efficient redundancy for power supplies](#)

Also visit our page for [Redundancy Modules](#)

The Dimension CP-Series are cost optimized power supplies without compromising quality, reliability and performance. The most outstanding features of the CP20.241-R1/-R2/-R3 units are the high efficiency, electronic inrush current limitation, active PFC, wide operational temperature range and the extraordinary small size. The units include a decoupling MOSFET for building 1+1 or n+1 redundant power supply systems.

These redundancy power supplies come with three connection terminal options; screw terminals, spring-clamp terminals or plug connector terminals which allows replacement on an active application.

CP20.242-R2 version feature an enhanced DC input voltage range and the CP20.241-R2-C1 is additionally equipped with conformal coated pc-boards.

CP10.242-R2 version feature an enhanced DC input voltage range.

With high immunity to transients and power surges, low electromagnetic emission, a DC-OK signal contact for remote monitoring, and a large international approval package, makes this unit suitable for nearly every application.

- AC 100-240V Wide-range Input
- Width only 39 or 48 mm
- Built-in Decoupling Mosfet for 1+1 and n+1 Redundancy
- Efficiency up to 94.7%
- 20% Output Power Reserves
- Safe HiccupPLUS Overload Mode
- Easy Fuse Breaking – 3 times nominal current for 12ms
- Active Power Factor Correction (PFC)
- Minimal Inrush Current Surge
- DC-OK Relay Contact
- Current Sharing Feature Included
- 3 Year Warranty

TECHNICAL DATA

INPUT DATA

Input voltage ac	100-240 V
Input voltage ac min	85 V AC

Input voltage ac max	264 V AC
Input voltage dc	110-150 V
Input voltage dc min	88 V DC
Input voltage dc max	180 V DC
Inrush current at 120 V ac typical	10 A
Inrush current at 230 V ac typical	4.5 A
Input voltage range	Wide-range
Power factor at 120 V ac, full load. Typical	0.99
Power factor at 230 V ac, full load. Typical	0.98
Number of phases	1

OUTPUT DATA

Output voltage	24 V DC
Output voltage min	24 V DC
Output voltage max	28 V DC
Output current	20 A
Power	480 W

EFFICIENCY / LIFETIME / MTBF

Efficiency at 120 V ac, full load, typical	93.8 %
Efficiency at 230 V ac, typical	94.6 %
Efficiency at 230 V ac, full load, typical	95.2 %
Lifetime at 120 V ac, full load and +40 ° C	53000 h
Lifetime at 230 V ac, full load and +40 ° C	90000 h
MTBF (IEC 61709) 230 V ac, max load, 40 ° C	543000 h

DIMENSIONS

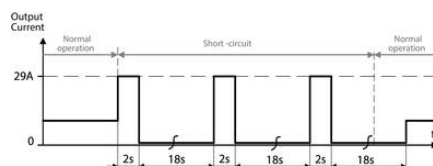
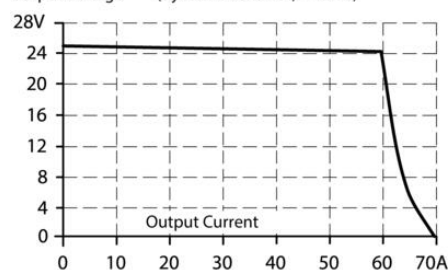
Width	48 mm
Height	124 mm
Depth	127 mm
Weight	0.83 kg

OTHER

Approvals	ATEX, CB, CE, CSA US, cRUus, cULus, IECEx
Hold time at 120 V ac, typical full load	32 ms
Hold time at 230 V ac, typical full load	32 ms
IP class	IP20

Clamp type	Spring-clamp
Material protection	Aluminium
Supply frequency	50-60 ±6 %
Ripple max	100 mV pp
Series	Dimension C
Power consumption 120 V ac	4.28 A
Power consumption 230 V ac	2.25 A
Power drop from +60 °C to + 70 °C	12 W/°C
Temperature min without derating	-40 °C
Temperature max without derating	60 °C
Active Transient	Yes
DC relay output	Yes

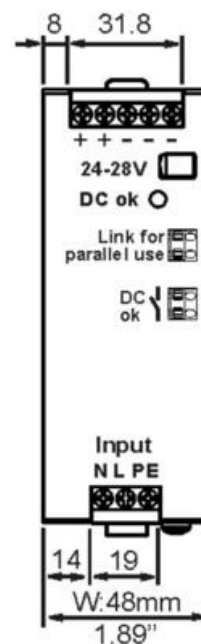
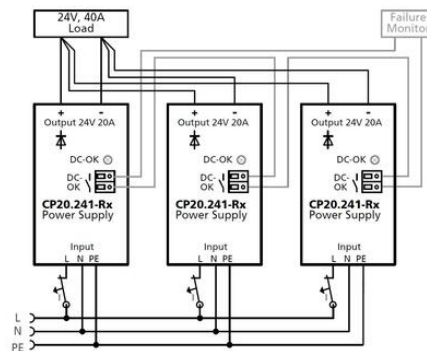
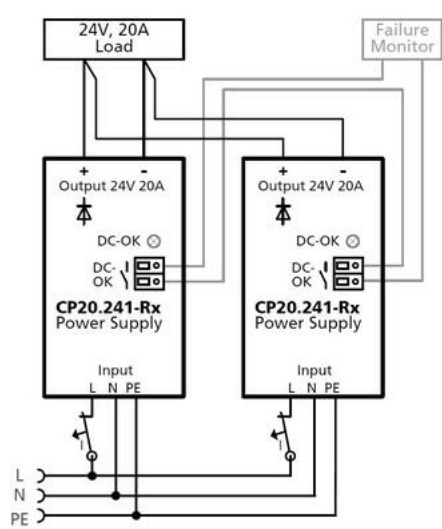
Output Voltage (dynamic behavior, < 12ms)

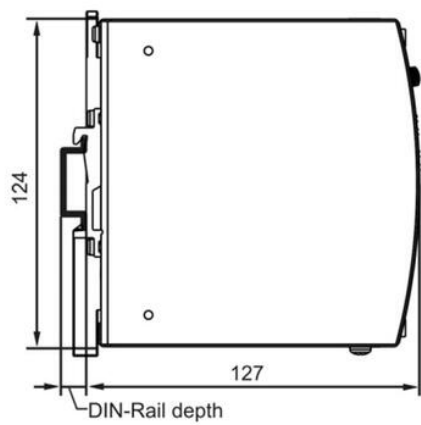


Maximal wire length^{*)} for a fast (magnetic) tripping:

	0.75mm ²	1.0mm ²	1.5mm ²	2.5mm ²
C-2A	34m	45m	64m	101m
C-3A	27m	36m	52m	79m
C-4A	19m	26m	35m	56m
C-6A	9m	12m	16m	23m
C-8A	4m	8m	12m	18m
C-10A	4m	6m	9m	15m
C-13A	2m	3m	4m	5m
B-6A	23m	30m	38m	67m
B-10A	11m	14m	21m	32m
B-13A	7m	12m	17m	23m
B-16A	4m	6m	8m	11m
B-20A	1m	1m	2m	4m

*) Don't forget to consider twice the distance to the load (or cable length) when calculating the total wire length (+ and - wire).





All dimensions in mm