

POWER SUPPLY 1-PHASE, 24 V DC, DIMENSION C SERIES, GENERATION 2, 5A

CP5.241
POWER SUPPLY 24VDC 120W 5A

- Output current 5 A
- Efficiency up to 94.3%
- 20% power reserve
- Only 32mm wide



PRODUCT DESCRIPTION

The Dimension CP-Series are cost optimized power supplies without compromising quality, reliability and performance. The CP-Series is part of the DIMENSION power supply family.

The CP5.241 power supplies come with three connection terminal options: screw, spring-clamp or push-in terminals, which are optimized for automated wiring. The CP5.241-C1 is equipped with conformal coated pc-boards preferred for the use in harsh environments and the CP5.242 features an enhanced DC input voltage range.

The most outstanding features of these units are the small size, the high efficiency, the electronic inrush current limitation, active PFC and the wide operational temperature range. The devices have a power reserve of 20% included, which may even be used continuously at temperatures up to +45°C. Additionally, they can deliver 3 times the nominal output current for 12ms which helps to trip fuses on faulty output branches.

High immunity to transients and power surges as well as low electromagnetic emission, a DC-OK signal contact for remote monitoring, and a large international approval package for a variety of applications makes this unit suitable for nearly every situation.

- AC 100-240V Wide-range Input
- Width only 32mm
- Efficiency up to 94.3%
- Excellent Partial Load Efficiency
- 20% Output Power Reserves
- Easy Fuse Breaking – 3 times nominal current for 12ms
- SafeHiccupPLUS Overload Mode
- Active Power Factor Correction (PFC)
- Minimal Inrush Current Surge
- Full Power Between -25°C and +60°C
- DC-OK Relay Contact
- 3 Year Warranty

TECHNICAL DATA

INPUT DATA

Input voltage range	Wide-range
Input voltage ac	100-240 V
Input voltage ac min	85 V AC
Input voltage dc max	180 V DC

Input voltage dc	110-150 V
Input voltage ac max	264 V AC
Inrush current at 230 V ac typical	6 A
Number of phases	1
Inrush current at 120 V ac typical	5 A
Power factor at 120 V ac, full load. Typical	0,98
Power factor at 230 V ac, full load. Typical	0,91
Input voltage dc min	88 V DC

OUTPUT DATA

Output voltage min	24 V DC
Output voltage	24 V DC
Output voltage max	28 V DC
Power	120 W
Output current	5 A

EFFICIENCY / LIFETIME / MTBF

Lifetime at 120 V ac, full load and +40 ° C	143000 h
MTBF (IEC 61709) 230 V ac, max load, 40 ° C	876000 h
Efficiency at 230 V ac, full load, typical	94,3 %
Efficiency at 230 V ac, typical	92 %
Lifetime at 230 V ac, full load and +40 ° C	166000 h
Efficiency at 120 V ac, full load, typical	93,6 %

DIMENSIONS

Weight	0,44 kg
Depth	102 mm
Width	32 mm
Height	124 mm

OTHER

IP class	IP20
Power consumption 120 V ac	1,09 A
Ripple max	50 mV pp
Power drop from +60 °C to + 70 °C	3 W/°C
Clamp type	Screw
Temperature min without derating	-25 °C

Hold time at 120 V ac, typical full load	35 ms
Series	Dimension C
Hold time at 230 V ac, typical full load	35 ms
Power consumption 230 V ac	0,6 A
Supply frequency	50-60 ± 6 %
Approvals	ATEX, CE, cULus, IECEx, IEC 62368-1:2018
Temperature max without derating	60 °C
Material protection	Aluminium
Type Power Supply	AC-DC
Active Transient	Yes
Conformal coated	No
DC relay output	Yes



