3-phase 5 A

SL5.300

- Input: 3 AC 400–500 V
- Output: 24...28V / 120 W
- Power boost up to 144 W
- High overload current, no switch-off
- 3 phase wide range input
- Robust mechanics and EMC

Data sheet

3-phase 5 A

SL5.300

- Input: 3 AC 400–500 V, ± 15 \% 47-63 Hz, suitable for IT power systems
- Rated tolerances (at 24V/SA)
  - Continuous operat. 340...576 V AC resp. 450...820 V DC
  - Short term (1 min.) 300...620 V AC resp. 420...890 V DC
- Even if one phase fails, the unit’s operation with nominal current can be continued (limitations: EN 61000-3-2 (harmonic current emissions) is then not fulfilled, the unit has noise suppression level A instead of level B and the hold-up time is shorter). Continued operat. with two phases is also possible; however, it reduces the unit’s reliability and lifetime.

Input current 3 x 0.5 A

Inrush current typ. <25A at 575 V AC and cold-start

To be fused with a 3 x 10A, B-type ‘circuit-breaker’ switch based on the usual thermomagnetic overload sensing principle (used anyway to fuse the input lines; unit has no internal fuses).

Harmonic current emissions (PFC) acc. to EN 61000-3-2

Hold-up time >16 ms (3 phase op. at 400 VAC, 24 V / 5 A)

>10 ms (2 phase op. at 400 VAC, 24 V / 5 A)

**Efficiency, Reliability etc.**

- Efficiency typ. 89% (3 AC 400V, 24 V / 5 A)
- Losses typ. 15 W (3 AC 400V, 24 V / 5 A)
- MTBF 410.000 h acc. to Siemensnorm 29500 (24 V/5 A, 3 AC 400V, T_\text{J} = 40 \degree C)
- Life cycle (electrolytics) The unit exclusively uses longlife electrolytics, specified for +105 \degree C (cf. ‘The SilverLine’, p.2).

* For further information see data sheets „The SilverLine“, „SilverLine Family Branches“ and mechanics data sheet (mechanical design equals that of the SL20.100).

**Startup / Overload Behaviour**

- Startup delay typ. 0.1 s
- Rise time ca. 5-20 ms, depending on load

Overload Behaviour

- Special PULS Overload Design (see diagram overleaf)
  - no disconnection, no hiccup if overloaded
  - high overload current (up to typ. 2 \cdot I_{\text{Nom}}), Vout is reduced with increasing current.
  - 20% power boost 6 A short-term, at 45\degree C or forced cooling even continuous

Advantages:

- High short-circuit current, giving large ‘start-up window’: unit starts reliably even with awkward loads such as DC-DC converters.
- Secondary fuses operate more reliably

Output

- Output voltage 24...28 V DC, adjustable by (covered) front panel potentiometer, preset: 24.5 V ± 0.5% Adjusting range guaranteed
- Output noise supression EN 61000-6-3 (class B) is fulfilled even when using long, unscreened output cables
- Ambient temperature range T_{\text{amb}} Operation: -10\degree C...+70\degree C (>60\degree C: Derating) Storage: -25\degree C...+85\degree C

Rated continuous loading with convection cooling

<table>
<thead>
<tr>
<th>Input</th>
<th>T_{\text{amb}}</th>
<th>I_{\text{out}} @ 24V</th>
<th>I_{\text{out}} @ 28V</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-phase</td>
<td>-10\degree C...+60\degree C</td>
<td>5 A</td>
<td>4,3 A</td>
</tr>
<tr>
<td>-10\degree C...+45\degree C</td>
<td>6 A*</td>
<td>5,1 A*</td>
<td></td>
</tr>
<tr>
<td>2-phase</td>
<td>-10...+60</td>
<td>5 A</td>
<td>4,3 A</td>
</tr>
<tr>
<td>DC in</td>
<td>-10...+60</td>
<td>6 A*</td>
<td>5,1 A*</td>
</tr>
</tbody>
</table>

* short-term (< 1 min) or with forced air-cooling also at 60\degree C admissible

- Derating typ. 6W/K (at T_{\text{amb}=60\degree C...+70\degree C})
- Voltage regulation better than 2\% Vout overall
- >25 mVpp, (20 MHz bandw., 50 \Omega measurem.)
- Overvolt. protection typ. 33 V
- Serial connection not allowed
- Parallel operation yes; current sharing available on request
- Power back immunity 34 V; inapplicable for inductive loads
- Front panel indicator green LED off, at V_{\text{out}}<20V

**Construction / Mechanics**

- Housing dimensions and Weight
  - W x H x D 73 mm x 124 mm x 117 mm (+ DIN rail)
  - Free space for ventilation above/below 50 mm recommended
  - Weight 730 g
- Design advantages:
  - All connection blocks are easy to reach as mounted at the front panel.
  - Input and output are strictly apart from each other and so cannot be mixed up (Input below, output above).

* 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>SL5.300</td>
<td>Screw mounting set, two needed per unit</td>
</tr>
<tr>
<td>SL201</td>
<td>Screw mounting set, two needed per unit</td>
</tr>
</tbody>
</table>
Specifications valid for 3AC 400V input voltage, +25°C ambient temperature, and 5 min run-in time, unless otherwise stated. They are subject to change without prior notice.

Your partner in power supply:
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

<table>
<thead>
<tr>
<th>Order number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL2.100</td>
<td>24V/2.5A</td>
</tr>
<tr>
<td>SL2.103</td>
<td>12-15V/40W</td>
</tr>
<tr>
<td>SL5.100</td>
<td>24V/5A</td>
</tr>
<tr>
<td>SL5.102</td>
<td>24-28V/120W</td>
</tr>
<tr>
<td>SL5.105</td>
<td>24-28V/120W</td>
</tr>
<tr>
<td>SL5.300</td>
<td>24-28V/120W, 3AC400-500V input</td>
</tr>
<tr>
<td>SL10.100 and SL10.105</td>
<td>24-28V/240W</td>
</tr>
<tr>
<td>SL10.101</td>
<td>48-56V/240W</td>
</tr>
<tr>
<td>SLZ01</td>
<td>Screw mounting set, two needed per unit</td>
</tr>
</tbody>
</table>

Connections

- Input/Output
- Current handling capacity
- Grid

Design advantages:

- All connection blocks are easy to reach as mounted at the the front panel.
- Input and output are strictly apart from each other and so cannot be mixed up

Side view SL2.5

Front view SL2.5

Bottom view SL2.5

Construction / Mechanics

<table>
<thead>
<tr>
<th>Unit</th>
<th>W x H x D [mm]</th>
<th>Weight</th>
<th>Free space for ventilation</th>
<th>Overall depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL2.5</td>
<td>49 x 124 x 102</td>
<td>460 g</td>
<td>left 0 mm, above/below 25 mm each 10 mm</td>
<td>depth value as mentioned + DIN rail depth</td>
</tr>
<tr>
<td>SL5.10x</td>
<td>64 x 124 x 102</td>
<td>620 g</td>
<td>15 mm 25 mm each 15 mm</td>
<td></td>
</tr>
<tr>
<td>SL5.300</td>
<td>73 x 124 x 117</td>
<td>730 g</td>
<td>15 mm 50 mm each 15 mm</td>
<td></td>
</tr>
<tr>
<td>SL10</td>
<td>120 x 124 x 102</td>
<td>980 g</td>
<td>15 mm 25 mm each 15 mm</td>
<td></td>
</tr>
</tbody>
</table>

Mounting on DIN-Rail (TS35/7.5 or TS35/15, 1...1.5 mm thick), thus:

- Simple snap-on system
- Sits safely and firmly on the DIN-Rail
- No tools required to remove
- or backplane-mounted (two optional screw mounting sets SLZ01 required)
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: