Power in square, PFC

SL10.105

- Input: AC 230/115V, DC 240...375V
- Output: 24-28V/240W
- Power boost up to 288W
- High overload current, no switch-off
- Robust mechanics and EMC
- Very low leakage current

Input

Input voltage: AC 100-120/220-240V (switchable), 47-63Hz (AC 85...132/176...264V, DC 240...375V)

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

Input current:
- <6A (switch in 115V position)
- <2.8A (switch in 230V position)
- DCin at open output 8mA (preserves battery sources)

Inrush current:
- typ. <30A at AC 264V and cold start

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):
- acc. 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:
- >20ms (at AC 196V, 24V/10A) (see diagram overleaf)

Efficiency, Reliability etc.*

Efficiency:
- typ. 89% (AC 230V, 24V/10A)

Losses:
- typ. 29W (AC 230V, 24V/10A)

MTBF:
- 225,000h acc. to Siemensnorm SN 29500 (24V/10A, AC 230V, Tamb = +40°C)

Life cycle (electrolytics):
- The unit exclusively uses longlife electrolytics, specified for +105°C (cf. ‘The SilverLine’, p.2).

Start / Overload Behaviour

Startup delay:
- typ. 0.1s

Rise time:
- ca. 5-20ms, depending on load

Overload Behaviour:
- Special PULS Overload Design (see diagram overleaf)
- 20% power boost

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

Output

Output voltage:
- DC 24-28V, adjustable by (covered) front panel potentiometer; preset: 24.5V ±0.5%
  - Adj. range guaranteed

Output noise suppression:
- Radiated EMI values below EN 61000-6-3, even when using long, unscreened output cables.

Ambient temperature range:
- Operation: 0°C...+70°C (derating)
- Storage: -25°C...+85°C

Rated continuous loading with convection cooling:
- Tamb=0°C - 60°C: 24V/10A (240W) resp. 28V/8.6A (240W)
- Tamb=0°C - 45°C: 24V/12A (288W) resp. 28V/10.3A (288W)
- short-term also at 60°C

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

Derating:
- typ. 6W/K (at Tamb = +60°C...+70°C)

Voltage regulation:
- better than 2% Vout overall

Ripple / Noise:
- <30mVp, (20MHz bandw., 50Ω measurement)

Overvolt. protection:
- typ. 35V

Parallel operation:
- yes, current sharing available on request

Power back immunity:
- 34V

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: 1195g

Design advantages:
- All connection blocks are easy to reach as mounted at the front panel.
- Very low leakage current >0.5mA, suitable for medical applications.

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

Order information

<table>
<thead>
<tr>
<th>Order number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL10.105</td>
<td>Screw mounting set, two needed per unit</td>
</tr>
<tr>
<td>SL202</td>
<td></td>
</tr>
</tbody>
</table>
Efficiency (typ.)

Output characteristic (min.)

Hold-up time (typ., at $V_{out}=24V$)

For further information, especially about
- EMC
- Connections
- Safety, Approvals
- Mechanics and Mounting,
see page 2 of the „The SilverLine“ data sheet.

For detailed dimensions
see SilverLine mechanics data sheet SL2.5/ SL5/ SL10

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

Your partner in power supply:

Your partner in power supply:
Mechanics

SL2.5/ SL5/ SL10

• Innovative DIN-Rail mount, unit holds even at vibration or lateral pressure
• Clearly arranged and user oriented
• Large, robust screw terminals
• Sealed metal housing
• Fine ventilating grid

Order information

Order number | Description
---|---
SL2.100 | 24V/2.5A
SL2.103 | 12-15V/40W
SL5.100 | 24V/5A
SL5.102 | 24-28V/120W
SL5.105 | 24-28V/120W
SL5.300 | 24-28V/120W, 3AC400-500V input
SL10.100 and SL10.105 | 24-28V/240W
SL10.101 | 48-56V/240W
SLZ01 | Screw mounting set, two needed per unit
his 'mechanics data sheet' exclusively deals with the mechanical properties of the product. For further information (especially concerning electrical properties), please refer to the generic data sheet of the SL2.5, SL5 and SL10 and to the basic data sheet „The SilverLine“ dealing with common features of all SilverLine units. This data sheet is subject to change without prior notice.

Your partner in power supply: