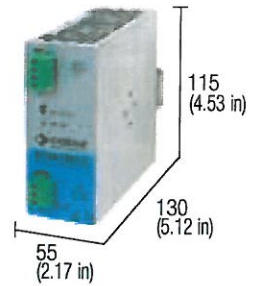


# DC/DC Insulated converters output power 120 W



- DC wide range input
- Short circuit, overload, over temperature protection
- Compact design

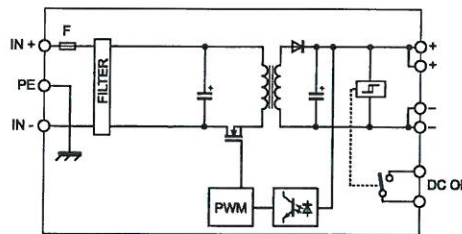


## NOTES

The depth dimension includes the terminal blocks and the DIN clamp.

- (1) Inrush current is measured with input supplied by a battery; the current peak vary depending on the internal impedance of the current source and depending on cables and connections resistance.
- (2) According to EN60950 insulation tests on input side must be made only with DC instruments.

## BLOCK DIAGRAM



## VERSIONS

- 12 Vdc / 24 Vdc 5 A
- 12 Vdc / 48 Vdc 2.5 A
- 24 Vdc / 12 Vdc 7 A
- 24 Vdc / 24 Vdc 5 A

## INPUT TECHNICAL DATA

- Input rated voltage
- Current @ Iout max
- Inrush peak current
- Standby power
- Internal protection fuse
- External protection on AC line
- Overvoltage input protection circuit

## 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
- Overload / short circuit protections
- Status display
- Alarm contact threshold
- Parallel connection
- Redundant parallel connection

## GENERAL TECHNICAL DATA

- Efficiency (Jin 110 Vdc)
- Dissipated power (Jin 110 Vdc)
- 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

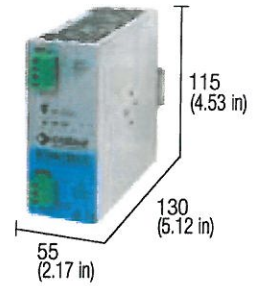
- Mounting rail type according to IEC60715/TH35-7.5
- Mounting rail type according to IEC60715/G32

| Cod. XGSA120BC                                                             | Cod. XGSA120BD                      | Cod. XGSA120CB                                 | Cod. XGSA120CC                    |
|----------------------------------------------------------------------------|-------------------------------------|------------------------------------------------|-----------------------------------|
| <b>CSA120BC</b>                                                            | <b>CSA120BD</b>                     | <b>CSA120CB</b>                                | <b>CSA120CC</b>                   |
| <b>12 Vdc</b> (range 10.5...18 Vdc)                                        | <b>12 Vdc</b> (range 10.5...18 Vdc) | <b>24 Vdc</b> (range 18...36 Vdc)              | <b>24 Vdc</b> (range 18...36 Vdc) |
| 12 A ±10%                                                                  | 12 A ±10%                           | 5.1 A ±10%                                     | 5.8 A ±10%                        |
| < 60A / < 2ms (1)                                                          | < 60A / < 2ms (1)                   | < 110A / < 2ms (1)                             | < 90A / < 2ms (1)                 |
| <1.5 W @ 12 Vdc                                                            | <1.5 W @ 12 Vdc                     | <1 W @ 24 Vdc                                  | <1.5 W @ 24 Vdc                   |
| T 20 A replaceable<br>≥25 A C characteristic                               |                                     | T 10 A replaceable<br>≥13 A C characteristic   |                                   |
| Passive varistor and active shutdown at 19 Vdc                             |                                     | Passive varistor and active shutdown at 38 Vdc |                                   |
| <b>24 Vdc</b>                                                              | <b>48 Vdc</b>                       | <b>12...15 Vdc</b>                             | <b>24 Vdc</b>                     |
| 22.5 - 27.5 Vdc                                                            | 45...55 Vdc                         | 12...15 Vdc                                    | 22.5 - 27.5 Vdc                   |
| <b>5 A @ 24 Vdc</b>                                                        | <b>2.5 A @ 48 Vdc</b>               | <b>7 A @ 12 Vdc</b>                            | <b>5 A @ 24 Vdc</b>               |
| 6.5 A                                                                      | 3.4 A                               | 9.1 A                                          | 6.5 A                             |
| 12 A for 300 ms                                                            | 5.8 A for 300 ms                    | 15 A for 300 ms                                | 12 A for 300 ms                   |
|                                                                            | <0.5%                               | <0.5%                                          | <0.5%                             |
|                                                                            | ≤ 100 mVpp                          | ≤ 100 mVpp                                     | ≤ 150 mVpp                        |
|                                                                            | >1 ms                               |                                                | >2 ms                             |
| hiccup at the overload limit with auto reset / over temperature protection |                                     |                                                |                                   |
| "DC OK" green LED                                                          |                                     |                                                |                                   |
| possible                                                                   |                                     |                                                |                                   |
| possible with external ORing diode                                         |                                     |                                                |                                   |
| > 83%                                                                      | > 83%                               | >87%                                           | >87%                              |
| <25 W                                                                      | <25 W                               | <16 W                                          | <18 W                             |
| -20...+50°C                                                                |                                     |                                                |                                   |
| 2.1 kVdc / 60s (2)                                                         |                                     |                                                |                                   |
| 1.41 kVdc / 60s (2)                                                        |                                     |                                                |                                   |
| 0.75 kVdc / 60s (2)                                                        |                                     |                                                |                                   |
| IEC950, EN60950                                                            |                                     |                                                |                                   |
| EN50081-1, EN50082-2, EN61000-3-2                                          |                                     |                                                |                                   |
| >500'000 h secondo SN 29500 / >150'000 h secondo MIL Std. HDBK 217F        |                                     |                                                |                                   |
| II / 2                                                                     |                                     |                                                |                                   |
| IP 20 IEC 529, EN60529                                                     |                                     |                                                |                                   |
| 2.5 mm² pluggable screw type                                               |                                     |                                                |                                   |
| aluminium                                                                  |                                     |                                                |                                   |
| 550 g (19.40 oz)                                                           |                                     |                                                |                                   |
| vertical on rail, allow 10 mm spacing between adjacent components          |                                     |                                                |                                   |
| <b>PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB</b>                            |                                     |                                                |                                   |

# DC/DC Insulated converters output power 120 W



- DC wide range input
- Short circuit, overload, over temperature protection
- Compact design

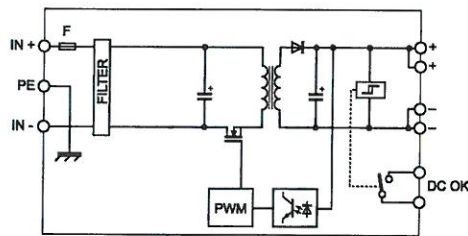


## NOTES

The depth dimension includes the terminal blocks and the DIN clamp.

- (1) Inrush current is measured with input supplied by a battery; the current peak vary depending on the internal impedance of the current source and depending on cables and connections resistance.
- (2) Over 50°C (122°F) apply a derating -3 W/°C, max 60°C
- (3) According to EN60950 insulation tests on input side must be made only with DC instruments.

## BLOCK DIAGRAM



## VERSIONS

48 Vdc / 12 Vdc 8 A  
48 Vdc / 24 Vdc 5 A

Cod. XCSA120DB  
CSA120DB

Cod. XCSA120DC  
CSA120DC

## INPUT TECHNICAL DATA

Input rated voltage  
Current @ Iout max.  
Inrush peak current  
Standby power  
Internal protection fuse  
External protection on AC line  
Overvoltage input protection circuit

**48 Vdc** (range 36...72 Vdc)  
2.8 A ±10%  
< 120A / < 2ms (1)  
<2 W @ 48 Vdc

**48 Vdc** (range 36...72 Vdc)  
2.8 A ±10%  
< 120A / < 2ms (1)  
<2 W @ 48 Vdc

T 5 A replaceable  
≥6 A C characteristic  
Passive varistor and active shutdown at 76 Vdc

## 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  
Overload / short circuit protections  
Status display  
Alarm contact threshold  
Parallel connection  
Redundant parallel connection

**12...15 Vdc**  
12...15 Vdc  
8 A @ 12 Vdc  
12 A  
18 A per 300 ms  
<0.5%  
≤ 100 mVpp  
2 ms

**24 Vdc**  
22.5...27.5 Vdc  
5A @ 24 Vdc  
6.5 A  
13 A per 300 ms  
<0.5%  
≤ 200 mVpp  
4.5 ms

hiccup at the overload limit with auto reset / over temperature protection  
"DC OK" green LED

possible

possible with external ORing diode

## GENERAL TECHNICAL DATA

Efficiency (Iin 110 Vdc)  
Dissipated power (Iin 110 Vdc)  
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

>89%  
<17 W

>90%  
<13 W

-20...+60°C, with derating over 50°C

2.1 kVdc / 60s (2)

1.41 kVdc / 60s (2)

0.75 kVdc / 60s (2)

IEC950, EN60950

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

>500'000 h acc. to SN 29500 / >150'000 h acc. to MIL Std. HDBK 217F

II / 2

IP 20 IEC 529, EN60529

2.5 mm<sup>2</sup> pluggable screw type

aluminium

550 g (19.40 oz)

vertical on rail, allow 10 mm spacing between adjacent components

## MOUNTING ACCESSORIES

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

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