

Power in square, PFC

PULS

SL10.105

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



Data sheet

Input

Input voltage	AC 100-120/220-240V (switchable), 47-63Hz (AC 85...132/176...264V, DC 240...375V)
Note: At DC input, always leave the switch in the 230V position	
Input current	<6A (switch in 115V position) <2.8A (switch in 230V position)
• DCin at open output	8mA (preserves battery sources)
Inrush current	typ. <30A at AC 264V and cold start
Unit is internally fused (fuse not accessible). External fuse not necessary, but recommended (common thermomagnetic 10A, B-type 'circuit-breaker' switch used anyway to fuse the input lines).	
Harmonic current emissions (PFC)	acc. EN 61000-3-2 Power factor: better than 0.68 at nominal load
Transient handling	Transient resistance acc. to VDE 0160 / W2 (750V/1.3ms), for all load conditions.
Hold up time	>20ms (at AC 196V, 24V/10A) (see diagram overleaf)

Efficiency, Reliability etc.*

Efficiency	typ. 89% (AC 230V, 24V/10A)
Losses	typ. 29W (AC 230V, 24V/10A)
MTBF	225.000h acc. to Siemensnorm SN 29500 (24V/10A, AC 230V, 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. 0.1s
Rise time	ca. 5-20ms, depending on load
Overload Behaviour	<ul style="list-style-type: none"> • Special PULS Overload Design (see diagram overleaf) • 20% power boost

– no disconnection, no hiccup if overloaded
– high overload current (up to 1.6 I_{Nom}), V_{out} is gradually reduced with increasing current.
– 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

Output

Output voltage	DC 24-28V, adjustable by (covered) front panel potentiometer; preset: 24.5V ±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	<ul style="list-style-type: none"> • T_{amb}=0°C - 60°C 24V/10A (240W) resp. 28V/8.6A (240W) • T_{amb}=0°C - 45°C 24V/12A (288W) resp. 28V/10.3A (288W) short-term also at 60°C
Output is protected against short-circuit, open circuit and overload	
Derating	typ. 6W/K (at T _{amb} = +60°C...+70°C)
Voltage regulation	better than 2% V _{out} overall
Ripple / Noise	<30mV _{pp} , (20MHz bandw., 50Ω measurement)
Overvolt. protection	typ. 35V
Parallel operation	yes, current sharing available on request
Power back immunity	34V
Front panel indicator	Green LED on front panel

Construction / Mechanics*

Housing dimensions and Weight	
• W x H x D	120mm x 124mm x 102mm (+ DIN rail)
• Free space for ventilation	above/below 25mm recommended left/right 15mm recommended
• Weight	1195g

Design advantages:

- All connection blocks are easy to reach as mounted at the front panel.
- Very low leakage current >0,5mA, suitable for medical applications.

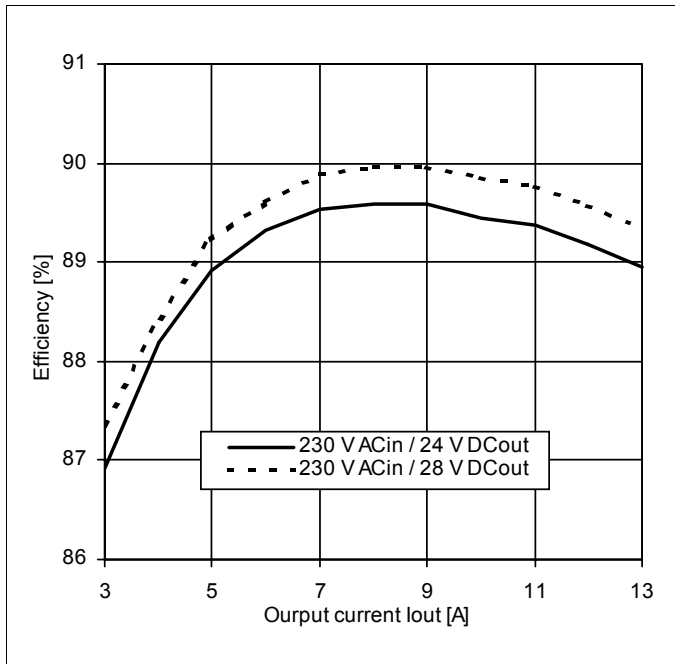
* For further information see data sheets „The SilverLine“, „SilverLine Family Branches“ and mechanics data sheet

Order information

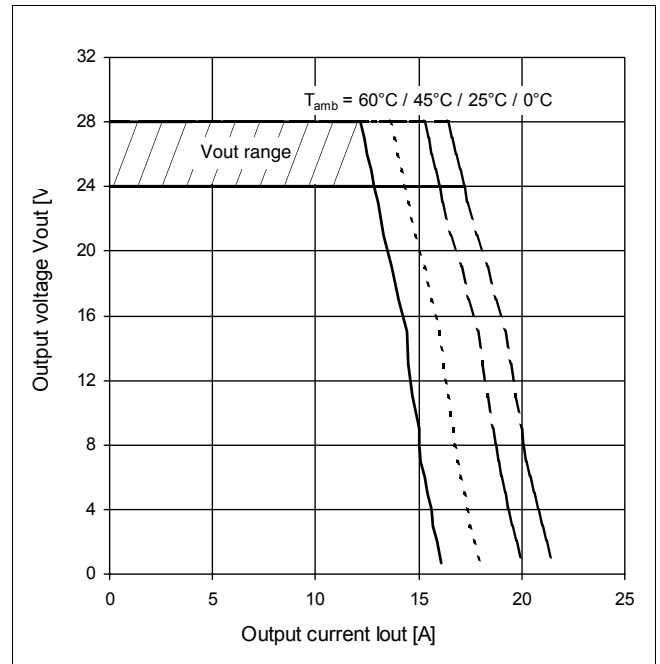
Order number	Description
SL10.105	
SLZ02	Screw mounting set, two needed per unit

Functional diagrams

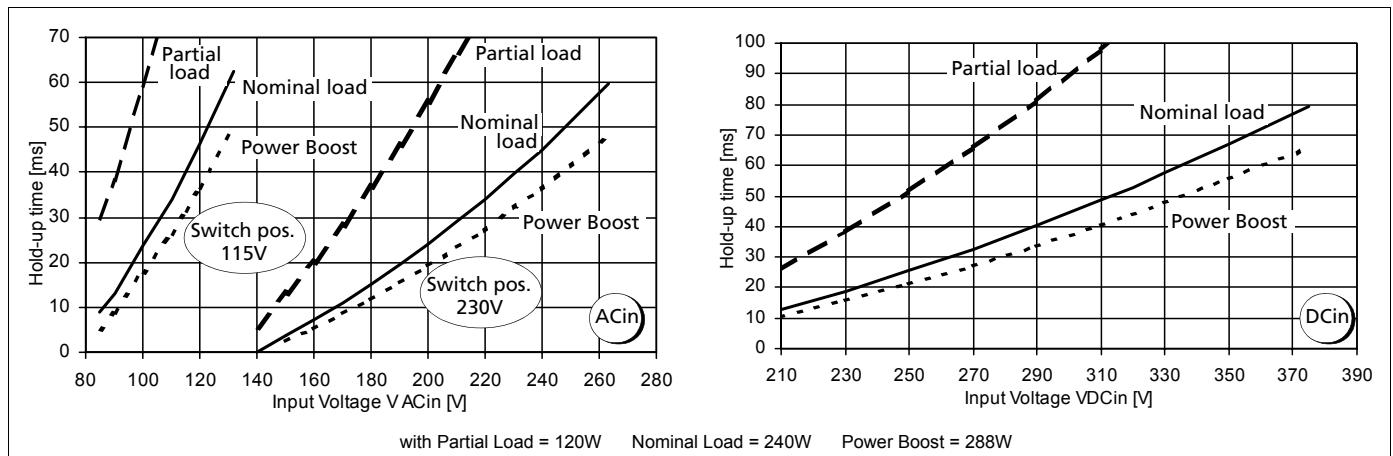
Efficiency (typ.)



Output characteristic (min.)



Hold-up time (typ., at Vout=24V)



For further information, especially about

- EMC
 - Connections
 - Safety, Approvals
 - Mechanics and 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:



Bayerns Best 50
Czech 100 Best
Europe's 500

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