


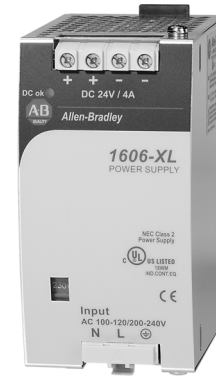


Application Note

1606-XLDNET4

- World-wide approvals (  ) for industry
- Input: AC 230V/115V, DC 210...375V
- Output: 24V/4 A
- 100 VA Limited Power Source



- No switch-off at overload
- Wide-Range Input
- Robust mechanics and EMC

Input

Input voltage	AC 100...120/200...240V (switchable), 47...63 Hz (85...132VAC / 176...264VAC, 210...375VDC, see also "Output: Continuous Loading")
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Wide-Range Input: With the switch in the 230V position the power-supply unit operates at low and moderate loads (up to 2 A) at any input voltage between 95 and 264VAC.

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

Input current	< 2.0 A (switch in 115V position) < 1.1 A (switch in 230V position)
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DCin at open output typ. 5 mA (preserves battery sources)

Inrush current typ. < 15 A at 264V AC and cold start

If you intend to protect the primary side of the power supply with a fuse or a circuit breaker, a 10 A slow acting fuse (HBC) or a supplementary protector 1492-SPU1C100 is recommended. In order to meet local requirements, please consult local codes and regulations for proper installation..

Transient handling	Transient resistant acc. to VDE 0160 / W2 (750V / 1.3 ms), for <i>all</i> load conditions.
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Hold-up time	> 20 ms at 196VAC, 24V/4 A (see diagram)
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Efficiency, Reliability etc.

Efficiency	typ. 88 % (230V AC, 24V/4 A)
Losses	typ. 13.6 W (230V AC, 24V/4 A)
Life cycle (electrolytics)	The unit exclusively uses longlife electrolytics, specified for +105°C.

Construction / Mechanics

Housing dimensions and Weight	
• W x H x D	65 mm x 124 mm x 102 mm (+ DIN rail)
• Free space for ventilation	above/below 25 mm recommended 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).

Wire Size Input/Output:

- Stranded 20...10 AWG (0.5...4 mm²), Solid 20...10 AWG (0.5...6 mm²)

Tightening Torque: 7 lbs in (0.8 Nm) recommended

Output

Output voltage	24V DC +5% -1%
Output noise suppression	Radiated EMI values below EN50081-1, even when using long, unscreened output cables.

Ambient temperature range	Operation: -10°C...+70°C (>60°C Derating)
T _{amb}	Storage: -25°C...+85°C

Continuous loading	Switch	AC/DCin	I _{out}
(T _{amb} = -10°C...+60°C, convection cooling), see also diagram For start at T _{amb} < 0°C and low input voltage, please contact Rockwell Automation.	230V	176...264V	ACin 4 A
		95...176V	ACin 3 A
	115V	210...375V	DCin 4 A
		150...210V	DCin 3 A
		100...150V	DCin 2 A
		85...132V	ACin 4 A

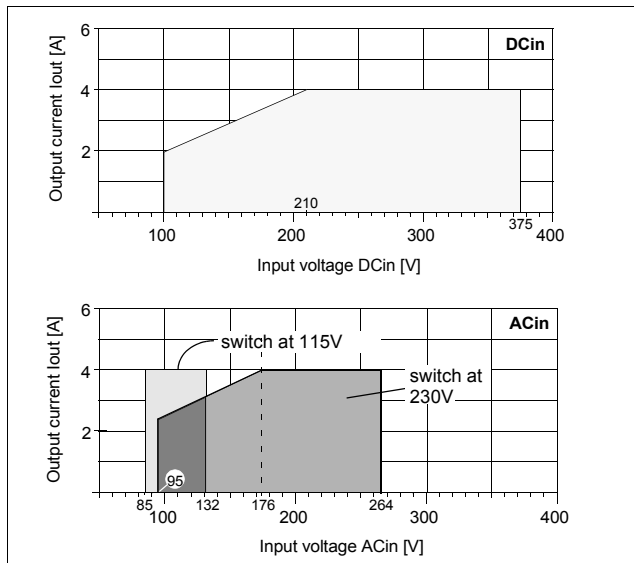
Output is protected against short circuit, open circuit and overload.

Derating	typ. 3 W/K (at T _{amb} = +60°C...+70°C)
Voltage regulation	better 2% V _{out} over all
Ripple / Noise	< 25 mV _{pp} (20 MHz bandwidth, 50 Ω measurement)
Overvolt. protection	typ. 29V
Parallel operation	yes
Power back immunity	26V
Front panel indicator	Green LED on front panel, goes out at V _{out} < 12 V

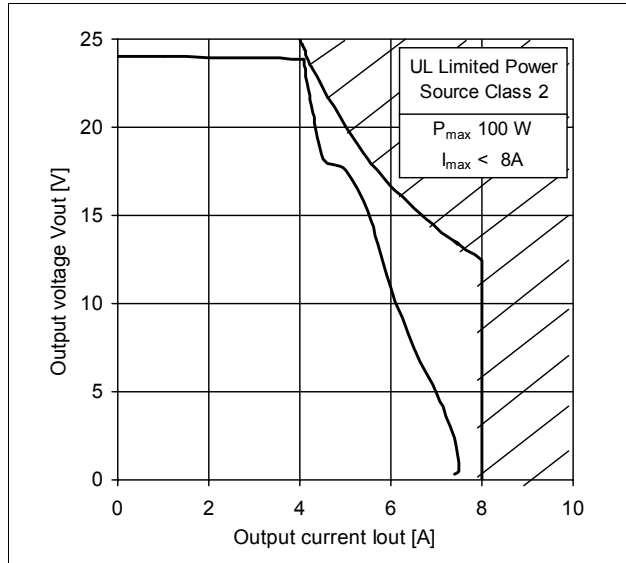
Start / Overload Behavior

Start-up delay	typ. 0.1 s
Rise time	appr. 5...30 ms, depending on load
Overload behavior	Unit fulfills the requirements under Ltd. Power Source acc. to EN60950, para. 2.11, as follows:
• P _{out}	< 100 VA at all load conditions
• I _{out}	< 8 A at all load conditions

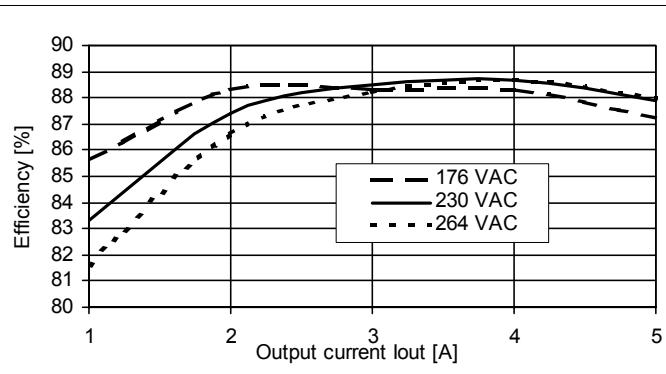
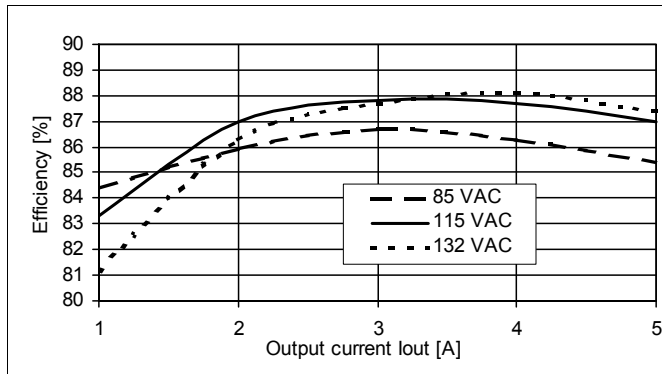
Output Current over Input Voltage (min.)



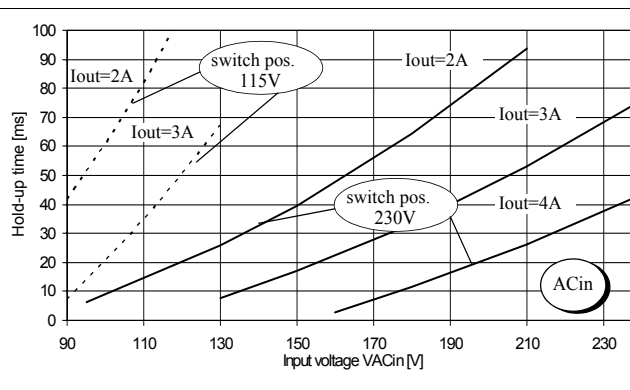
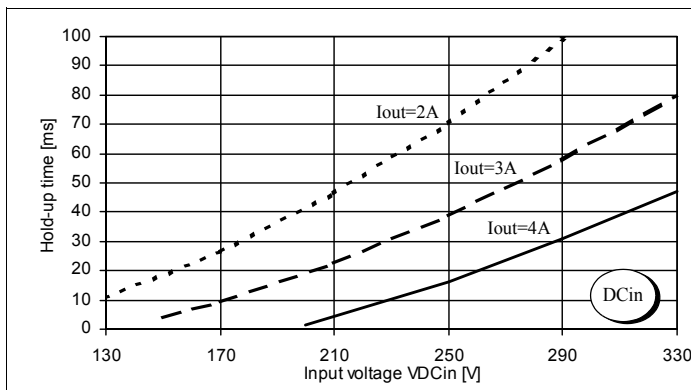
Output characteristic (min.)



Efficiency (min.)



Hold-up time (min.)



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Specifications valid for 230V AC input voltage, +25°C ambient temperature, and 5 min run-in time, unless otherwise stated. They are subject to change without prior notice.