PULS

Power in square

SilverLine SL10.100

- Input: AC 230V / 115V, DC 240-375 V
- Output: 24...28 V / 240 W
- Power boost up to 288 W
- High overload current, no switch-off
- Robust mechanics and EMC

EMC and Low Volt. Directive | UL1950 E137006 CUL/CSA-C22.2 No 950-M90 | UL508 LISTED IND. CONT. EQ. 18 WM, 60°C | IEC60950 | EN 60950 EN 50178 EN50081+82

Data sheet

Input

Input voltage	AC100-120/220-240 V (switchable), 47-63 Hz (85-132 VAC / 176-264 VAC, 240-375 VDC)

Note: At DC input, always leave the switch in the 230V position

Input current	< 6 A (switch in 115V position) < 2.6 A (switch in 230V position)
• DCin at open output	8 mA (preserves battery sources)
Inrush current	typ. < 30 A at 264 V AC and cold start

Unit is internally fused (fuse not accessible). External fuse not necessary, but recommended (common thermomagnectic 10A, B-type 'circuit-breaker' switch used anyway to fuse the input lines).

Transient handling	Transient resistance acc. to VDE 0160 / W2 (750 V / 1.3 ms), for *all* load conditions.
Hold up time	> 25 ms at 196 VAC, 24 V / 10 A (see Diagram overleaf)

Efficiency, Reliability etc.*

Efficiency	typ. 90 % (230 VAC, 24 V / 10 A)
Losses	typ. 26.7 W (230 VAC, 24 V / 10 A)
MTBF	425.000 h acc. to Siemensnorm SN 29500 (24 V/10 A, 230 VAC, T_{amb} = +40 °C)
Life cycle (electrolytics)	The unit exclusively uses longlife electrolytics, specified for +105°C (cf. 'The SilverLine', p.2).

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 1.6 I_{Nom}), Vout is gradually reduced with increasing current.
- 20% power boost – 12A 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).
- No 'sticking' such as can occur with fold-back characteristics
- Secondary fuses operate more reliably

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

Output

Output voltage	24...28 V DC, adjustable by (covered) front panel potentiometer; preset: 24.5 V±0.5% Adj. range guaranteed
Output noise suppression	Radiated EMI values below EN50081-1, even when using long, unscreened output cables.
Ambient temperature range T_{amb}	Operation: 0°C...+70°C (>60°C: Derating) Storage: -25°C...+85°C

Rated continuous loading with convection cooling
- T_{amb}=0°C - 60°C 24 V / 10 A (240 W) resp. 28 V / 8.6 A (240 W)
- T_{amb}=0°C - 45°C 24 V / 12 A (288 W) resp. 28 V / 10.3 A (288 W) short-term also at 60 °C

Output is protected against short-circuit, open circuit and overload

Derating	typ. 6 W/K (at T_{amb}=+60°C...+70°C)
Voltage regulation	better than 2% Vout overall
Ripple / Noise	< 30 mV_{PP}, (20 MHz bandw., 50 Ω measurem.)
Overvolt. protection	typ. 35 V
Parallel operation	yes, load sharing available on request
Power back immunity	34 V
Front panel indicator	Green LED on front panel

Construction / Mechanics*

Housing dimensions and Weight
- W x H x D 120 mm x 124 mm x 102 mm (+ DIN rail)
- Free space for ventilation above/below 25 mm recommended left/right 15 mm recommended
- Weight 980 g

Design advantages:
- All connection blocks are easy to reach as mounted at the front panel.

Ordering information

Order number	SL10.100 (Basic version*) SLR10.100 (N+1 redundancy*) SLS10.100 (Safety Cover*)
Accessories	SLZ01 (Screw mounting set, two needed per unit)

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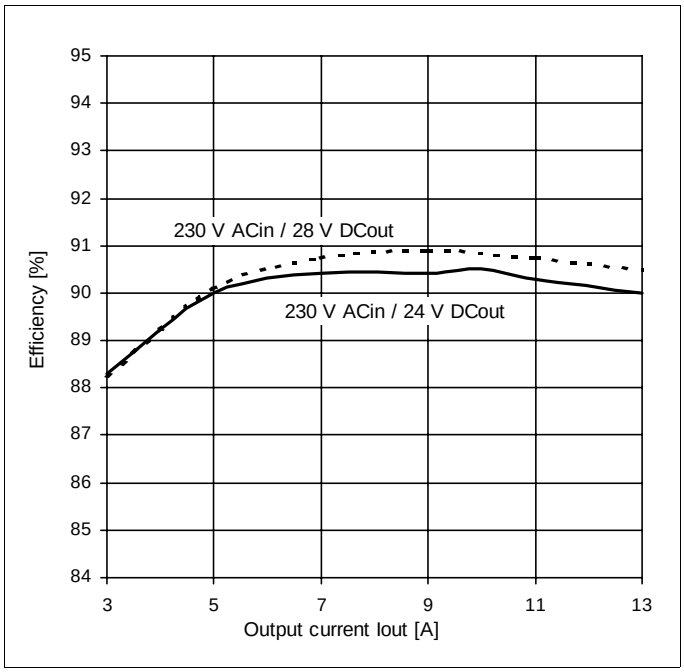
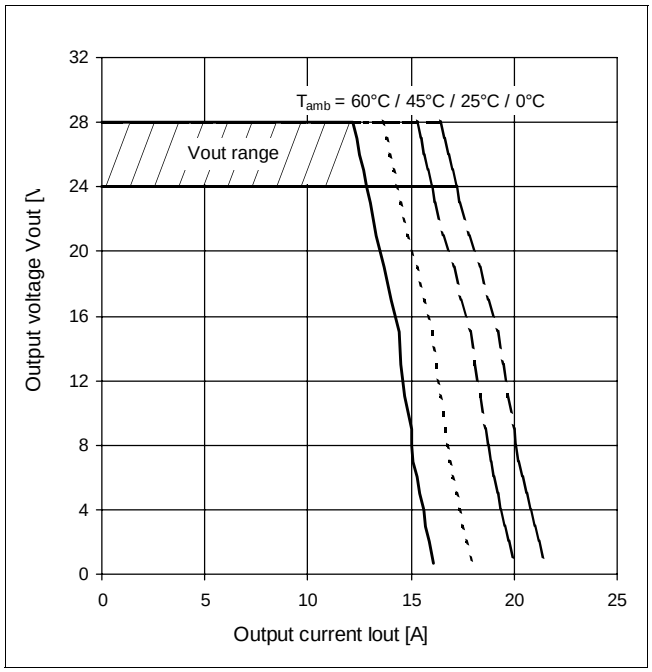
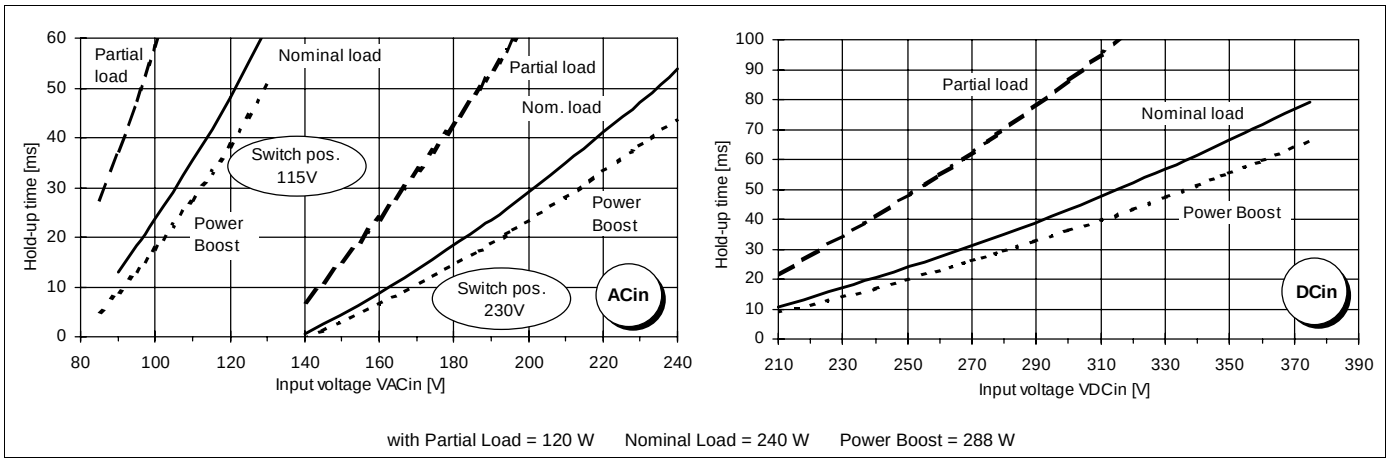
Efficiency (typ.)



Output characteristic (min.)



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



with Partial Load = 120 W Nominal Load = 240 W Power Boost = 288 W

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 230 V AC 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 9001 certified

European Power Supply Manufacturers Association

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