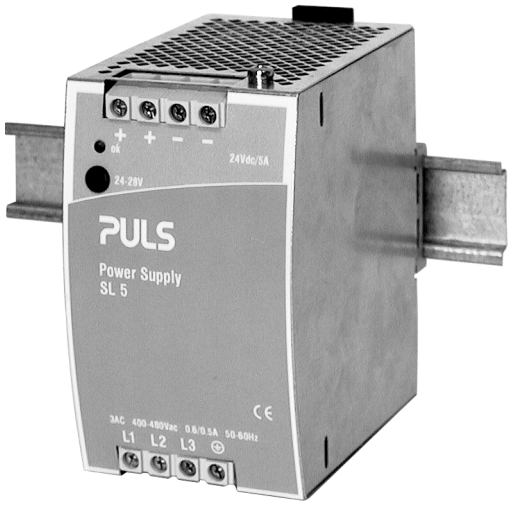
Data sheet

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



PULS

CE
EMV und Nied.-Spg. Richtlinie

c UL us
UL60950 E137006
CUL/CSA-C22.2 No. 60950

c UL us
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 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_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 Overload 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 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 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 convection cooling
Output is protected against short-circuit, open circuit and overload

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

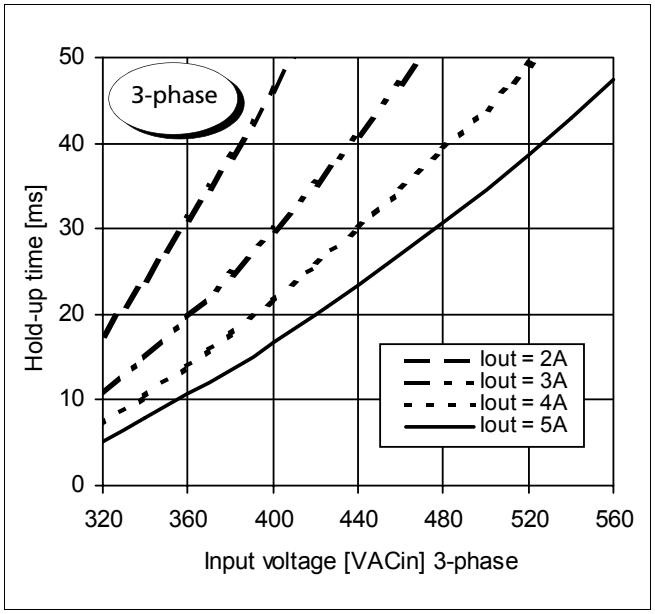
Design advantages:
- All connection blocks are easy to reach as mounted at the front panel.
- Input and output are strictly apart from each other and so cannot be mixed up (Input below, output above).

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

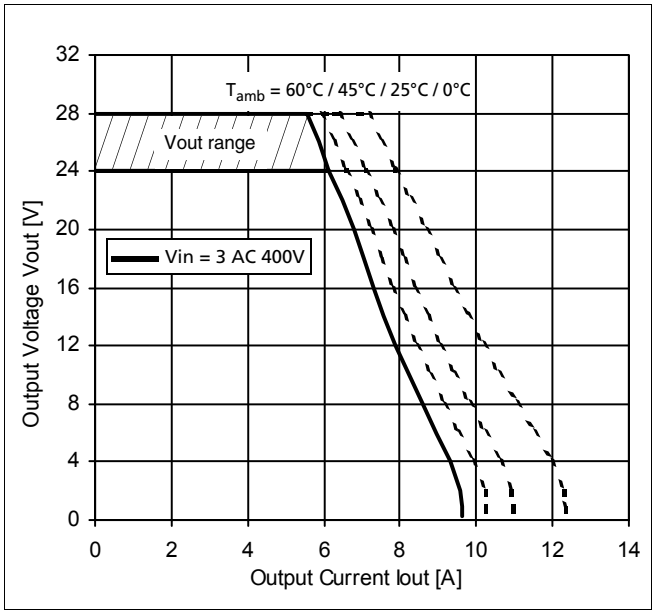
Order information

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

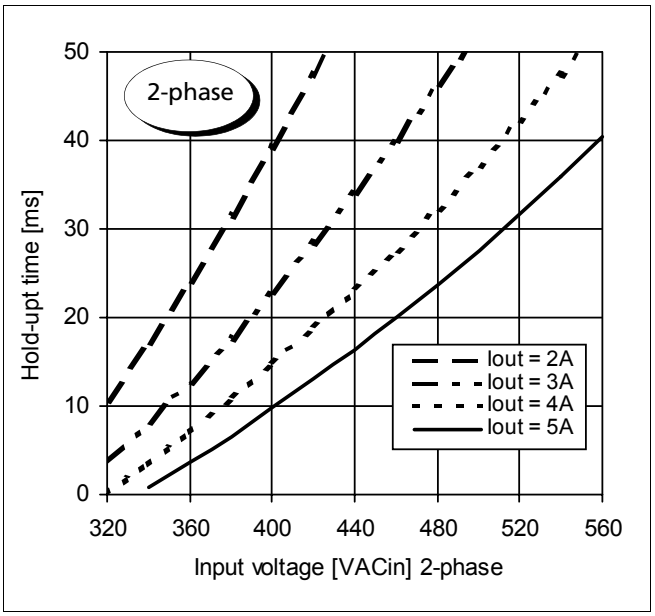
Hold-up time, 3-phase (min., at V_{out}=24V)



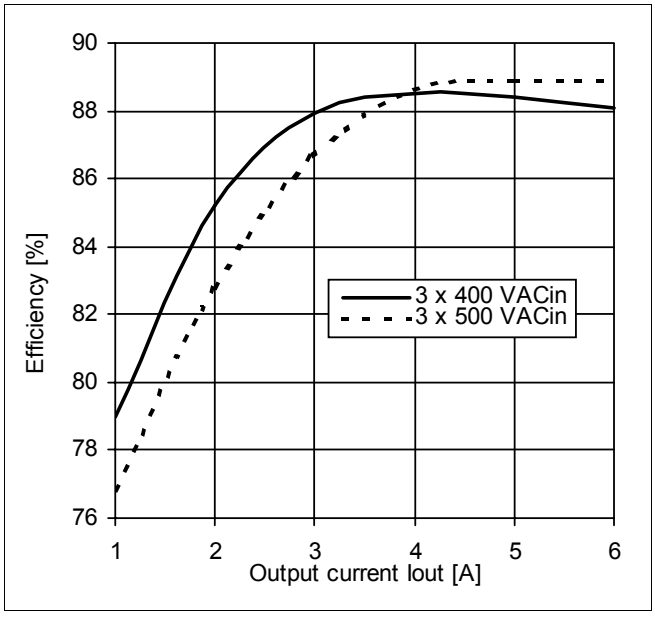
Output characteristic (min.)



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

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:

ISO 9000:2000 certified

EPSMA European Power Supply Manufacturers Association

AWARDED Bayerns Best 50 Czech 100 Best EuropeÖs 500

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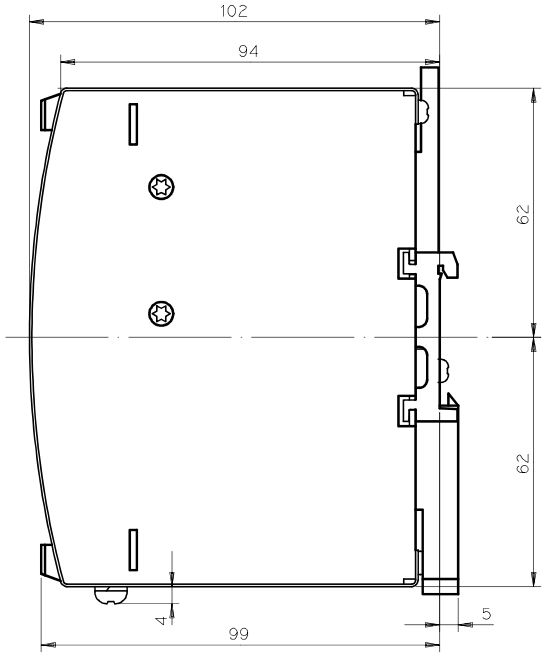
Data sheet

Mechanics

SL2.5/ SL5/ SL10

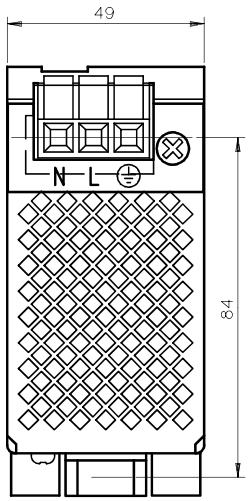
- Innovative DIN-Rail mount, unit holds even at vibration or lateral pressure
- Clearly arranged and user oriented
- Large, robust screw terminals
- Sealed metal housing
- Fine ventilating grid

Side view SL2.5



Front view SL2.5

Bottom view SL2.5



Construction / Mechanics

Housing dimensions and Weight

Unit	W x H x D [mm]	weight	Free space for ventilation left	above/below	right
• **SL2.5**	49 x 124 x 102	460 g	0 mm	25 mm each	10 mm
• **SL5.10x**	64 x 124 x 102	620 g	15 mm	25 mm each	15 mm
• **SL5.300**	73 x 124 x 117	730 g	15 mm	50 mm each	15 mm
• **SL10**	120 x 124 x 102	980 g	15 mm	25 mm each	15 mm

Overall depth = depth value as mentioned + DIN rail depth

Robust metal housing with
fine ventilat. grid (◇ 3,5 mm, IP20), to keep out small parts (e.g. screws)

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)

Connections

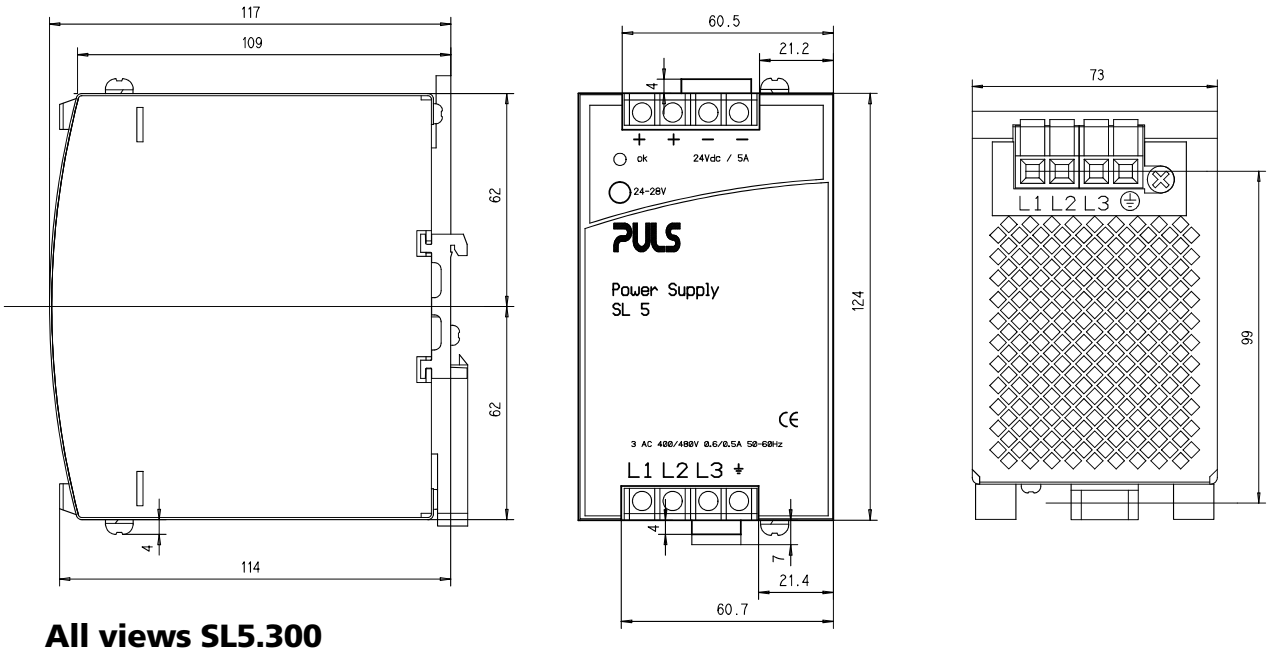
Connections
- Input/Output
- Current handling capacity
- Grid

Screw terminals, connector size range:
solid 0.5- 6 mm^2 / flexible 0.5- 4 mm^2
30 A per output
Two connectors per output, 9 mm distance between adjacent connectors

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

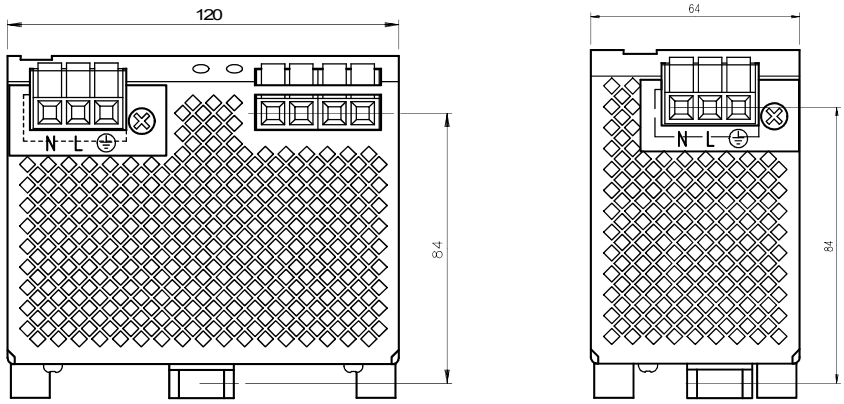
Order information

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

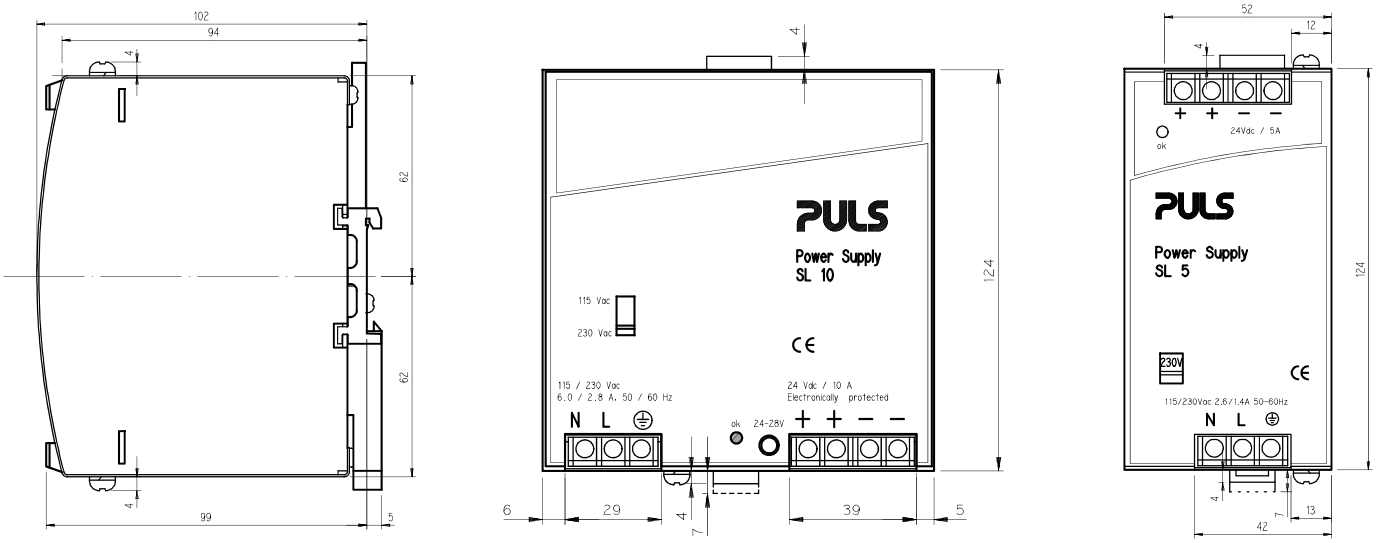


All views SL5.300

Bottom view
SL10 SL5.10x



Side view and front view
SL10, SL5.10x



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:

ISO 9000:2001 certified

EPSMA European Power Supply Manufacturers Association

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