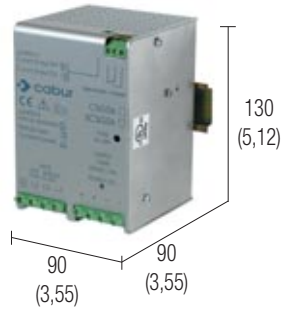
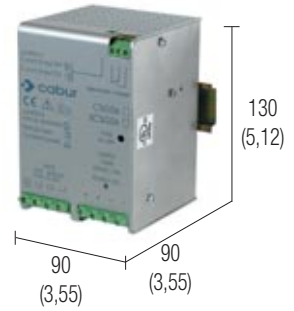


Three phase switching power supply

24 Vdc regulated output

- High efficiency and low dissipated power
- High current for starting-up heavy loads and to guarantee the selectivity of the 24 V lines
- Short circuit, overload, over temperature, input / output over-voltage protection
- Electronic output voltage limiting @ 32 V
- Suitable for SELV and PELV circuitry


24 Vdc 6 A @ 45°C

24 Vdc 10 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.

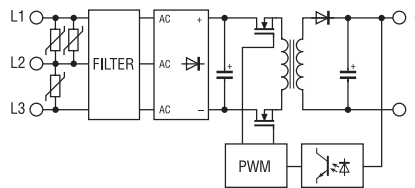
(1) Like the standard version but with the relay for failure contact inside mounted, available upon request.

(2) Max 575 Vac / 60 s

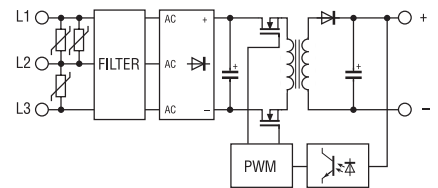
(3) CSG06 can give 8.5 A before overload circuit limits output voltage, and up to 15 A for 1.5 second if "hiccup" protection mode is selected.

CSG10 can give 14 A before overload circuit limits output voltage, and up to 20 A for 1.5 second if "hiccup" protection mode is selected.

BLOCK DIAGRAM



BLOCK DIAGRAM



APPLICATIONS

With 400–500 Vac input range, are suitable in every supply mains world wide.

The devices comply with IEC and EN EMC Standards for Industrial 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 guaranteeing safety and reliability.

Overload and short circuit protection allows a power boost up to 150% of rated performances, and offers the "manual reset" option to satisfy EN 60204-2 that requires to avoid unwanted and dangerous reset on 24 Vdc line.

The overtemperature protection prevents failures even in case of overload along 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

INPUT TECHNICAL DATA

Rated voltage	340 – 550 Vac (2) / 507 – 780 Vdc (tree-phase)
Frequency	47 – 63 Hz
Current @ Iout max	3 x 0.4 A a 340 Vac / 3 x 0.25 A a 550 Vac
Inrush current	< 15 A
Power factor	> 0.7
Protection fuse	3 x T 1 - external

OUTPUT TECHNICAL DATA

Voltage	24 – 28 Vdc adjustable, max 32 Vdc with crow-bar
Maximum current	8.5 A overload limit / 15 A peak 1.5 s (3)
Continuous current	6 A @ 45°C
Load regulation	< 1 %
Ripple @ rated U-I output	≤ 50 mVpp
Hold up time	> 20 ms full load
Overload/short circuit protection	Hiccup 1.4 circuit, auto reset Manual reset Constant current (to select)
Output signal	Standard version "P" version
Parallel connection	possible with Current Share
Redundant parallel connection	possible with external Oring diode

APPROVALS

GENERAL TECHNICAL DATA

Efficiency	> 89% @ 400 Vac
Dissipated power	18 W max.
Operating temperature	-20 ... +60°C, with overtemperature protection
Input / output isolation	3 kVac / 60 s
Input / ground isolation	2 kVac / 60 s
Input / ground isolation	0.5 kVac / 60 s
Protection degree	IP 20
Standard / Approvals	EN 60950, IEC950, UL 508c
EMC Standards	EN 50081-2, EN 50082-2
Surge immunity	EN61000-4-2, EN61000-4-4, EN 61000-4-5
Connection terminal blocks	4 mm ² , screw type
Housing material	Aluminium
Approximative weight	800 g (28.1 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

CSG06
CSG06P (1) Cod. XCSG06
Cod. XCSG06P

CSG10
CSG10P (1) Cod. XCSG10
Cod. XCSG10P

Rated voltage	340 – 550 Vac (2) / 507 – 780 Vdc (tree-phase)
Frequency	47 – 63 Hz
Current @ Iout max	3 x 0.6 A a 340 Vac / 3 x 0.42 A a 550 Vac
Inrush current	< 20 A
Power factor	> 0.7
Protection fuse	3 x T 1.5 - external

Voltage	24 – 28 Vdc adjustable, max 32 Vdc with crow-bar
Maximum current	14 A overload limit / 20 A peak 1.5 s (3)
Continuous current	10 A @ 45°C
Load regulation	< 1 %
Ripple @ rated U-I output	≤ 50 mVpp
Hold up time	> 20 ms full load
Overload/short circuit protection	Hiccup 1.4 circuit, auto reset Manual reset Constant current (to select)

Output signal	Standard version "P" version
Parallel connection	possible with Current Share
Redundant parallel connection	possible with external Oring diode

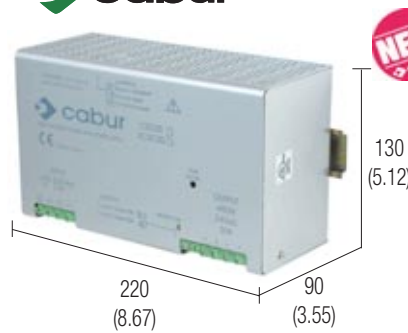
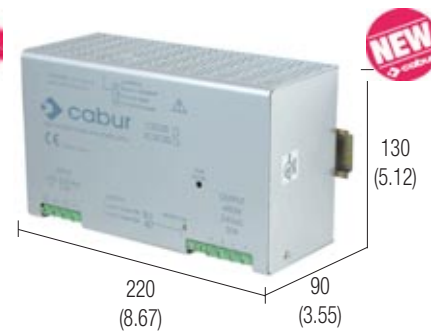


Efficiency	> 90% @ 400 Vac
Dissipated power	27 W max.
Operating temperature	-20 ... +60°C, with overtemperature protection
Input / output isolation	3 kVac / 60 s
Input / ground isolation	2 kVac / 60 s
Input / ground isolation	0.5 kVac / 60 s
Protection degree	IP 20
Standard / Approvals	EN 60950, IEC950, UL 508c
EMC Standards	EN 50081-2, EN 50082-2
Surge immunity	EN61000-4-2, EN61000-4-4, EN 61000-4-5
Connection terminal blocks	4 mm ² , screw type
Housing material	Aluminium
Approximative weight	1000 g (35.1 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

Three phase switching power supply

24 Vdc regulated output

- High efficiency and low dissipated power
- High current for starting-up heavy loads and to guarantee the selectivity of the 24 V lines
- Short circuit, overload, over temperature, input / output over-voltage protection
- Suitable for SELV and PELV circuitry
- With PFC filter


24 Vdc 20 A @ 45°C

24 Vdc 30 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) Like the standard version but with the relay for failure contact inside mounted, available upon request.

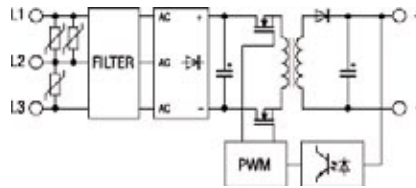
(2) Max 575 Vac/60 s, they can be supplied with an input range from 507 – 780 Vdc

(3) CSG20 can give 24 A before overload circuit limits output voltage, and up to 50 A for 1.5 second if "hiccup" protection mode is selected.

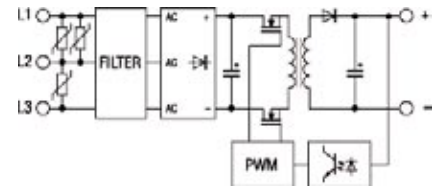
CSG30 can give 32 A before overload circuit limits output voltage, and up to 55 A for 1.5 second if "hiccup" protection mode is selected.

(4) output protection is setting for "hiccup auto reset" mode; changing the position of a jumper bridge it is possible to switch from "auto reset" mode to "manual reset" mode, that prevents unwanted start-up, useful to achieve higher safety in some applications.

BLOCK DIAGRAM



BLOCK DIAGRAM



APPLICATIONS

With 400–500 Vac input range, are suitable in every supply mains world wide.

The devices comply with IEC and EN EMC Standards for Industrial 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 at operating temperature of 45°C, without exceeding the standard temperature limits and guaranteeing safety and reliability.

Overload and short circuit protection allows a power boost up to 150% of rated performances, and offers the "manual reset" option to satisfy EN 60204-2 that requires to avoid unwanted and dangerous reset on 24 Vdc line. The overtemperature protection prevents failures even in case of overload along 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

INPUT TECHNICAL DATA

Rated voltage
Frequency
Current @ Iout max
Inrush current
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
Input / ground isolation
Protection degree
Standard / Approvals
EMC Standards
Surge immunity
Connection terminal blocks
Housing material
Approximative weight
Mounting information

Mounting rail type
according to IEC60715/TH35-7.5

CSG20
CSG20P

Cod. XCSG20
Cod. XCSG20P

(1)

340 – 550 Vac (2) / 507 – 780 Vdc (three - phase)
47 - 63 Hz
3 x 1.3 A a 400 Vac / 3 x 0.8 A a 500 Vac
< 12 A with electronic limitation
> 0.76 with PFC
3 x T 3.15 A - external

24 - 28 Vdc adjustable, max 32 Vdc with crow-bar
24 A overload limit / 50 A peak 1.5 s (3)
20 A @ 45°C
0.5 %
≤ 50 mVpp
> 20 ms full load
Hiccup 1.2 circuit, auto reset
Manual reset
Constant current (to select) (4)

–
SPDT 2 A / 250 Vac
possible with Current Share
possible with external Oring diode



CSG30P

Cod. XCSG20P

340 – 550 Vac (2) / 507 – 780 Vdc (three - phase)
47 - 63 Hz
3 x 1.5 A a 400 Vac / 3 x 1.2 A a 500 Vac
< 12 with electronic limitation
> 0.76 with PFC
3 x T 4 A - external

24 - 28 Vdc adjustable, max 32 Vdc with crow-bar
32 A overload limit / 55 A peak 1.5 s (3)
30 A @ 40°C
0.5 %
≤ 100 mVpp
> 11 ms full load
Hiccup 1.1 circuit, auto reset
Manual reset
Constant current (to select) (4)

–
SPDT 2 A / 250 Vac
possible with Current Share
possible with external Oring diode



> 94% @ 400 Vac
45 W max.
–20 ... +60°C, with overtemperature protection
3 kVac / 60 s
2 kVac / 60 s
0.5 kVac / 60 s
IP 20
EN 60950, IEC950, UL 508c
EN 50081-2, EN 50082-2, EN 61000-3-2
EN61000-4-2, EN61000-4-4, EN 61000-4-5, liv. 4
4 mm², screw type
Aluminium
2200 g (77.2 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