

48-56V adjustable, PFC

# SL10.106

- Input: AC 230/115V, DC 240...375V
- Output: 48-56V/240W
- PULS Overload Design™: Power boost up to 288W; high overload current, no switch-off
- Robust mechanics and EMC

CB  
scheme  
IEC60950

UL US

UL508 LISTED  
IND. CONT. EQ.  
18 WM, 60°CC UL US  
UL60950 E137006  
CULICSA-C22.2  
No 60950CE  
EMC and  
Low Volt.  
Directive

## Input

Input voltage AC100-120/220-240V (switchable), 47-63 Hz  
(AC 85...132/176...264V, DC 240...375V)

Note: At DC input, always leave the switch in the 230V position

Input current  $I_n$  <6A (switch in 115V position)  
<2.8A (switch in 230V position)

Inrush current  $I_{pk}$  <37A at AC 264V ( $T_{amb} = +25^\circ\text{C}$ , cold start)  
<62A at AC 264V ( $T_{amb} = +50^\circ\text{C}$ , cold start)

Fuse loading  $I^2t$  <2.5A<sup>2</sup>s ( $T_{amb} = +25^\circ\text{C}$ , cold start)  
<6A<sup>2</sup>s ( $T_{amb} = +50^\circ\text{C}$ , cold start)

DCin at open output 8mA (preserves battery sources)

Unit is internally fused (fuse not accessible). For external fusing of unit and for input line protection, use circuit breaker with B-characteristic 10A or slower action, or alternatively T10A HBC fuse.

Harmonic current emissions (PFC) according to EN 61000-3-2  
Power factor: better than 0.68 at nominal load

Transient handling Transient resistance acc. to VDE 0160 / W2  
(750V/1.3ms), for all load conditions.

Hold up time >25ms at AC 196V, 48V/5A  
(see Diagram overleaf)

## Efficiency, Reliability etc.\*

Efficiency >90% (AC 230V, 48V/5A)

Losses <26.7W (AC 230V, 48V/5A)

MTBF 425.000h acc. to Siemensnorm SN 29500  
(48V/5A, AC 230V,  $T_{amb} = +40^\circ\text{C}$ )

Life cycle (electrolytics) The unit uses longlife electrolytics, specified for +105°C (cf. 'The SilverLine', p.2).

\* For further information see data sheets „The SilverLine“, „SilverLine Family Branches“ and mechanics data sheet

## Output

Output voltage DC 48-56V, adjustable by (covered) front panel potentiometer; preset: 48 V  $\pm 0.5\%$   
Adj. range guaranteed

Ambient temperature range  $T_{amb}$  Operation:  $0^\circ\text{C} \dots +70^\circ\text{C}$  (> $60^\circ\text{C}$ : Derating)  
Storage:  $-25^\circ\text{C} \dots +85^\circ\text{C}$

Rated continuous loading with convection cooling

- $T_{amb} = 0^\circ\text{C} - 60^\circ\text{C}$  48V/5A (240W) resp. 56V/4.3A (240W)
- $T_{amb} = 0^\circ\text{C} - 45^\circ\text{C}$  48V/6A (288W) resp. 56V/5.1A (288W)  
short-term also at  $60^\circ\text{C}$

Output is protected against short-circuit, open circuit and overload

Derating typ. 6W/K (at  $T_{amb} = +60^\circ\text{C} \dots +70^\circ\text{C}$ )

Voltage regulation better than 2%  $V_{out}$  overall

Ripple / Noise <50mV<sub>pp</sub>, (20MHz bandw., 50Ω measurement)

Parallel operation possible; however, no equal load sharing

Overvolt. protection typ. 59V

Power back immunity 60V

Front panel indicator Green LED on front panel

## Construction / Mechanics\*

Housing dimensions and Weight

- W x H x D 120mm x 124mm x 102mm (+ DIN rail)
- Free space for above/below 25mm recommended  
ventilation left/right 15mm recommended
- Weight 980g

Design advantages:

- All connection blocks are easy to reach as mounted at the front panel.

## Ordering information

### Order number

SL10.106  
SLZ14  
SLZ02

### Description

SilverLine switched-mode power supply  
Adapter for S7-300 rail  
Wall mounting set

## Start / Overload Behaviour

Startup delay	typ. 0.1s
Rise time	ca. 5-20ms, depending on load
<b>Overload Behaviour</b>	
<ul style="list-style-type: none"> <li>Special PULS Overload Design (see diagram overleaf)</li> <li>20% power boost</li> </ul>	<ul style="list-style-type: none"> <li>no disconnection, no hiccup if overloaded</li> <li>high overload current (up to <math>1.6 I_{Nom}</math>), <math>V_{out}</math> is gradually reduced with increasing current.</li> <li>6A short-term, at 45°C or forced cooling even continuous</li> </ul>

### Advantages:

- High short-circuit current, giving large 'start-up window': unit starts reliably even with heavy loads (DC-DC converters, motors).
- No 'sticking' such as can occur with fold-back characteristics
- Secondary fuses operate more reliably

## Further information

For further information, especially about

- EMC
  - Connections
  - Safety, Approvals
  - Mechanics und Mounting,
- see page 2 of the „The SilverLine“ data sheet.

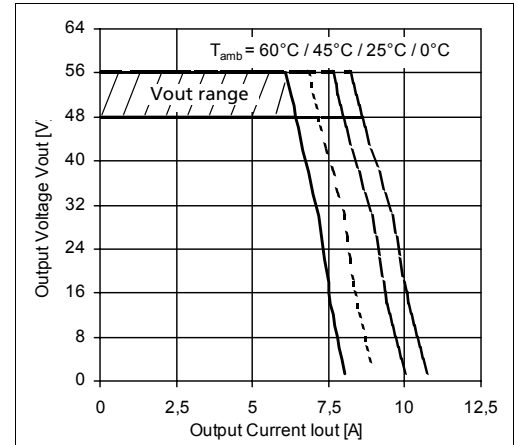
### For detailed dimensions

see SilverLine mechanics data sheet SL2.5/ SL5/ SL10

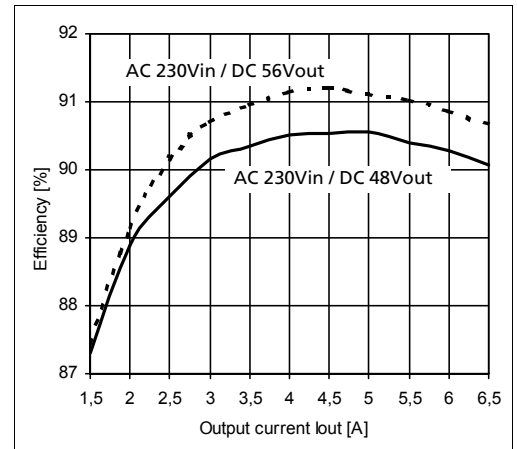
Alle Angaben gelten, sofern nicht anders angegeben, für AC 230V, +25°C Umgebungstemp. und 5 min. Einlaufzeit. Sie dienen ausschließlich der Produktbeschreibung und sind nicht als zugesicherte Eigenschaften im Rechtssinne aufzufassen. Änderungen vorbehalten.

## Your partner in power supply:

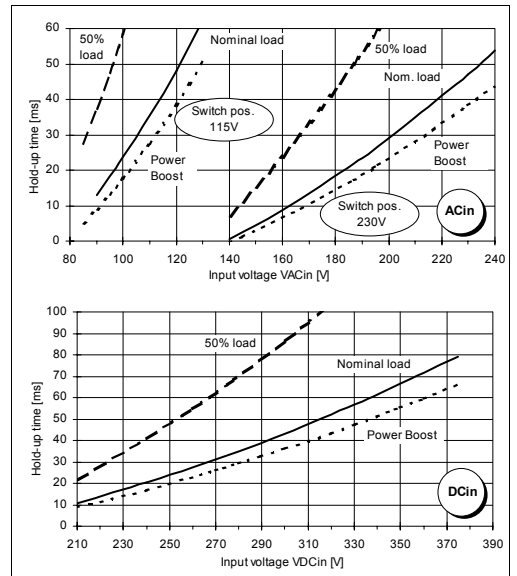
## Output characteristic (min.)



## Efficiency



## Hold-up time (typ., at $V_{out}=48V$ )



with 50% Load = 120W /



European  
Power Supply  
Manufacturers  
Association



Bayerns Best 50  
Czech 100 Best  
Europe's 500

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