Data sheet

Baby SilverLine with 2.5 A

SL2.5

- Input: AC 230V / 115V
- Output: 24V / 2.5A
- High overload current, no switch-off
- Quasi-Wide-Range Input
- Robust mechanics and EMC
- NEC Class 2 Power Supply

CE
EMC and Low Volt. Directive

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

Data sheet

Input

Input voltage	AC100-120/220-240 V (switchable), 47-63 Hz (85-132 VAC / 176-264 VAC, 160-375 VDC, see also „Output: Continuous Loading“)

Quasi-Wide-Range Input: With the switch in the 230V position the power-supply unit operates at low and moderate loads at any input voltage between 95 and 264 V AC (see 'Output' at the right side).
Note: At DC input, always leave the switch in the 230V position

Input current	< 1.3 A (switch in 115V position) < 0.7 A (switch in 230V position)
DC input current at open output	typ. 5.3 mA at 110 VDC, 3.9 mA at 300 VDC (preserves battery sources)
Inrush current	typ. 25 A at 264 V AC and cold start

To be fused with a 10A, B-type 'circuit-breaker' switch based on the usual thermomagn. overload sensing principle (used anyway to fuse the input lines). In addition, the unit contains an internal fuse (not accessible)

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

Transient handling	Transient resistance acc. to VDE 0160 / W2 (750 V / 1.3 ms), for *all* load conditions.
Hold up time	> 20 ms at 196 VAC, 24 V / 2.5 A (see Diagram overleaf)

Efficiency, Reliability etc.*

Efficiency	typ. 87.5 %	(230 VAC, 24 V / 2.5 A)
Losses	typ. 8.6 W	(230 VAC, 24 V / 2.5 A)
MTBF	740,000 h acc. to Siemensnorm SN 29500 (24 V/2.5 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).	

Output

Output voltage	24 V DC +5% –1% *(12V on request)*
Output noise suppression	Radiated EMI values below EN 61000-6-3, even when using long, unscreened output cables.
Ambient temperature range T_{amb}	Operation: -10°C...+70°C (>60°C: Derating) Storage: -25°C...+85°C

Continuous loading (at T_{amb} = -10°C...+60°C, convection cooling), see also Diagram overleaf. For start at T_{amb}<0°C and low input voltage, please contact PULS.
* For start with DC input > 95 V DC needed

Switch	AC/DCin		Iout
230V	176-264 V	ACin	2,5 A
	95-176 V	ACin	1,5 A
	160-375 V	DCin	2,5 A
	120-160 V	DCin	2,0 A
	80*-120 V	DCin	1,5 A
115V	85-132 V	ACin	2.5 A

Output protected against short circuit, open circuit and overload

Derating	typ. 1.5 W/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. 32 V
Parallel operation	yes; current sharing available on request
Power back immunity	26 V
Front panel indicator	Green LED, goes out at V_{out} < 18V

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 1.5 I_{Nom}), Vout is gradually reduced with increasing current.

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 reliably

Order information

Order number	Description
SL2.100	(Basic version*)
SLR2.100	(N+1 redundancy*)
SLZ01	(Screw mounting set, two needed per unit)

Construction / Mechanics*

Housing dimensions and Weight

- W x H x D 49 mm x 124 mm x 102 mm (+ DIN rail)
- Free space for ventilation above/below 25 mm recommended
  right 10 mm recommended (front view)
- Weight 460 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

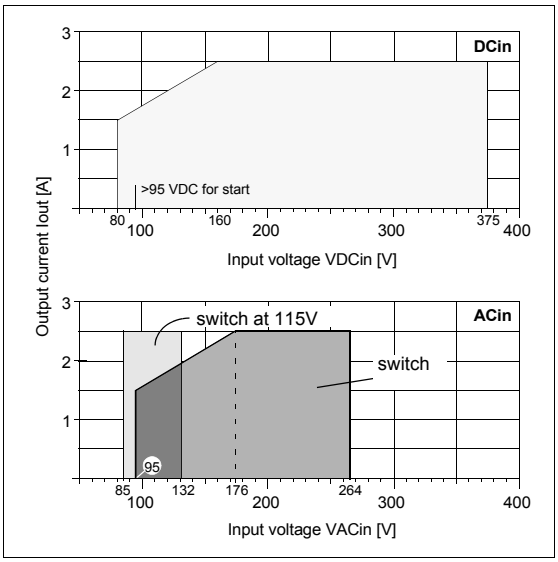
For further information, especially about

- EMC
- Connections
- Safety, Approvals
- Mechanics und Mounting,

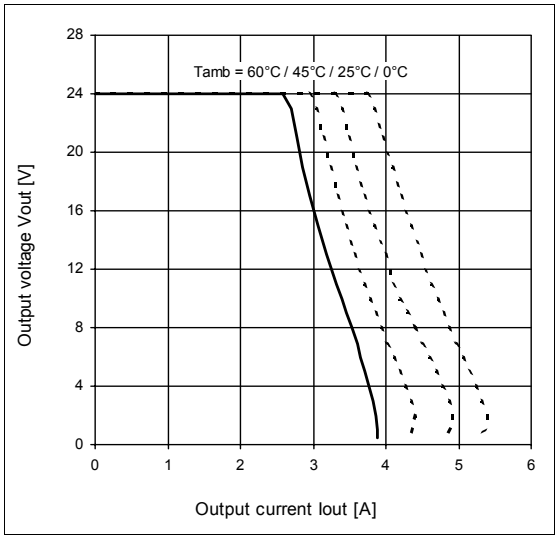
see page 2 of the „The SilverLine“ data sheet.

For detailed dimensions
see SilverLine mechanics data sheet SL2.5/ SL5/ SL10

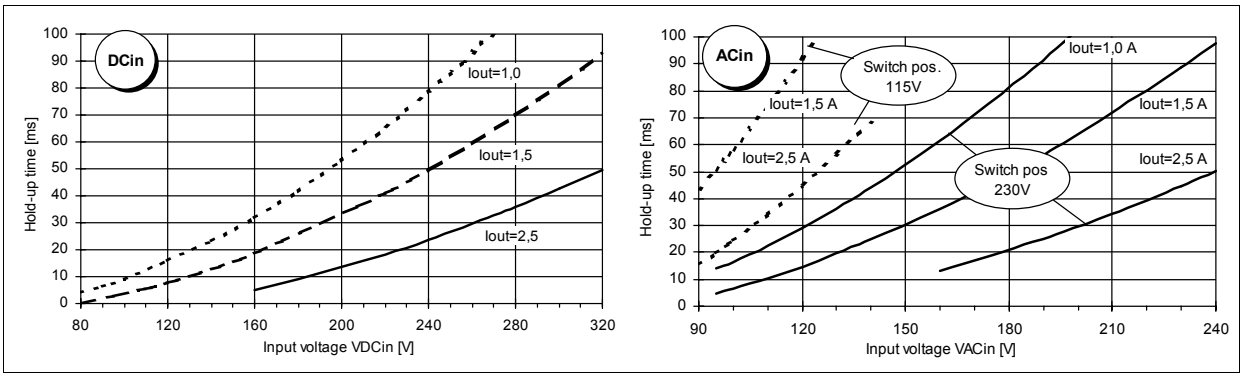
Output Current over Input Voltage (min.)



Output characteristic (min.)



Hold-up time (min.)



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:

ISO 9000:2001 certified

EPSMA European Power Supply Manufacturers Association

AWARDED Bayerns Best 50 Czech 100 Best Europe's 500

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