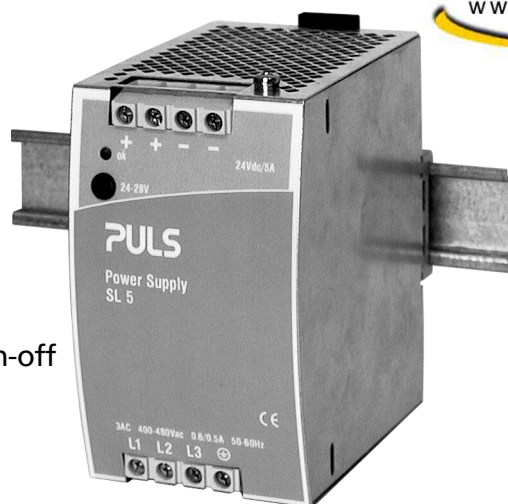


## 3-phase 5 A

# 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

## Input

Input voltage	3 AC 400...500 V, $\pm 15\%$ 47-63 Hz, suitable for IT power systems
Rated tolerances	(at 24V/5A)
• 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 permissible; 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% (400 VAC, 24 V / 5 A)
Losses	typ. 15 W (400 VAC, 24 V / 5 A)
MTBF	410.000 h acc. to Siemensnorm 29500 (24 V/5 A, 400 VAC, $T_U = 40^\circ\text{C}$ )
Life cycle (electrolytics)	The unit exclusively 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 (mechanical design equals that of the SL20.100).

## Start / 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.  $2 \cdot I_{Nom}$ ),  $V_{out}$  is reduced with increasing current.
- 20% power boost 6 A 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 awkward loads (DC-DC converters, motors).
- Secondary fuses operate more reliably

## Output

Output voltage	24...28 V DC, adjustable by (covered) front panel potentiometer, preset: 24.5 V $\pm 0.5\%$ Adjusting range guaranteed			
Output noise suppression	Radiated EMI values below EN50081-1, even when using long, unscreened output cables.			
Ambient temperature range $T_{amb}$	Operation: $-10^\circ\text{C}...+70^\circ\text{C}$ (>60°C: Derating) Storage: $-25^\circ\text{C}...+85^\circ\text{C}$			
Rated continuous loading with convection cooling	Input	$T_{amb}$	$I_{out @ 24V}$	$I_{out @ 28V}$
	3-phase	$-10^\circ\text{C}...+60^\circ\text{C}$	5 A	4,3 A
		$-10^\circ\text{C}...+45^\circ\text{C}$	6 A*	5,1 A*
	Output is protected against short-circuit, open circuit and overload	2-phase	$-10...+60$	5 A
DC in		$-10...+60$	5 A	4,3 A
		$-10^\circ\text{C}...+45^\circ\text{C}$	6 A*	5,1 A*

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

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	< 25 mV <sub>pp</sub> , (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
Front panel indicator	Green LED, goes out at $V_{out} < 20V$
Output voltage	24...28 V DC, adjustable by (covered) front panel potentiometer, preset: 24.5 V $\pm 0.5\%$ Adjusting range guaranteed
Output noise suppression	Radiated EMI values below EN50081-1, even when using long, unscreened output cables.

## 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 left/right 15 mm recommended 730 g

### Design advantages:

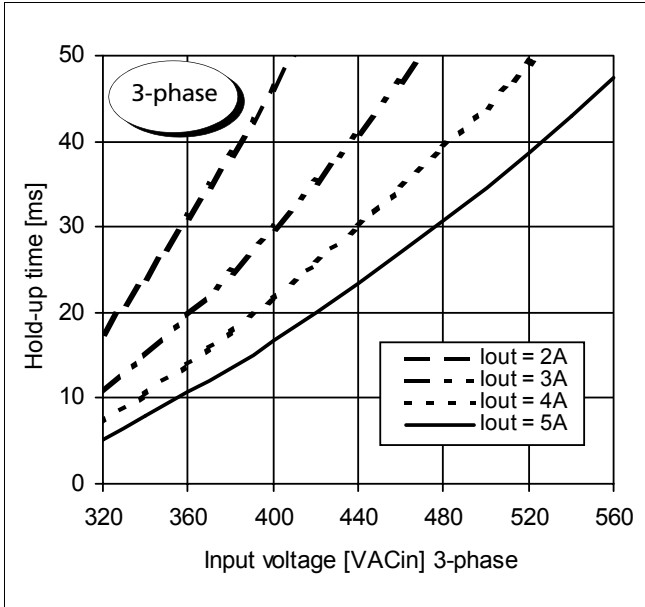
- All connection blocks are easy to reach as mounted at the front panel.
- Input and output are strictly apart from each other and so cannot be mixed up (Input below, output above).

\* For further information see data sheets "the SilverLine", "SilverLine Family Branches" and mechanics data sheet

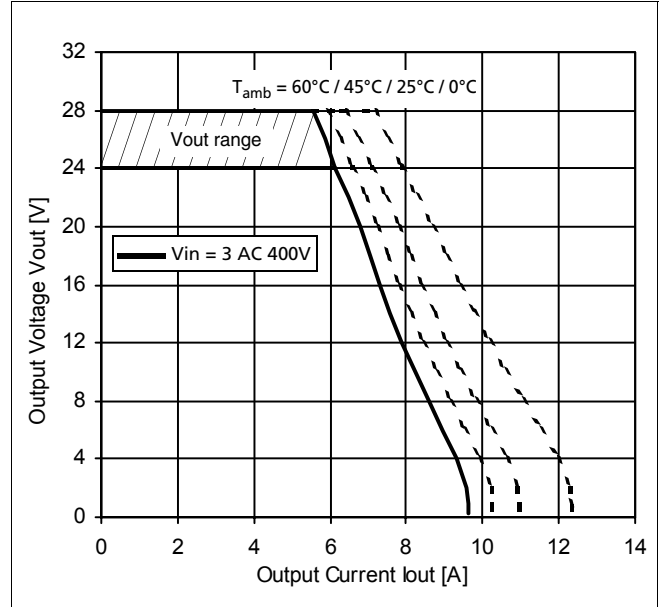
## Order information

Order number	Description
SL5.300	
SLZ01	Screw mounting set, two needed per unit

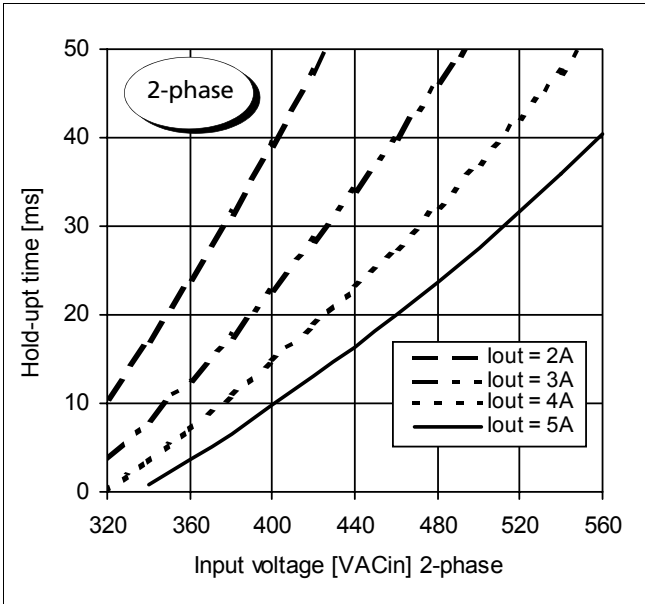
**Hold-up time, 3-phase** (min., at  $V_{out}=24V$ )



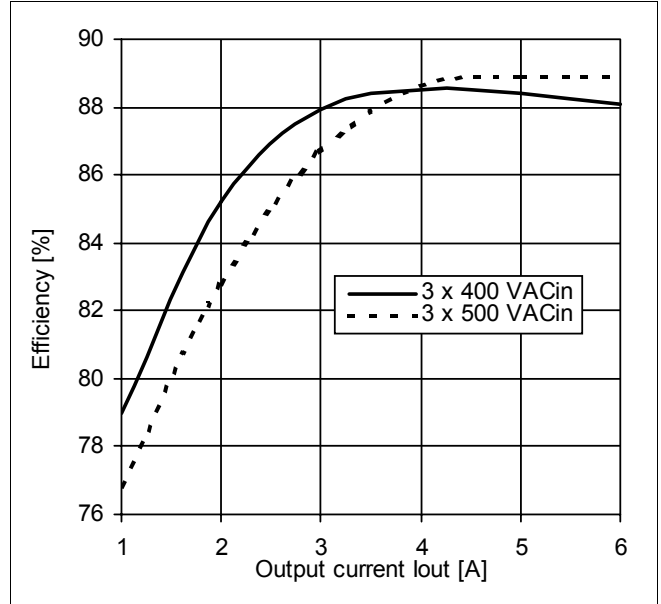
**Output characteristic** (min.)



**Hold-up time, 2-phase** (min., at  $V_{out}=24V$ )



**Efficiency** (typ., at  $V_{out}=24V$ )



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