

Redundancy in square

SLR10.100

- Input: AC 230V/115V, DC 240-375 V
- Output: 24 V/10 A
- High overload current, no switch-off
- N+1 redundancy, RDY relay contact
- Robust mechanics and EMC



The Redundant Variant

PULS

CB
scheme
IEC60950

UL
US
UL508 LISTED
IND. CONT. EQ.
18 WM, 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, 240-375 VDC)

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

Input current < 6 A (switch in 115V position)
< 2.8 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 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. 89 % (230 VAC, 24 V / 10 A)

Losses typ. 26.7 W (230 VAC, 24 V / 10 A)

MTBF 390.000 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

Start-up 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}), V_{out} 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 reliably

Order information

| Order number | Description |
|--------------|---|
| SLR10.100 | N+1 redundancy* |
| SL10.100 | Basic version without redundancy* |
| SLS10.100 | Safety Cover* |
| SLZ01 | Screw mounting set, two needed per unit |

Output

Rated output voltage 24 V DC

For balanced current sharing during parallel operation:

Soft characteristic (25.2 V DC ±2% at no-load, 24 V DC ±0.5% at nominal load, almost linear characteristic curve)

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
- T_{amb}=0°C - 45°C 12 A short-term also at 60 °C

Output is protected against short circuit, open circuit and overload

Derating typ. 12 W/K (at T_{amb}=+60°C...+70°C)

Voltage regulation better than 2% V_{out} overall

Ripple / Noise < 30 mV_{pp}, (20 MHz bandw., 50 Ω measur.)

Overvolt. protection typ. 35 V

Parallel operation yes, current sharing via soft characteristic (see diagram)

Front panel indicator Green LED

RDY relay contact

- Type normally open contact
- closes when output voltage > 22.1V ±4%
- opens when output voltage < 19.8V ±4%
- Electrical isolation 500V DC to output voltage
- Contact rating 1A at 28V DC

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

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:

- Input and output pluggable by means of Combicon® plug connector
- Ensure strain relief of the plug connectors when installing the unit.



Further information

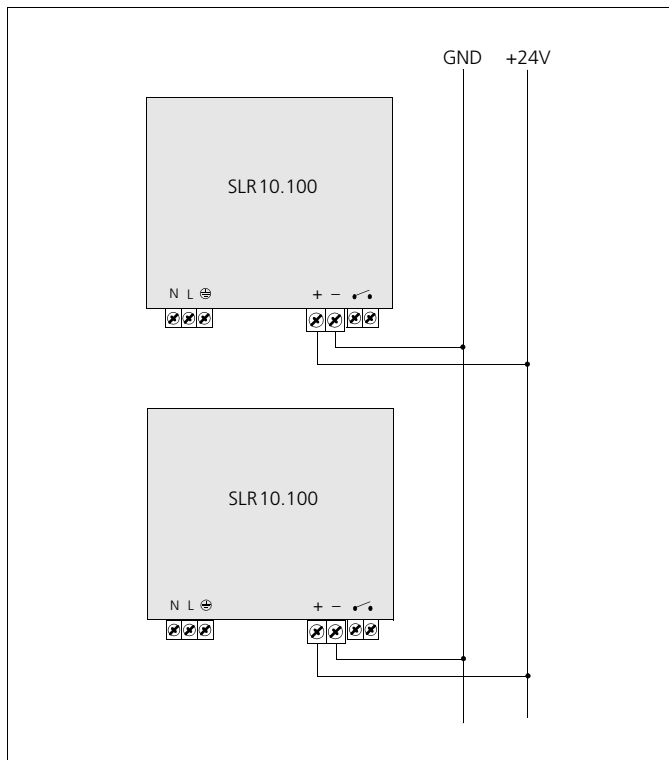
Further information, especially about

- EMC
 - Connections
 - Safety, Approvals
 - Mechanics and Mounting
- see page 2 of „The SilverLine“ data sheet.

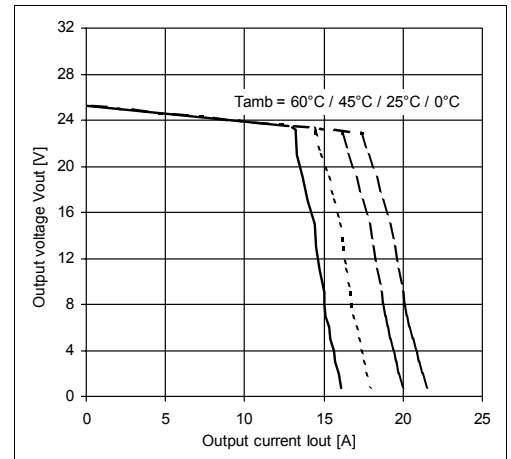
For detailed dimensions

see SilverLine mechanics data sheet SLR2.5/ 5/ 10

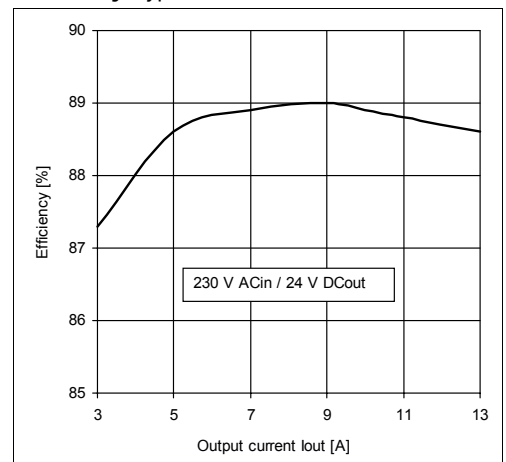
Power wiring



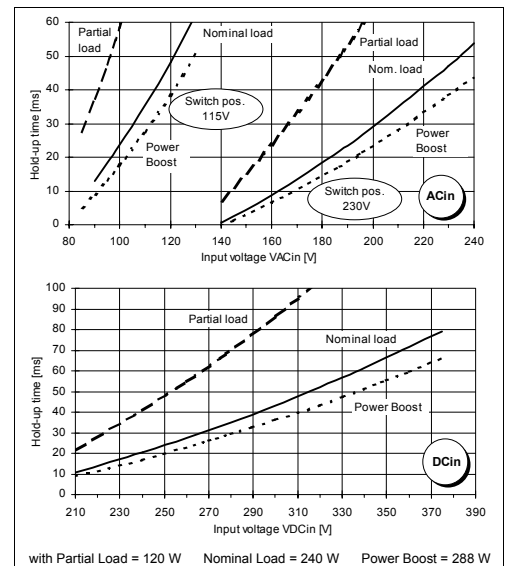
Output characteristic (min.)



Efficiency (typ.)



Hold-up time (typ.)



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:

