Data sheet

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

EMV und Nied.-Spg. Richtlinie

UL60950 E137006 CUL/CSA-C22.2 No. 60950

UL508 LISTED IND. CONT. EQ. 18 WM, 60°C

CB scheme IEC60950

Input

Input voltage	3 AC 400–500 V, ± 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 redu ces 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 'c ircuit-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 $_U$ = 40 °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 Over-load Design (see diagram overleaf)	no disconnection, no hiccup if overloaded high overload current (up to typ. 2 · I_{Nom}), Vout 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 lo ads such as DC-DC converters.
- Secondary fuses operate more reliably

Output

Output voltage	24...28 V DC, ad justable by (covered) front panel potentiometer, preset: 24.5 V ± 0.5% Adjusting range guaranteed
Output noise suppression	EN 61000-6-3 (class B) is fulfilled even when using long, unscreened output cabels
Ambient temperature range T $_{amb}$	Operation: -10°C...+70°C (>60°C: Derating) Storage: -25°C...+85°C

Rated continuous loading with con-vection cooling Output is protected against short-circuit, open circuit and over-load	Input	T $_{amb}$	I $_{out}$ @ 24V	I $_{out}$ @ 28V
	3-phase	-10°C...+60°C	5 A	4,3 A
		-10°C...+45°C	6 A*	5,1 A*
	2-phase	-10...+60	5 A	4,3 A
	DC in	-10...+60	5 A	4,3 A
		-10°C...+45°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°C...+70°C)
Voltage regulation	better than 2% Vout overall
Ripple / Noise	< 25 mV $_{PP}$, (20 MHz bandw., 50 Ω 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 $_{out}$ <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 left/right 15 mm recommended
• Weight	730 g

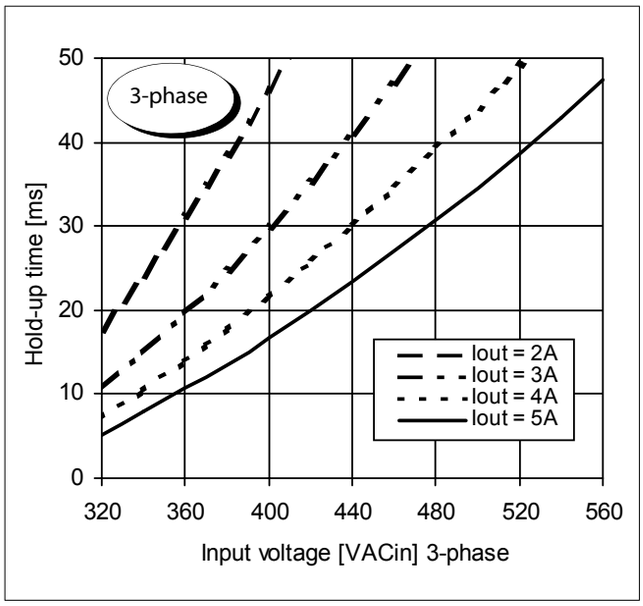
Design advantages:
- All connection blocks are easy to reach as mounted at the front pan-el.
- Input and output are strictly apart from each other and so cannot be mixed up (Input below, output above).

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

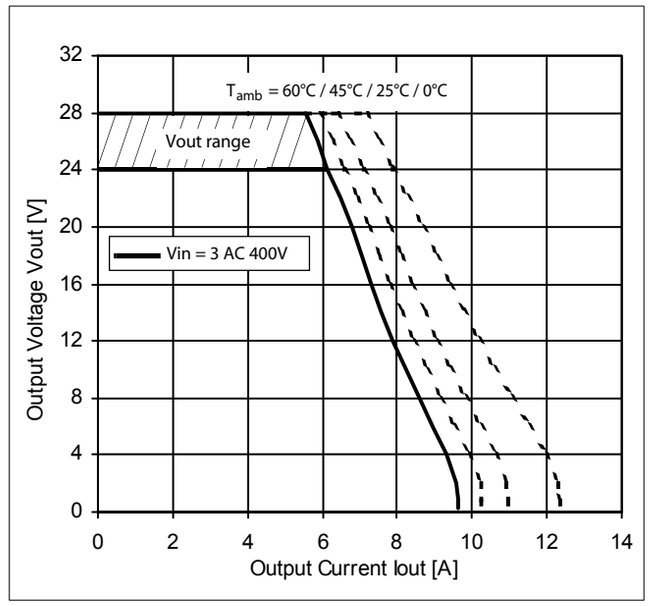
Order information

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

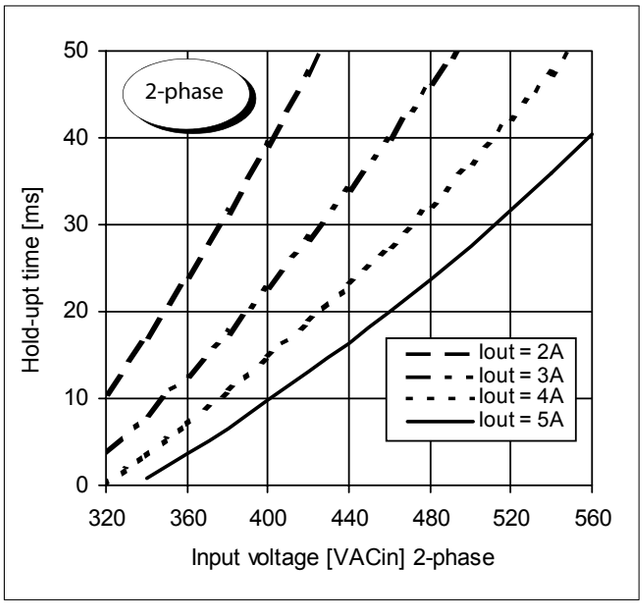
Hold-up time, 3-phase (min., at V_{out} = 24V)



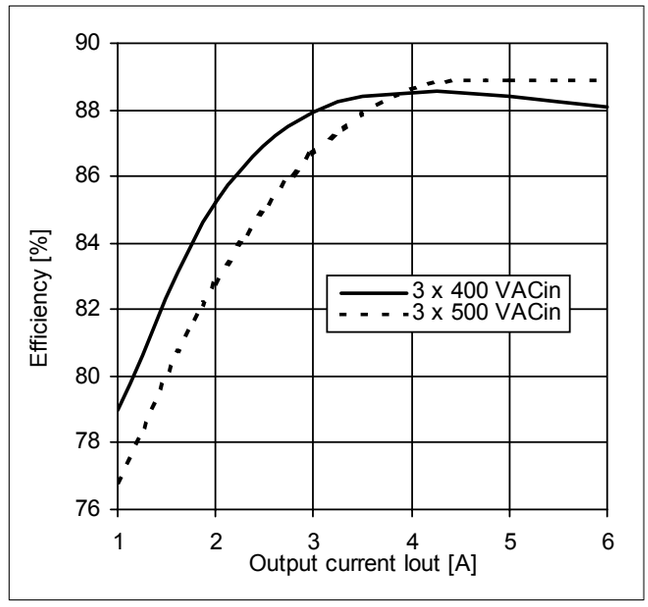
Output characteristic (min.)



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

Specifications valid for 3AC 400V input voltage, +25°C ambient te mperature, and 5 min run-in time, unless otherwise stated. The y are subject to change without prior notice.

Your partner in power supply:

ISO 9000:2000 certified

EPSMA European Power Supply Manufacturers Association

AWARDED Bayerns Best 50 Czech 100 Best EuropeÖs 500