

5 A with power boost

PULS

SL5.100

- Input: AC 230V / 115V
- Output: 24V / 5A
- Power boost up to 6A
- High overload current, no switch-off
- Quasi-Wide-Range Input
- Robust mechanics and EMC



CB
scheme
IEC60950

UL
US

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

UL
US
UL60950 E137005
CUL/CSA-C22.2
No 950-M90

CE
EMC and
Low Volt.
Directive

Data sheet

Input

Input voltage AC100-120/220-240 V (switchable), 47-63 Hz (85-132 VAC / 176-264 VAC, 210-375 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 (until 3 A) at any input voltage between 95 and 264 V AC (see 'Output' below).

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

Input current < 2.6 A (switch in 115V position)
< 1.4 A (switch in 230V position)

- DCin at open output typ. 5 mA (preserves battery sources)

Inrush current typ. 15 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 > 37 ms at 196 VAC, 24 V / 5 A (see Diagram overleaf)

Efficiency, Reliability etc.*

Efficiency typ. 90 % (230 VAC, 24 V / 5 A)

Losses typ. 13,3 W (230 VAC, 24 V / 5 A)

MTBF 520,000 h acc. to Siemensnorm SN 29500 (24 V/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).

Construction / Mechanics*

Housing dimensions and Weight
 • W x H x D 64 mm x 124 mm x 102 mm (+ DIN rail)
 • Free space for above/below 25 mm recommended
 ventilation left/right 15 mm recommended
 • Weight 620 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

Output

Output voltage 24 V DC +5% -1% (24...28 V DC on request)

Output noise suppression Radiated EMI values below EN50081-1, 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.	Switch	AC/DCin	I _{out}
Output is protected against short circuit, open circuit and overload	230V	176-264 V	ACin 5 A / 6 A *
		95-176 V	ACin 3 A
	115V	210-375 V	DCin 5 A / 6 A *
		150-210 V	DCin 3 A
		100-150 V	DCin 2 A

* short-term 6 A (< 1 min), at 45°C or forced cooling even continuous

Derating typ. 3 W/K (at T_{amb}=+60°C...+70°C)

Voltage regulation better than 2% V_{out} overall

Ripple / Noise < 50 mV_{pp}, (20 MHz bandw., 50 Ω measur.)

Overvolt. protection typ. 29 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)
 - 20% power boost
- no disconnection, no hiccup if overloaded
 - high overload current (up to 1.9 I_{Nom}), V_{out} is gradually reduced with increasing current.
 - 6A short-term, at 45°C or forced cooling even continuous

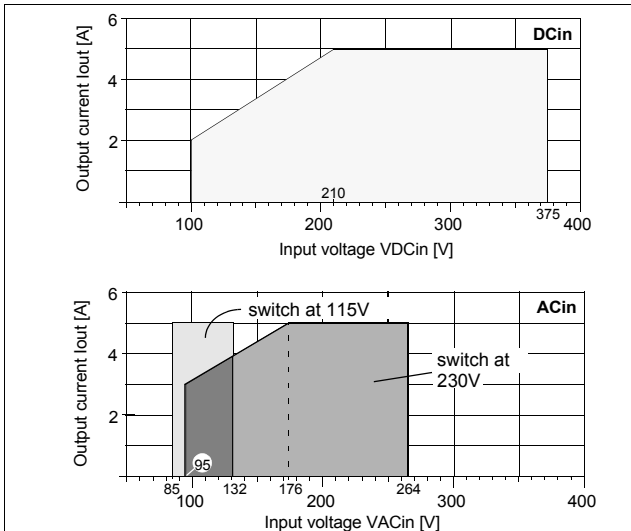
Advantages:

- 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 reliably

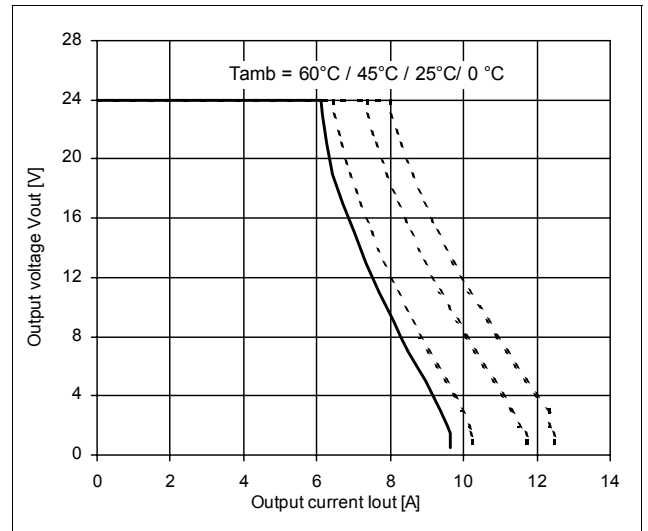
Order information

Order number	Description
SL5.100	(Basic version*)
SLR5.100	(N+1 redundancy*)
SLS5.100	(Safety Cover*)
SLZ01	Screw mounting set, two needed per unit

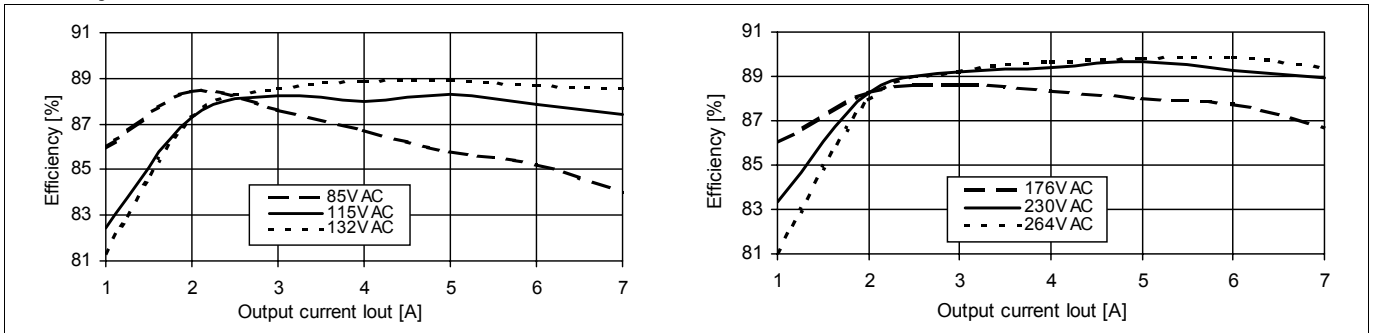
Output Current over Input Voltage (min.)



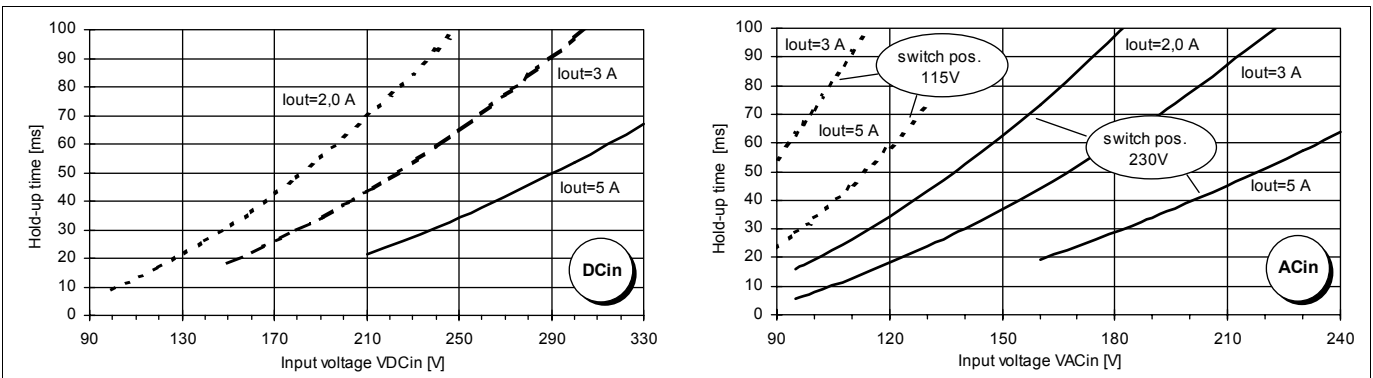
Output characteristic (min.)



Efficiency (min.)



Hold-up time (min.)



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

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:



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