

Single phase switching power supply

48 Vdc regulated output

- 90-264 Vac/110–300 Vdc input voltage
- Short circuit, overload, over temperature, input / output over-voltage protection
- Output protected against internal or external overvoltage
- High efficiency and low dissipated power
- Suitable for SELV and PELV circuitry



48 Vdc 2.5 A @ 45°C

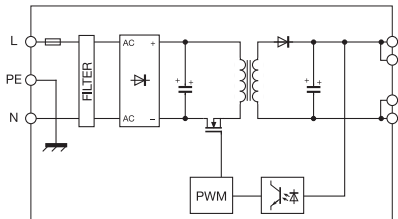
NOTES

Dimensions indicated on drawings and photos, are overall dimensions, are inclusive of external components such as terminal blocks and Din-rail clamps.

(1) Version available upon request.

(2) With 110 – 127 Vdc input voltage, the output current must be derated by 25%.

BLOCK DIAGRAM



APPLICATIONS

With 120-230 Vac input range, are suitable in every supply mains world wide.

The devices comply with IEC and EN EMC Standards for Building automation applications without any external filter. Engineering has been focused on achieving a high efficiency allow to reduce energy consumption and operating temperature of the components. High efficiency moreover makes available over +20% power boost @ operating temperature of 45°C, without exceeding the standard temperature limits and guaranting safety and reliability.

Short-circuit - overload - over temperature protections are set to give +150% of the rated current to feed heavy loads, start-up currents, while the over temperature protection prevents failure of the power supply also in case of long overload duration with high ambient temperature. Output is adjustable and overvoltage protected. The housings assure a high ventilation of internal components, compact dimensions and a IP20 protection degree according to IEC529 Std.

Battery charger:

these units are suitable as battery chargers while feeding other loads.

To allow a power supply to charge batteries, we developed the cost effective CSBC module (Cat. No. XCSBC), featuring protection diodes, current charge limiting resistor and battery protection fuse. For more details, refer to the accessories section.

VERSIONS

Standard
With failure contact

CSF5D

cod. XCSF5D

(1)

INPUT TECHNICAL DATA

Rated voltage	90–264 Vac / 110–300 Vdc (2)
Frequency	47–63 Hz
Current @ lout max.	1.8 A @ 120 Vac / 1 A @ 230 Vac
Inrush current	< 20 A
Power factor	> 0.7
Protection fuse	T 3.15 A - internal, replaceable

OUTPUT TECHNICAL DATA

Voltage	48 Vdc ± 5% adjustable
Maximum current	3.2 A @ 120 Vac / 4 A @ 230 Vac
Continuous current	2.5 A @ 45°C / 3 A @ 25°C
Load regulation	< 1%
Ripple @ rated U-I output	≤ 50 mVpp @ 230 Vac
Hold up time	> 20 ms @ 230Vac full load
Overload / short circuit protection	Hiccup 1.4 In auto reset / over temperature protection
Output signal	standard version "P" version
Parallel connection	–
Redundant parallel connection	SPDT 2 A / 250 Vac - 30 Vdc

APPROVALS



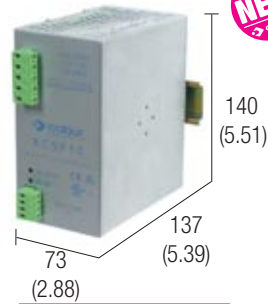
GENERAL TECHNICAL DATA

Efficiency	> 86 % @ 120 Vac / > 90 % @ 230 Vac
Dissipated power	19 W @ 120 Vac / 13 W @ 230 Vac
Operating temperature	–20 ... +60°C, with overtemperature protection
Input / output isolation	3 kVac / 60 s
Input / ground isolation	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s
Protection degree	IP20
Standards / Approvals	IEC950, EN60950, UL 508c
EMC Standards	EN 50081-1, EN 50082-2, EN 61000-3-2
Surge immunity	EN61000-4-2, EN61000-4-4, EN61000-4-5, level 4
Connection terminal blocks	2.5 mm ² , screw type pluggable
Housing material	Aluminium and stainless steel
Approximative weight	535 g (18.8 oz)
Mounting information	Vertical on rail, allow 10 mm spacing between adjacent components
Mounting rail type according to IEC60715/TH35-7.5	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB

Single phase switching power supply

48 Vdc regulated output

- 120 and 230 Vac double input voltage
- Short circuit, overload, over temperature, input / output over-voltage protection
- Output protected against internal or external overvoltage
- High efficiency and low dissipated power
- Suitable for SELV and PELV circuitry



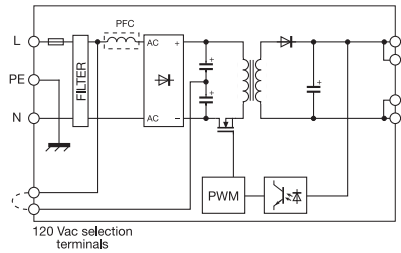
48 Vdc 5 A @ 45°C

NOTES

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(1) Version available upon request.

BLOCK DIAGRAM



APPLICATIONS

With 120-230 Vac input range, are suitable in every supply mains world wide.

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VERSIONS

Standard
With failure contact

INPUT TECHNICAL DATA

Rated voltage
Frequency
Current @ Iout max.
Inrush current @ cold start at 230 Vac
Power factor
Protection fuse

OUTPUT TECHNICAL DATA

Voltage
Maximum current
Continuous current
Load regulation
Ripple @ rated U-I output
Hold up time
Overload / short circuit protection
Output signal standard version
"P" version
Parallel connection
Redundant parallel connection

APPROVALS

GENERAL TECHNICAL DATA

Efficiency
Dissipated power
Operating temperature
Input / output isolation
Input / ground isolation
Output / ground isolation
Protection degree
Standards / Approvals
EMC Standards
Surge immunity
Connection terminal blocks
Housing material
Approximative weight
Mounting information

Mounting rail type according to IEC60715/TH35-7.5

CSF10D

cod. XCSF10D

(1)

120 and 230 Vac ±10%
47– 63 Hz
3.5 A @ 120 Vac / 1.8 A @ 230 Vac
< 35 A
> 0.6 @ 120 Vac / > 0.85 A @ 230 Vac
T 6.3 A - internal, replaceable

48 Vdc ± 10% adjustable
5.5 A overload limit
5 A @ 45°C
< 1%
≤ 60 mVpp @ 230 Vac
> 40 ms @ 230Vac full load
Hiccup 1.1 In auto reset / over temperature protection

–
SPDT 2 A / 250 Vac - 30 Vdc
Possible
"P" version provided with Oring diode



> 87 % @ 120 Vac / > 90 % @ 230 Vac
36 W @120 Vac / 27 W @ 230 Vac
–20 ... +60°C, with overtemperature protection
3 kVac / 60 s
1.5 kVac / 60 s
0.5 kVac / 60 s
IP20
IEC950, EN60950, UL 508c
EN50081-1, EN50082-1, EN61000-3-2
EN61000-4-2, EN61000-4-4, EN61000-4-5, level 4
2.5 mm², screw type pluggable
Aluminium
920 g (32.4 oz)
Vertical on rail, allow 10 mm spacing between adjacent components
PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB