10 A 3-phase
SL10.300
SL10.309 (Conformal Coated)

- Input: 3 AC 400-500V (2-phase and 3-phase operation)
- Output: 24-28V / 240W
- Power Boost up to 288W
- External primary fuse not necessary
- Switchable operating mode (single/parallel)
- Switchable overload behaviour options (Fuse Mode / Continuous Mode)

Data sheet

- Input:
  - Nominal input voltage: 2 AC and 3 AC 400-500V (47...63Hz), suitable for IT power systems
  - Rated tolerances: (at 24V/10A) 2-phase and 3-phase operation
  - Continuous operat. AC 340...576V resp. DC 450...820V
  - Short-term (1 min.) AC 300...620V resp. DC 400...890V
  - Pls. ask for ‘application notes’ at operation with DC input voltage.

- Inrush current (supply impedance acc. EN61000-3-3)
  - 3 x 0.8/0.7A at AC 400/500V
  - 2 x 1.2/1A at AC 400/500V

- EN 61000-3-2 (harmonic current emissions [PFC]) is fulfilled

- Transient handling
  - Transient resistance acc. to VDE 0160/W2 (1300V/1.3ms), for all load conditions

- Emissions
  - 3-phase and 2-phase operation: acc. to EN 61000-6-3 (Class B)

- Hold-up time
  - >24ms (3-phase operat. @ AC 400V, 24V/10A)
  - >20ms (2-phase operat. @ AC 400V, 24V/10A)

Output

- Output voltage: DC 24-28V, adjustable by (covered) front panel potentiometer, preset: 24.5V ±0.5%
- Output noise suppression: Conducted EMI values below EN61000-6-3, even when using long, unscreened output cables.

- Ambient temperature range T\textsubscript{Amb}
  - Operation: 0°C...+70°C (>60°C with Derating)
  - Storage: -25°C...+85°C

- Rated continuous loading with convection cooling
  - T\textsubscript{Amb} = 0°C - 60°C: 24V/10A (240W) resp. 28V/8.6A (240W)
  - T\textsubscript{Amb} = 0°C - 45°C: 24V/12A (288W) resp. 28V/10.3A (288W)

- Overvolt. protection typ. 36V, max. 39V
- Power back immunity min. 34V

- Parallel operation: Yes, up to five units.

Construction / Mechanics

- Housing dimensions and Weight
  - W x H x D: 89mm x 124mm x 117mm (+ DIN rail)
  - Free space for connection cooling: above/below 50mm recommended, left/right 20mm recommended
  - Weight: 980g

- Design advantages:
  - All connection blocks are easy to reach as mounted on the front panel.
  - PVC insulated cable can be used for all connections, as the connection blocks are mounted on the cooler area on the underside of the unit.

Order information

<table>
<thead>
<tr>
<th>Order number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL10.300/</td>
<td>SLZ13 (adapter for S7-300 rail)</td>
</tr>
<tr>
<td>SL10.309</td>
<td>SLZ02 (wall mounting set; contains 2 pcs.)</td>
</tr>
</tbody>
</table>

For further information, particularly about
- EMC, Connections
- Safety, Approvals,
- Mechanics and Mounting: see data sheet „The SilverLine“ pg. 2
- Detailed dimensions: see SilverLine mechanics data sheet SL10.300

At a competitive price, it also offers 12A power boost, 20A short circuit current, output noise suppression, optional Single Mode or Parallel Mode, small dimensions, more than 500,000h MTBF as well as easy installation. The unit can be connected to European and American power supply networks without switching.
Efficiency, Reliability etc.

Efficiency / Power loss:

<table>
<thead>
<tr>
<th>Operation</th>
<th>Efficiency typ.</th>
<th>Power loss typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-phase</td>
<td>91.2%</td>
<td>23.6W (400V)</td>
</tr>
<tr>
<td>2-phase</td>
<td>92%</td>
<td>21.4W (500V)</td>
</tr>
<tr>
<td>2-phase</td>
<td>90.9%</td>
<td>24.5W (400V)</td>
</tr>
</tbody>
</table>

MTBF acc. to Siemensnorm SN 29500 at 24V/10A, AC 400V, $T_{amb} = +40^\circ$C

3-phase operation: 543.000h
2-phase operation: 525.000h

Life cycle (electrolytics): The unit exclusively uses longlife electrolytics, specified for +105°C

Start Behaviour

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Startup delay</td>
<td>typ. 100ms</td>
</tr>
<tr>
<td>Rise time</td>
<td>appr. 5-20ms, depending on load</td>
</tr>
</tbody>
</table>

Overload Behaviour

Two different operating mode options, switchable by plugging the front-panel jumper. If the jumper is missing, the unit is in the Fuse Mode. The unit is delivered preset in Continuous Mode.

a) Continuous Mode (continuous current):
- Jumper is in the ‘OVL cont. mode’ position.
- When overload or short-circuit occurs, the unit continuously supplies current (see. diag. 1), no Hiccup.

Advantage: The unit starts reliably even with heavy, non-linear loads (high capacities, DC-DC converters, motors). The high short-circuit current triggers downstream fuses, and allows for selective configuration of electrical installations.

b) Fuse Mode (Switch-off after typ. 5s):
- Jumper is in the ‘OVL fuse mode’ position.
- When overload or short-circuit occurs for more than typ. 5s, the unit switches off the output.
- Definition of overload or short-circuit: The set output voltage in each case can no longer be maintained.
- The capacity to deliver current (PULS Overload Design™) (see diag. 1) remains unchanged during the typ. 5s delay time.
- Red LED flashes at switch-off.

Feature: With some applications, the Fuse Mode can replace the usual fusing on the secondary side. The Fuse Mode has closer tolerances than thermal trips. The release delay time of typ. 5s ensures that motors can be reliably operated.

Re-start:
- by pushing the reset button on the unit’s front panel
- by disconnection from mains and re-start of the unit after > 1 min. or as soon as the red LED stops flashing

Overtemperature Protection

Continuous Mode Switch-off and automatic re-start after cooling.
Fuse Mode Unit remains switched off after overheating until restart (also see ‘Re-start’ above).

Efficiency (typ., $V_{out}=24.5V$)

- 3 x AC 400V
- 3 x AC 450V
- 3 x AC 500V

Hold-up time (typ., $V_{out}=24.5V$)

- Iout = 8A
- Iout = 10A
- Iout = 12A

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:
Mechanics

SL10.300

- 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

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<td>Screw mounting set, two needed per unit</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

Screw terminals, connector size range:
- solid 0.5-6 mm² / flexible 0.5-4 mm²
- 30 A per output
- Two connectors per output
- Primary side: 9,52 mm between adjacent connectors
- Secondary side: 6,35 mm between adjacent connectors

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
- PVC insulated cable can be used for all connections, no thermal protection is needed

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This '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 SL10.300 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: