

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
IEC60950EN 60950
EN 50178
EN 50081-1
EN 61000-6-2UL US
UL508 LISTED
IND. CONT. EQ.
18 Wm, 60°CUL US
UL60950 E137006
CUL/CSA-C22.2
No 950-M90CE
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 <2.5A²s ($T_{amb} = +25^\circ\text{C}$, cold start)
<6A²s ($T_{amb} = +50^\circ\text{C}$, 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: 48.5V $\pm 0.5\%$
Adj. range guaranteed

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

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°C

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

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

Voltage regulation better than 2% V_{out} overall

Ripple / Noise <50mV_{pp}, (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 ventilation above/below 25mm recommended
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

Overload Behaviour

- Special PULS Overload – no disconnection, no hiccup if overloaded Design (see diagram – high overload current (up to $1.6 I_{Nom}$), V_{out} is gradually reduced with increasing current.
- 20% power boost – 6A short-term, at 45°C or forced cooling even continuous

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

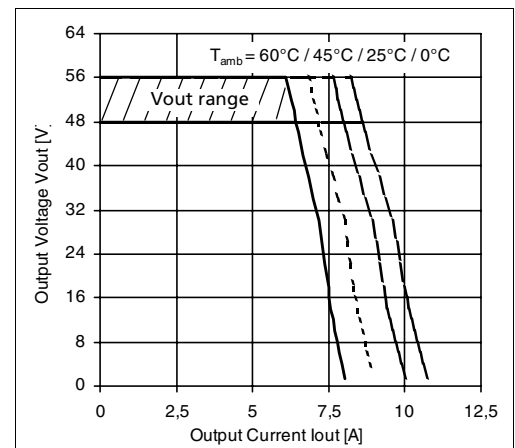
For further information, especially about

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

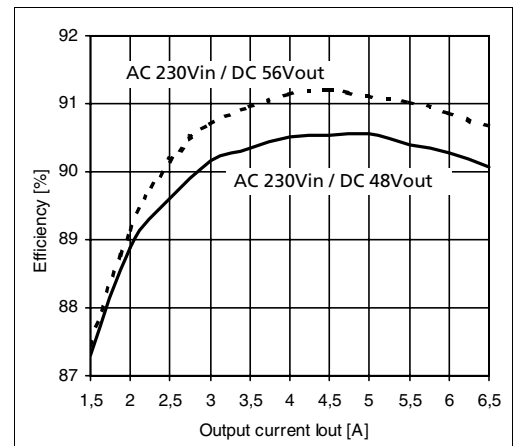
For detailed dimensions

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

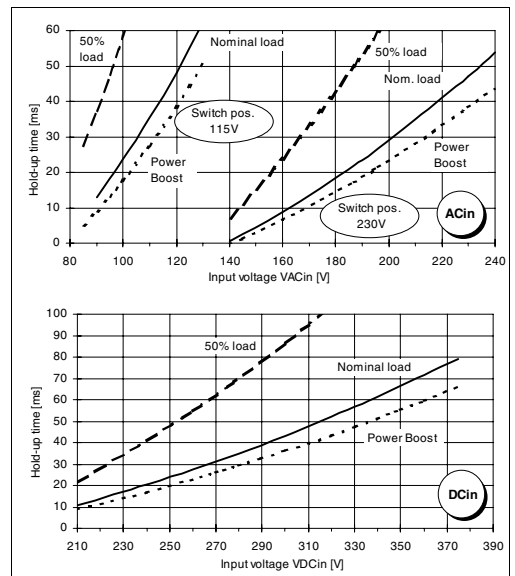
Output characteristic (min.)



Efficiency



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



Specifications valid for 230 V AC input voltage, +25°C ambient temperature, and 5 min run-in time, unless otherwise stated. They are subject to change without prior notice

with 50% Load = 120W / Rated Load = 240W / Power Boost = 288W

Your partner in power supply:



Bayerns Best 50
Czech 100 Best
Europe's 500

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