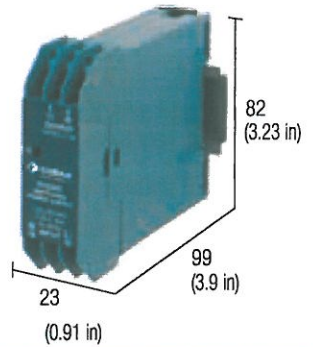


Single-phase switching power supply 120-230 Vac output power 30 W

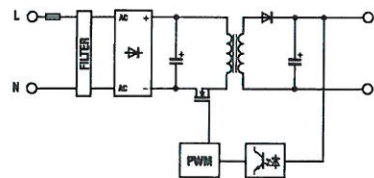
- Single-phase input 90...264 Vac and DC 100...320 Vdc
- Short circuit, overload, over temperature protection
- Isolation Class 2, no grounding needed
- Compact dimensions
- Suitable for applications in SELV and PELV circuits



NOTES

- The depth dimension includes the DIN rail clamp.
- (1) Version available upon request; for information call our sales department, local agent or representative
- (2) With 100...127 Vdc input voltage, constant output power and $T_a > 45^\circ\text{C}$, the output current must be derated by 25%
- (3) Over 50°C (122°F) apply a derating: C version: $-0.03 \text{ A}/^\circ\text{C}$; B version: $-0.038 \text{ A}/^\circ\text{C}$; F version: $-0.013 \text{ A}/^\circ\text{C}$
- (4) Overload and short circuit current depends on the total line resistance.

BLOCK DIAGRAM



VERSIONS

- Output 24 Vdc 1.2 A
Output 10...15 Vdc 1.5 A
Output $\pm 12... \pm 15 \text{ Vdc}$ 0.5 A

INPUT TECHNICAL DATA

- Input rated voltage
Frequency
Current @ nominal lout (Uin 120 / 230 Vac)
Inrush peak current
Power factor
Internal protection fuse
External protection on AC line

OUTPUT TECHNICAL DATA

- Output rated voltage
Output adjustable range
Continuous current
Overload limit
Short circuit peak current
Load regulation
Ripple @ nominal ratings
Hold up time @ In (Uin 120 / 230 Vac)
Overload / short circuit protections
Status display
Alarm contact threshold
Parallel connection
Redundant parallel connection

GENERAL TECHNICAL DATA

- Efficiency (Uin 120 / 230 Vac)
Dissipated power (Uin 120 / 230 Vac)
Operating temperature range
Input/output isolation
Input/ground isolation
Output/ground isolation
Standard/approvals
EMC Standards
MTBF @ 25°C @ nominal ratings
Overvoltage category/Pollution degree
Protection degree
Connection terminal
Housing material
Approx. weight
Mounting information

MOUNTING ACCESSORIES

- Mounting rail type according to IEC60715/TH35-7.5
Mounting rail type according to IEC60715/G32

Cod. XCSF30C

CSF30C

Cod. XCSF30B

CSF30B

Cod. XCSF30F

CSF30F (1)

120-230 Vac (range 90...264 Vac / 100...320 Vdc) (2)

47...63 Hz

0.55 A / 0.3 A $\pm 10\%$

0.35 A / 0.2 A $\pm 10\%$

< 25 A

> 0.60

T 1,25 A not replaceable

circuit breaker: 2 A - C characteristic - fuse: T 2 A

24 Vdc $\pm 1\%$

12 - 15 Vdc

$\pm 12 \pm 15 \text{ Vdc}$

1.2 A @ 50°C (3)

1.5...1 A @ 50°C (3)

$\pm 12... \pm 15 \text{ Vdc}$

1.4 A (4)

1.7...1.2 A (4)

0.5 A @ 50°C (3)

0.8...0.6 A (4)

< 1%

$\leq 50 \text{ mVpp}$

> 10 ms / > 30 ms

hiccup at the overload limit with auto reset

"DC OK" green LED

possible

possible with external ORing diode

> 86% / > 87%

4.7 W / 4.3 W

$-20...+60^\circ\text{C}$, with derating over 50°C (3)

3 KVac / 60 s SELV output

class 2 without PE connection

class 2 without PE connection

EN50178, EN61558, EN60950, IEC950, UL508, UL60950

EN61000-6-2, EN61000-6-4, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11

> 750'000 h acc. to SN 29500 / > 250'000 h acc. to MIL Std. HDBK 217F

II / 2

IP 20 IEC 529, EN60529

2.5 mm² fixed screw type

UL94V-0 plastic material

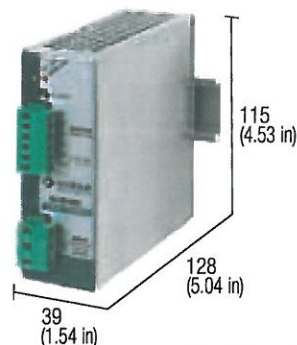
140 g (4.94 oz)

vertical on rail, allow 10 mm spacing between adjacent components

PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB

Single-phase switching power supply 120-230 Vac output power 85 W

- Single-phase input 90...264 Vac and DC 100...345 Vdc
- Short circuit, overload, over temperature, input and output overvoltage protections
- High outrush current to guarantee downstream overcurrent protections selectivity and to start-up heavy loads
- Failure contact for Uout -10%
- Compact dimensions
- Suitable for applications in SELV and PELV circuits



NOTES

- The depth dimension includes the DIN rail clamp.
- (2) With 100...127 Vdc input voltage, constant output power and $T_a > 45^\circ\text{C}$, the output current must be derated by 25%
- (3) Over 45°C (113°F) apply derating: CSF3-CSF3P: $-0.06\text{ A}/^\circ\text{C}$ for version C, CP and CPH; $-0.10\text{ A}/^\circ\text{C}$ for version B
- (4) For this peak current, the output voltage does not drop more than 10% of the nominal value, but the current value, provided by the power supply also depends on the total line resistance.
- (5) Only on version CSF85CP, for orders, adds the letter H to the code (XCSF85CPH)

VERSIONS

- Output 24 Vdc 3.5 A
- Output 24 Vdc 3.5 A redundant version
- Output 12...15 Vdc 6 A
- Output 48 Vdc 1.8 A

INPUT TECHNICAL DATA

- Input rated voltage
- Frequency
- Current @ nominal Iout (Uin 120 / 230 Vac)
- Inrush peak current
- Power factor
- Internal protection fuse
- External protection on AC line

OUTPUT TECHNICAL DATA

- Output rated voltage
- Output adjustable range
- Continuous current
- Overload limit
- Short circuit peak current
- Load regulation
- Ripple @ nominal ratings
- Hold up time @ In (Uin 120 / 230 Vac)
- Overload / short circuit protections
- Status display
- Alarm contact threshold
- Parallel connection

Redundant parallel connection

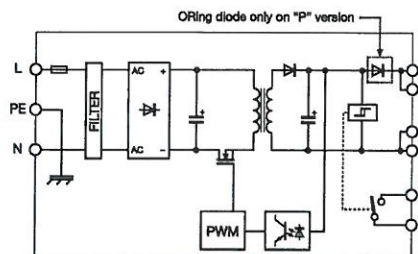
GENERAL TECHNICAL DATA

- Efficiency (Uin 120 / 230 Vac)
- Dissipated power (Uin 120 / 230 Vac)
- Operating temperature range
- Input/output isolation
- Input/ground isolation
- Output/ground isolation
- Standard/approvals
- EMC Standards
- MTBF @ 25°C @ nominal ratings
- Overvoltage category/Pollution degree
- Protection degree
- Connection terminal
- Housing material
- Approx. weight
- Mounting information

MOUNTING ACCESSORIES

- Mounting rail type according to IEC60715/TH35-7.5
- Mounting rail type according to IEC60715/G32

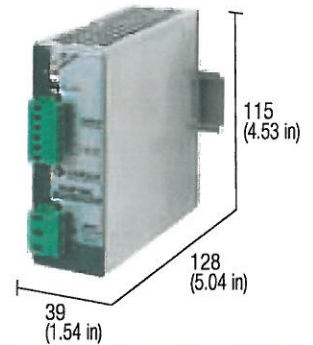
BLOCK DIAGRAM



Cod. XCSF85C	Cod. XCSF85CP	Cod. XCSF85B
CSF85C	CSF85CP	CSF85B
120-230 Vac (range 90...264 Vac / 100...345 Vdc) (2)		
47...63 Hz		
1.6 A / 0.9 A $\pm 10\%$		
< 20 A		
> 0.65		
T 2 A replaceable		
circuit breaker: 4 A - C characteristic - fuse: T 4 A		
24 Vdc	12...15 Vdc	
23...27.5 Vdc	12...15 Vdc	
3.5 A @ 50°C	6 A @ 50°C	
6 A for >30 s	9 A for >30 s	
with Uout > 90% Un (4)	with Uout > 90% Un (4)	
10 A for 50 ms	10 A for 50 ms	
< 1%	< 1%	
$\leq 70\text{ mVpp}$	$\leq 30\text{ mVpp}$	
>20 ms / >70 ms	>15 ms / >60 ms	
hiccup at the overload limit with auto reset / over temperature protection	hiccup at the overload limit with auto reset / over temperature protection	
"DC OK" green LED / "DC OK" alarm contact / "Overload" red LED	"DC OK" green LED / "DC OK" alarm contact / "Overload" red LED	
21.6 Vdc	10.8 Vdc	
possible	possible	
possible with external ORing diode	factory provided with internal ORing diode	possible with external ORing diode
>85% / >89%	>83% / >87%	
15 W / 11 W	17 W / 13 W	
-20...+60°C, with derating over 50°C / over temperature protection (3)	-20...+60°C, with derating over 50°C / over temperature protection (3)	
3 KVac / 60 s SELV output	3 KVac / 60 s SELV output	
1.5 KVac / 60 s	1.5 KVac / 60 s	
0.5 KVac / 60 s	0.5 KVac / 60 s	
EN50178, EN61558, EN60950, IEC950, UL508, UL60950	EN50178, EN61558, EN60950, IEC950, UL508, UL60950	
EN61000-6-2, EN61000-6-4, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11	EN61000-6-2, EN61000-6-4, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11	
>500'000 h acc. to SN 29500 / >150'000 h acc. to MIL Std. HDBK 217F	>500'000 h acc. to SN 29500 / >150'000 h acc. to MIL Std. HDBK 217F	
II / 3	II / 3	
IP 20 IEC 529, EN60529	IP 20 IEC 529, EN60529	
2.5 mm ² pluggable screw type	2.5 mm ² pluggable screw type	
aluminium	aluminium	
400 g (14.12 oz)	400 g (14.12 oz)	
vertical on rail, allow 10 mm spacing between adjacent components	vertical on rail, allow 10 mm spacing between adjacent components	
PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	

Single-phase switching power supply 120-230 Vac output power 120 W

- Single-phase input 90...264 Vac and DC 100...345 Vdc
- Short circuit, overload, over temperature, input and output overvoltage protections
- High outrush current to guarantee downstream overcurrent protections selectivity and to start-up heavy loads
- Failure contact for Uout -10%
- Compact dimensions
- Suitable for applications in SELV and PELV circuits



NOTES

- The depth dimension includes the terminal blocks and the DIN clamp.
- (2) With 100...127 Vdc input voltage, constant output power and $T_a > 45^\circ\text{C}$, the output current must be derated by 25%
- (3) Over 45°C (113°F) apply a derating $-0.08\text{ A}/^\circ\text{C}$ for version C, CP and CPH; $-0.12\text{ A}/^\circ\text{C}$ for version B; $-0.05\text{ A}/^\circ\text{C}$ for version DP;
- (4) For this peak current, the output voltage does not drop more than 10% of the nominal value, but the current value, provided by the power supply also depends on the total line resistance.
- (5) Only on version CSF120CP, for orders, adds the letter H to the code (XCSF120CPH)
- (6) article available till seal-out

VERSIONS

- Output 24 Vdc 5 A
- Output 24 Vdc 5 A redundant version
- Output 12...15 Vdc 7 A
- Output 48 Vdc 2.5 A

INPUT TECHNICAL DATA

- Input rated voltage
- Frequency
- Current @ nominal lout (Uin 120 / 230 Vac)
- Inrush peak current
- Power factor
- Internal protection fuse
- External protection on AC line

OUTPUT TECHNICAL DATA

- Output rated voltage
- Output adjustable range
- Continuous current
- Overload limit
- Short circuit peak current
- Load regulation
- Ripple @ nominal ratings
- Hold up time @ In (Uin 120 / 230 Vac)
- Overload / short circuit protections
- Status display
- Alarm contact threshold
- Parallel connection
- Redundant parallel connection

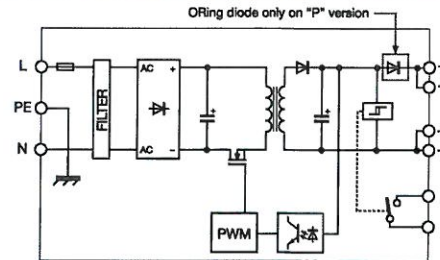
GENERAL TECHNICAL DATA

- Efficiency (Uin 120 / 230 Vac)
- Dissipated power (Uin 120 / 230 Vac)
- Operating temperature range
- Input/output isolation
- Input/ground isolation
- Output/ground isolation
- Standard/approvals
- EMC Standards
- MTBF @ 25°C @ nominal ratings
- Overvoltage category/Pollution degree
- Protection degree
- Connection terminal
- Housing material
- Approx. weight
- Mounting information

MOUNTING ACCESSORIES

- Mounting rail type according to IEC60715/TH35-7.5
- Mounting rail type according to IEC60715/G32

BLOCK DIAGRAM



Special version for DC motors

Cod. XCSF120C	Cod. XCSF120CP	Cod. XCSF120B	Cod. XCSF120DP
CSF120C	CSF120CP	CSF120B (6)	CSF120DP

120-230 Vac (range 90...264 Vac / 100...345 Vdc) (2)

47...63 Hz

1.9 A / 1.1 A $\pm 10\%$

< 20 A

> 0.65

T 3.15 A replaceable

circuit breaker: 4 A - C characteristic - fuse: T 4 A

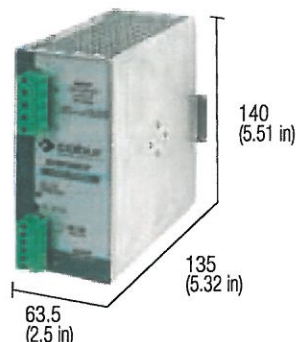
24 Vdc	12...15 Vdc	48 Vdc
23...27.5 Vdc	12...15 Vdc	45...55 Vdc
5 A @ 45°C (3)	7 A @ 45°C (3)	2.5 A @ 45°C (3)
8 A for >30 s	8 A for >30 s	8 A for >30 s
with 90% Un (4)	with 90% Un (4)	with 90% Un (4)
15 A for 50 ms (4)	15 A for 50 ms (4)	7.5 A for 50 ms (4)
< 1%	< 1%	< 1%
$\leq 30\text{ mVpp}$	$\leq 40\text{ mVpp}$	$\leq 30\text{ mVpp}$
>17 ms / >72 ms	>24 ms / >80 ms	>16 ms / >81 ms
hiccup at the overload limit with auto reset / over temperature protection		
"DC OK" green LED / "DC OK" alarm contact/ "Overload" red LED		
<21.6 Vdc	<10.8 Vdc	<43.2 Vdc
possible	possible	possible
possible with external ORing diode	possible with external ORing diode	possible with external ORing diode
factory provided with internal ORing diode	factory provided with internal ORing diode	factory provided with internal ORing diode

>86% / >90%	>85% / >89%	>86% / >90%
19 W / 13 W	21 W / 15 W	20 W / 13 W
-20...+60°C, with derating over 45°C / over temperature protection (3)		
3 kVdc / 60 s SELV output		
1.5 kVdc / 60 s		
0.5 kVdc / 60 s		
EN50178, EN61558, EN60950, IEC950, UL508, UL60950		
EN61000-6-2, EN61000-6-4, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11		
>500'000 h acc. to SN 29500 / >150'000 h acc. to MIL Std. HDBK 217F		
II / 3		
IP 20 IEC 529, EN60529		
2.5 mm ² pluggable screw type		
aluminium		
400 g (14.12 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

Single-phase switching power supply 120-230 Vac output power 240 W

- Single-phase input 120 and 230 Vac
- Short circuit, overload, over temperature, input and output overvoltage protections
- High outrush current to guarantee downstream overcurrent protections selectivity and to start-up heavy loads
- Failure contact for Uout -10%
- Compact dimensions
- Suitable for applications in SELV and PELV circuits



NOTES

- The depth dimension includes the terminal blocks and the DIN clamp.
- (2) Double input selectable with external jumper, DC supply allow only between 300 and 345 Vdc
- (3) Over 45°C (113°F) apply a derating: -0.17 A/°C for version C, CP and CPH; -0.27 A/°C for version B; -0.08 A/°C for version DP;
- (4) For this peak current, the output voltage does not drop more than 10% of the nominal value, but the current value, provided by the power supply also depends on the total line resistance.
- (5) Only on version CSF240CP, for orders, adds the letter H to the code (XCSF240CPH)

VERSIONS

- Output 24 Vdc 10 A
- Output 24 Vdc 10 A redundant version
- Output 12...15 Vdc 16 A
- Output 48 Vdc 5 A redundant version

INPUT TECHNICAL DATA

- Input rated voltage
- Frequency
- Current @ nominal Iout (Uin 120 / 230 Vac)
- Inrush peak current
- Power factor
- Internal protection fuse
- External protection on AC line

OUTPUT TECHNICAL DATA

- Output rated voltage
- Output adjustable range
- Continuous current
- Overload limit
- Short circuit peak current
- Load regulation
- Ripple @ nominal ratings
- Hold up time @ In (Uin 120 / 230 Vac)
- Overload / short circuit protections
- Status display
- Alarm contact threshold
- Parallel connection
- Redundant parallel connection

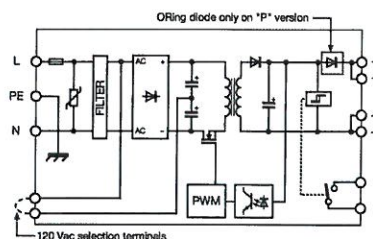
GENERAL TECHNICAL DATA

- Efficiency (Uin 120 / 230 Vac)
- Dissipated power (Uin 120 / 230 Vac)
- Operating temperature range
- Input/output isolation
- Input/ground isolation
- Output/ground isolation
- Standard/approvals
- EMC Standards
- MTBF @ 25°C @ nominal ratings
- Overvoltage category/Pollution degree
- Protection degree
- Connection terminal
- Housing material
- Approx. weight
- Mounting information

MOUNTING ACCESSORIES

- Mounting rail type according to IEC60715/TH35-7.5
- Mounting rail type according to IEC60715/G32

BLOCK DIAGRAM



Special version for DC motors

Cod. XCSF240C	Cod. XCSF240CP	Cod. XCSF240B	XCSF240DP
CSF240C	CSF240CP	CSF240B	CSF240DP
120 - 230 Vac (range 90...132 Vac / 185...264 Vac / 300...345 Vdc) (2)			
47...63 Hz			
3.5 A / 1.8 A ± 10%			
< 35 A			
> 0.6			
T 6.3 A replaceable			
circuit breaker: 6 A C characteristic - fuse: T 6.3 A			
24 Vdc 23...27.5 Vdc 10 A @ 45°C (3) 15 A for >30 s with Uout >90% Un (4) >25 A for 400 ms (4) < 1% ≤ 50 mVpp >30 ms / >60 ms			
12...15 Vdc 12...15 Vdc 16 A @ 45°C (3) 24 A for >30 s with Uout >90% Un (4) >25 A for 400 ms (4) < 1% ≤ 50 mVpp >30 ms / >60 ms			
48 Vdc 45...55 Vdc 5 A @ 45°C (3) 7.5 A for >30 s with Uout >90% Un (4) >25 A for 400 ms (4) < 1% ≤ 50 mVpp >30 ms / >60 ms			
hiccup at the overload limit with auto reset / over temperature protection			
"DC OK" green LED / "DC OK" alarm contact/ "Overload" red LED			
21.6 Vdc possible			
10.8 Vdc possible			
43.2 Vdc possible			
possible with external ORing diode	factory provided with internal ORing diode	possible with external ORing diode	factory provided with internal ORing diode
>88% / >90%			
32 W / 27 W			
-20...+60°C, with derating over 45°C / over temperature protection (3)			
3 KVac / 60 s SELV output			
1.5 KVac / 60 s			
0.5 KVac / 60 s			
EN50178, EN61558, EN60950, IEC950, UL508, UL60950			
EN61000-6-2, EN61000-6-4, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-11			
>500'000 h acc. to SN 29500 / >150'000 h acc. to MIL Std. HDBK 217F			
II / 3			
IP 20 IEC 529, EN60529			
2.5 mm² pluggable screw type			
aluminium			
920 g (32.48 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