

# LXC96 series

## LED Power Supply

### Constant Current LED Power Supplies



LED Power  
96W

#### LED POWER

next generation power  
source

#### FEATURES

- High Efficiency (up to 92%)
- UL1310 Class 2
- Active PFC (Typical 0.99)
- IP67 Waterproof
- OVP, SCP, OTP
- -35 to 70°C deg operation
- Universal Input 90-305VAC
- UL8750 compliant
- EN61347-1, -2-13 compliant

The LXC96 series of Class 2 constant current LED power supplies from Excelsys Technologies can deliver up to 96W of output power in an extremely compact package size.

The LXC96 series of constant current power supplies provides up to 4000mA of output current and 274V output voltage solutions for specific LED requirements. With industry leading efficiencies, and an extensive protection feature set, the LXC96 series provides high reliability and high performance in a compact package.

| Model Number    | Output Voltage | Output Current | Input Voltage | OVP Latching max | Efficiency |
|-----------------|----------------|----------------|---------------|------------------|------------|
| LXC96-0350SW    | 137-274V       | 350mA          | 90-305VAC     | 310V             | 92.0%      |
| LXC96-0450SW    | 106-213V       | 450mA          | 90-305VAC     | 250V             | 92.0%      |
| LXC96-0700SW    | 68-137V        | 700mA          | 90-305VAC     | 170V             | 91.0%      |
| LXC96-1050SW    | 46-92V         | 1050mA         | 90-305VAC     | 120V             | 91.0%      |
| LXC96-1400SW    | 35-69V         | 1400mA         | 90-305VAC     | 100V             | 90.0%      |
| LXC96-1750SW(C) | 27-54.8V       | 1750mA         | 90-305VAC     | 75V              | 90.0%      |
| LXC96-2100SW(C) | 22-45.7V       | 2100mA         | 90-305VAC     | 60V              | 89.0%      |
| LXC96-2450SW(D) | 19-39.1V       | 2450mA         | 90-305VAC     | 55V              | 89.0%      |
| LXC96-2800SW(D) | 17-34.2V       | 2800mA         | 90-305VAC     | 50V              | 89.0%      |
| LXC96-3150SW(D) | 15-30.4V       | 3150mA         | 90-305VAC     | 45V              | 88.0%      |
| LXC96-3500SW(D) | 13-27.4V       | 3500mA         | 90-305VAC     | 40V              | 88.0%      |
| LXC96-4000SW(E) | 12-24V         | 4000mA         | 90-305VAC     | 35V              | 88.0%      |

#### Input Specifications

| Parameter             | Conditions/Description      | Min  | Nom | Max  | Units |
|-----------------------|-----------------------------|------|-----|------|-------|
| Input Voltage Range   | Universal Input             | 90   |     | 305  | VAC   |
| Input Frequency Range |                             | 47   |     | 63   | Hz    |
| Input Current         | 100VAC in, 96W output       |      |     | 1.2  | A     |
| Leakage Current       | 277VAC in, 50Hz             |      |     | 1.0  | mA    |
| Inrush Current        | 230VAC in, 25°C, Cold Start |      |     | 50   | A     |
| Power Factor          | 220VAC, 110VAC              | 0.96 |     | 0.99 |       |

#### Output Specifications

| Parameter                | Conditions/Description                        | Min | Nom | Max | Units   |
|--------------------------|-----------------------------------------------|-----|-----|-----|---------|
| Line Regulation          |                                               |     |     | ±1  | %       |
| Load Regulation          |                                               |     |     | ±3  | %       |
| Voltage Range            | See table of outputs                          |     |     |     |         |
| Output Current Accuracy  | % of Iout                                     |     |     | ±5  | %       |
| Ripple and Noise         | 20MHz Bandwidth                               |     |     | 3.0 | % pk-pk |
| Overshoot                |                                               |     |     | 10  | %       |
| Turn-on Delay            | Measured at 220VAC and full load              |     | 0.6 | 1   | s       |
| Short Circuit Protection | Auto Recovery                                 |     |     |     |         |
| Over Voltage Protection  | Latching. See individual models OVP levels    |     |     |     |         |
| Over Temp Protection     | Auto Recovery. Internal component temperature |     | 110 |     | °C      |

#### General Specifications

| Parameter                 | Conditions/Description                      | Min  | Nom     | Max | Units |
|---------------------------|---------------------------------------------|------|---------|-----|-------|
| Isolation Voltage         | Input to Output See Note A                  | 3750 |         |     | VAC   |
|                           | Input to Chassis                            | 1500 |         |     | VAC   |
| Efficiency                | See individual models                       |      | 90.5    |     | %     |
| Safety Agency Approvals   | UL8750, EN61347-1, -2-13                    |      |         |     |       |
| No load Power Dissipation | Measured at 230 VAC                         |      | 1.0     |     | W     |
| MTBF                      | MIL-HDBK-217F, 110VAC input, 80% Load, 25°C |      | 400,000 |     | Hours |
| Lifetime                  | 45°C, 110VAC Input, 80% Load                |      | 50,000  |     | Hours |
| Weight                    |                                             |      | 850     |     | g     |
| Operating Temperature     | Maximum Case Temperature Tcase =89°C        | -35  |         | +70 | °C    |
| Storage Temperature       |                                             | -40  |         | +85 | °C    |
| Relative Humidity         | Non-condensing (operating)                  | 10   |         | 100 | %RH   |



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| EMC                       |              |  |           |  |       |
|---------------------------|--------------|--|-----------|--|-------|
| Parameter                 | Standard     |  | Level     |  | Units |
| <b>Emissions</b>          |              |  |           |  |       |
| Conducted                 | EN55015      |  | Compliant |  |       |
| Radiated                  | EN55015      |  | Compliant |  |       |
| Harmonic Distortion       | EN61000-3-2  |  | Compliant |  |       |
| Flicker and Fluctuation   | EN61000-3-3  |  | Compliant |  |       |
| <b>Immunity</b>           |              |  |           |  |       |
| ESD                       | EN61000-4-2  |  | Level 4   |  |       |
| Radiated RFI              | EN61000-4-3  |  | Level 3   |  |       |
| Fast Transients - burst   | EN61000-4-4  |  | Level 4   |  |       |
| Surge Immunity            | EN61000-4-5  |  | Level 4   |  |       |
| Conducted RFI             | EN61000-4-6  |  | Compliant |  |       |
| Power Freq Magnetic Field | EN61000-4-8  |  | Compliant |  |       |
| Voltage Dips              | EN61000-4-11 |  |           |  |       |

- Note A. Primary to Secondary Isolation test not to be carried on power supply.  
 Note B. Load Voltage must be maintained above minimum voltage. See models for voltage range.  
 Note C. Class 2 (USR) and Non Class 2( CNR) for dry and damp locations  
 Note D. Class 2 (USR and CNR) for dry and damp locations, CSA Class 2 for wet location.  
 Note E. Class 2 (USR and CNR) for dry and damp locations and Class 2 (USR and CNR) for wet location.

## INPUT / OUTPUT WIRING

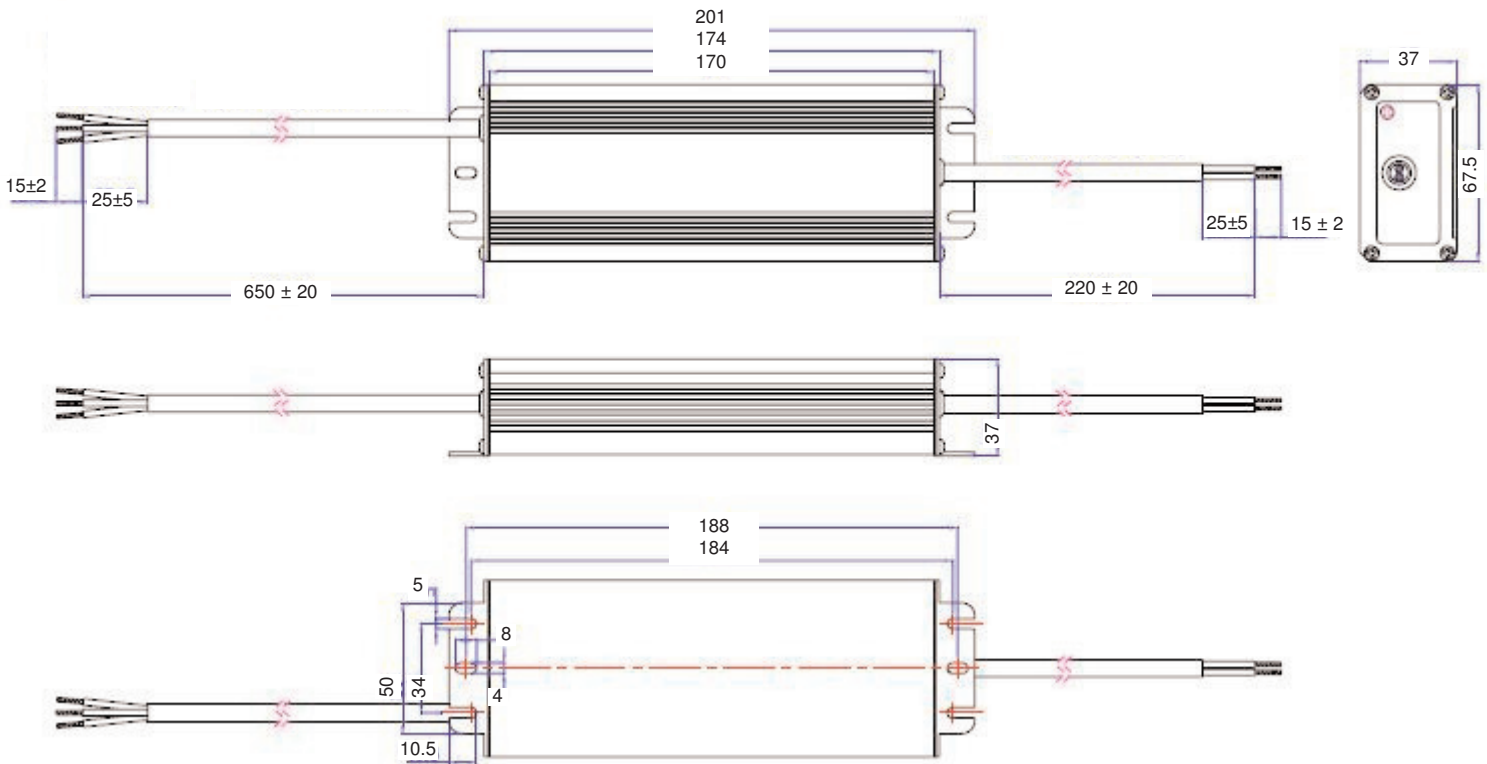
### INPUT CABLE

SJTW 18AWG 3C  
 Black (L), White(N), Green (G) 650±20mm

### OUTPUT CABLE

SJTW 18AWG 2C  
 Black (-V) and Red (+V) 220±20mm

## MECHANICAL SPECIFICATIONS



Specifications are subject to change without notice  
 LXC96 Datasheet Pre Release 18 March 2011



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