

## Application Note

# 1606-XLDNET8



- World-wide approvals (  $\text{CE}$   $\text{UL}$   $\text{UL}$  ) for industry
- Input: AC 115V/230V, DC 240...375V
- Output: 24V/8 A

- Current limitation at 8 A
- RDY relay contact
- Robust mechanics and EMC

### Input

Input voltage	AC100...120/200...240V (switchable), 47...63 Hz (85...132V AC / 176...264V AC, 240...375V DC)
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Note: At DC input, always leave the switch in the 230V position.

Input current	5 A (switch in 115V position) 2.3 A (switch in 230V position)
DCin at open output	8 mA (preserves battery sources)
Inrush current	typ. < 30 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 resistance acc. to VDE 0160 / W2 (750 V / 1.3 ms), for <i>all</i> load conditions.
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Hold-up time	> 30 ms at 196VAC, 24V/8 A (see diagram)
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### Efficiency, Reliability etc.

Efficiency	typ. 90 % (230V AC, 24V/8 A)
Losses	typ. 21.3 W (230VAC, 24V/8 A)
MTBF	390.000 h acc. to Siemensnorm SN 29500 (24V/8 A, 230VAC, $T_{\text{amb}} = +40^\circ\text{C}$ )

Life cycle (electrolytics)	The unit exclusively uses longlife electrolytics specified for +105°C.
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### Start / Overload Behavior

Start-up delay	typ. 0.1 s
Rise time	ca. 5...20 ms, depending on load

#### Overload Behavior:

- No disconnection, no hiccup if overloaded
- Current limited to 8 A
- Iout (8 A) continuously delivered up to +70°C
- No 'sticking' such as can occur with fold-back characteristics

### Output

Rated output voltage	24V DC $\pm$ 0.5%
Output noise suppression	Radiated EMI values below EN50081-1, even when using long, unshielded output cables.

Ambient temperature range	Operation: 0°C...+70°C $T_{\text{amb}}$ Storage: -25°C...+85°C
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Rated continuous loading with convection cooling	• $T_{\text{amb}} = 0^\circ\text{C} \dots 70^\circ\text{C}$ 24V/8 A
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Output is protected against short circuit, open circuit and overload

Voltage regulation	better than 2% $V_{\text{out}}$ overall
Ripple / Noise	< 30 mV <sub>pp</sub> , (20 MHz bandwidth, 50 $\Omega$ measurement)
Overvolt. protection	typ. 35V
Parallel operation	yes, current sharing on request
Front panel indicator	Green LED

#### RDY relay contact

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

### Construction / Mechanics

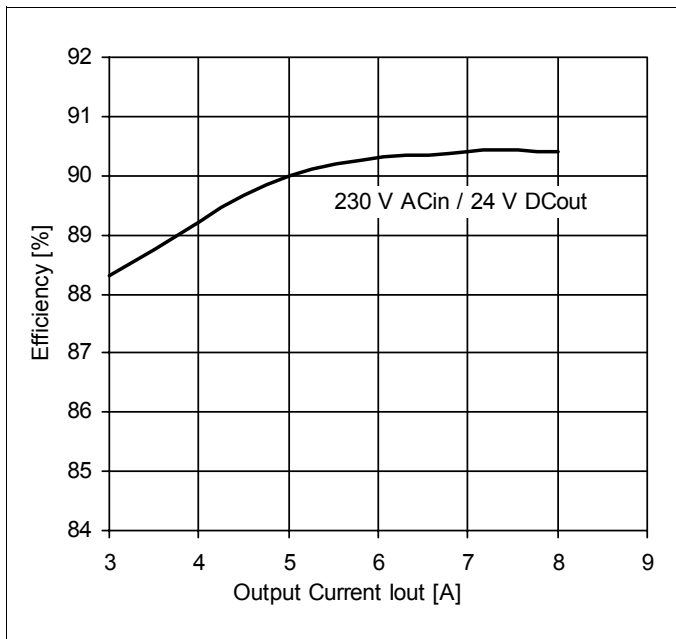
#### Housing dimensions and Weight

- 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

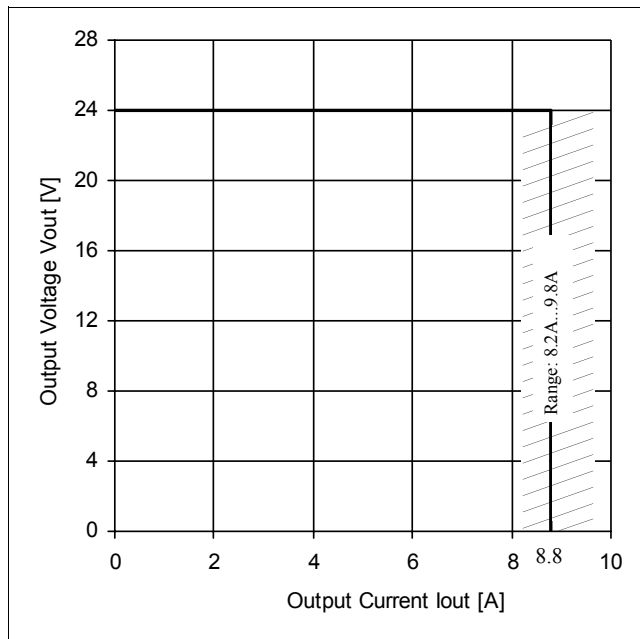
#### Design advantages:

- Input and output pluggable by means of Combicon<sup>®</sup> plug connector
- Wire Size Input/Output Stranded 22...12 AWG (0.2...2.5 mm<sup>2</sup>), Solid 22...12 AWG (0.2...2.5 mm<sup>2</sup>)
- Tightening Torque 3.5 lbs in (0.4 Nm) recommended (pluggable)

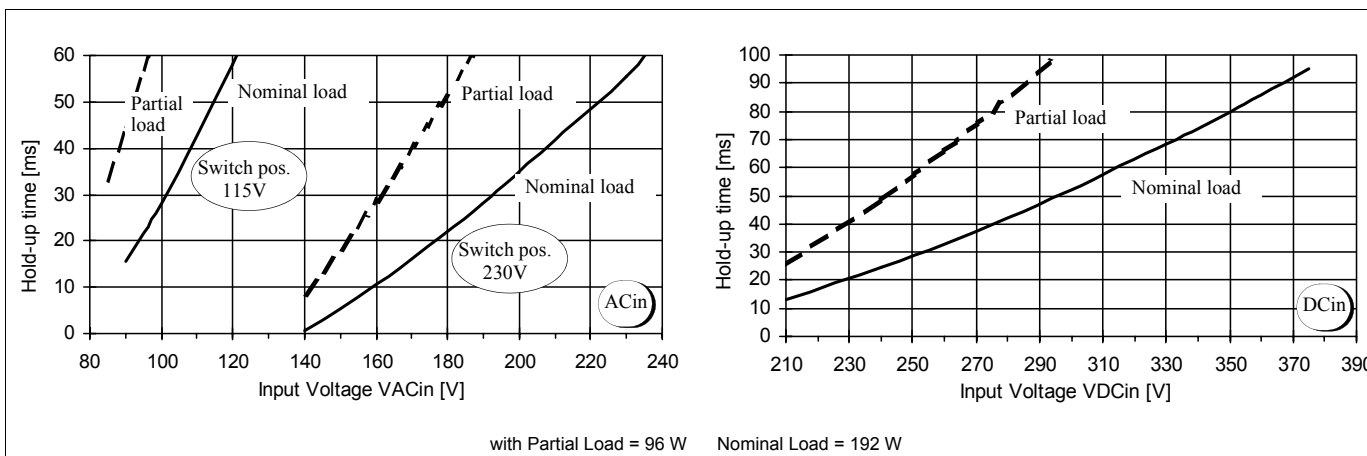
Efficiency (typ.)



Output characteristic (typ.)



Hold-up time (typ., at V<sub>out</sub>=24V)



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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

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