

# LXD96 series

## LED Power Supply

### Dimmable LED Power Supplies



LED Power  
96W

#### LED POWER

next generation power source

#### FEATURES

- High Efficiency (up to 92%)
- Dimming Control
- 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 LXD96 series of Class 2 dimmable LED power supplies from Excelsys Technologies can deliver up to 96W of output power in an extremely compact package size.

The LXD96 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 LXD96 series provides high reliability and high performance in a compact package.

Model Number	Output Voltage	Output Current	Input Voltage	OVP Latching max	Efficiency
LXD96-0350SW	137-274V	350mA	90-305VAC	310V	92.0%
LXD96-0450SW	106-213V	450mA	90-305VAC	250V	92.0%
LXD96-0700SW	68-137V	700mA	90-305VAC	170V	91.0%
LXD96-1050SW	46-92V	1050mA	90-305VAC	120V	91.0%
LXD96-1400SW	35-69V	1400mA	90-305VAC	100V	90.0%
LXD96-1750SW <sup>(H)</sup>	27-54.8V	1750mA	90-305VAC	75V	90.0%
LXD96-2100SW <sup>(H)</sup>	22-45.7V	2100mA	90-305VAC	60V	89.0%
LXD96-2450SW <sup>(L)</sup>	19-39.1V	2450mA	90-305VAC	55V	89.0%
LXD96-2800SW <sup>(L)</sup>	17-34.2V	2800mA	90-305VAC	50V	89.0%
LXD96-3150SW <sup>(L)</sup>	15-30.4V	3150mA	90-305VAC	45V	88.0%
LXD96-3500SW <sup>(L)</sup>	13-27.4V	3500mA	90-305VAC	40V	88.0%
LXD96-4000SW <sup>(L)</sup>	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 I <sub>out</sub>			±5	%
Ripple and Noise	20MHz Bandwidth. See Note H			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	Internal temperature		110		°C

#### General Specifications

Parameter	Conditions/Description	Min	Nom	Max	Units
Isolation Voltage	Input to Output See Note B	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 T <sub>case</sub> =89°C	-35		+70	°C
Storage Temperature		-40		+85	°C
Relative Humidity	Non-condensing (operating)	10		100	%RH



#### Europe/Asia

Excelsys Technologies Ltd t: +353 21 4354716  
 27 Eastgate Drive f: +353 21 4354864  
 Eastgate Business Park e: sales@excelsys.com  
 Little Island, Cork, Ireland  
 IRELAND

#### North America

Excelsys Technologies t: (972) 771 4544  
 519 Interstate 30, #309 f: (972) 421 1805  
 Rockwall, TX 75087 e: salesusa@excelsys.com  
 USA

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

Dimming Control					
Parameter		Min	Nom	Max	Units
<b>Control Voltage (1-10V input)</b>	Voltage applied on 1-10V input wire	0		12	V
<b>Source Current (1-10V input)</b>	Source current on 1-10V input wire	0		0.5	mA

- Note A. If dimming function is not required, dimming wires are to be floating
- Note B. Primary to Secondary Isolation test not to be carried on power supply.
- Note C. Load Voltage must be maintained above minimum voltage. See models for voltage range.
- Note D. Dimming range is 10%-100%
- Note E. See graphs for Dimming control. If Dimming Signal Voltage is 0-1V, output current is 10% rated current. If Dimming Signal Voltage is 9.0-10V, output current is 100% rated current
- Note F. See Dimming Implementation diagrams for various dimming methods.
- Note G. Do not connect GND of Dimming cable to Output.
- Note H. Class 2 (USR) and Non Class 2( CNR) for dry and damp locations
- Note I. Class 2 (USR and CNR) for dry and damp locations, CSA Class 2 for wet location.
- Note J. 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

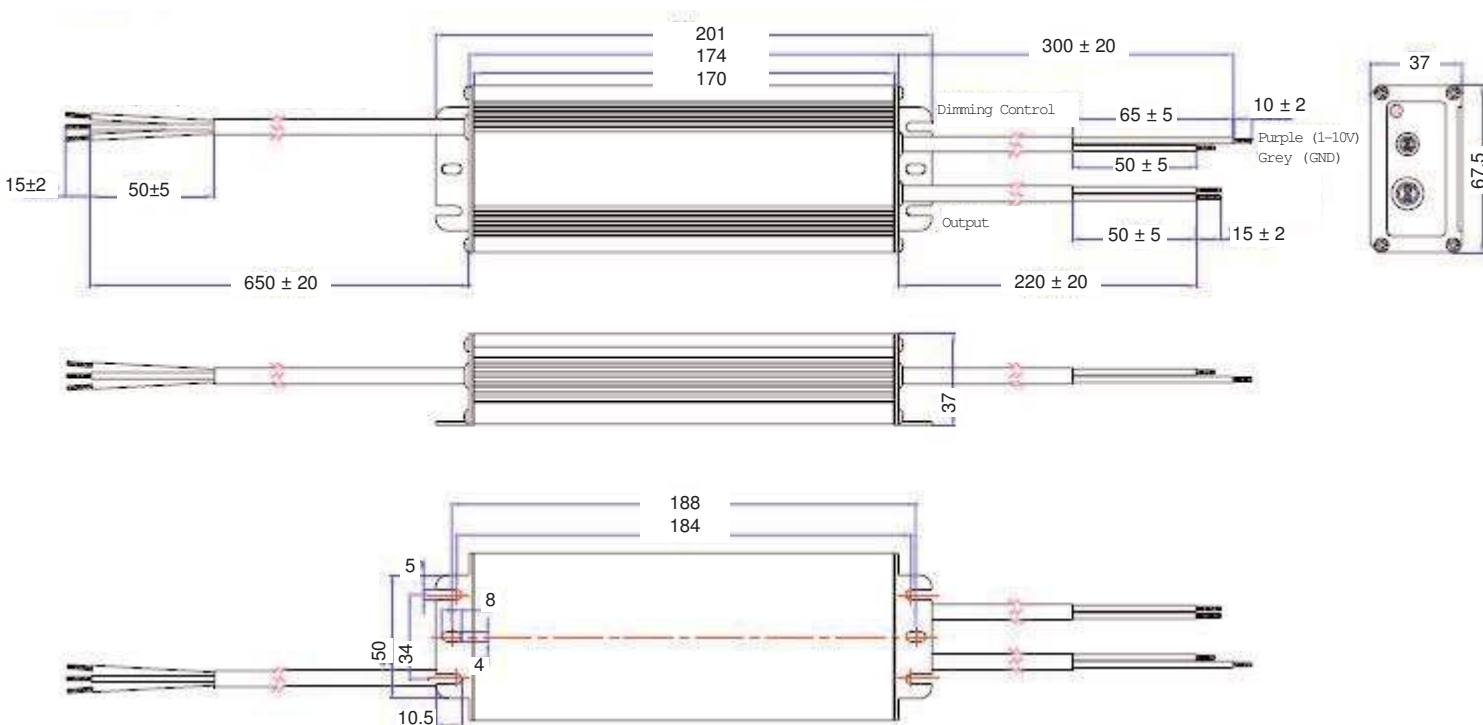
**OUTPUT CABLE**

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

**DIMMING CABLE**

SJTW 22AWG 2C  
Purple (1-10V), Grey (GND)

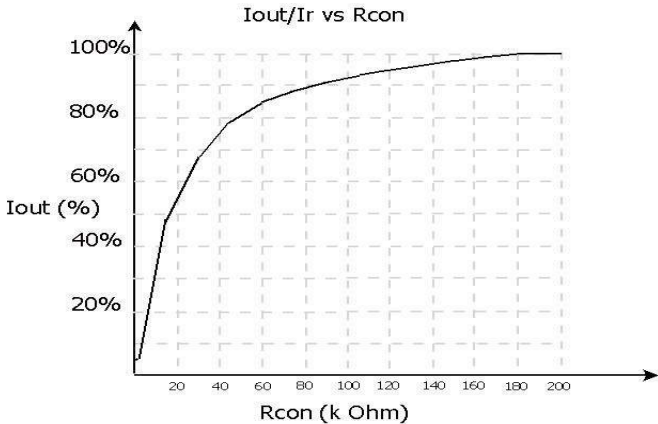
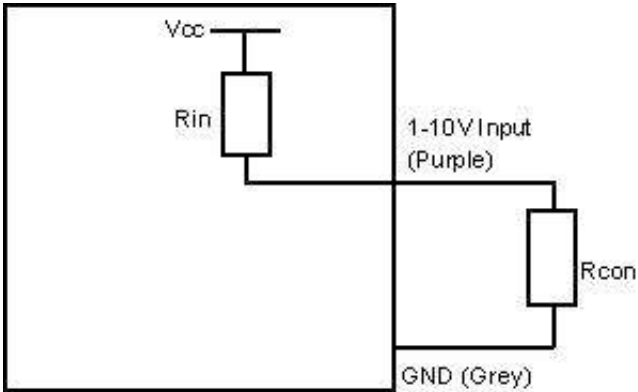
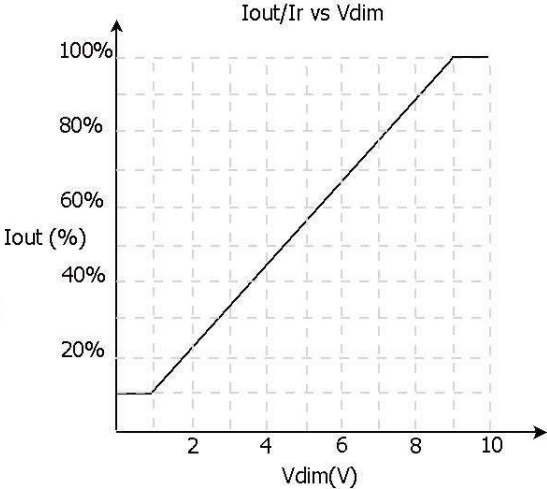
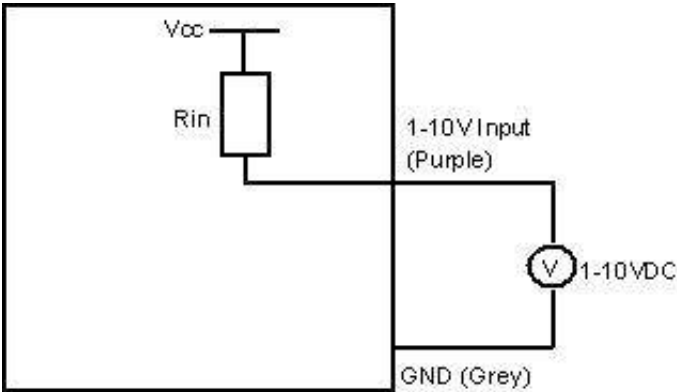
**MECHANICAL SPECIFICATIONS**



<b>Europe/Asia</b> Excelsys Technologies Ltd 27 Eastgate Drive Eastgate Business Park Little Island, Cork, Ireland IRELAND	t: +353 21 4354716 f: +353 21 4354864 e: sales@excelsys.com	<b>North America</b> Excelsys Technologies 519 Interstate 30, #309 Rockwall, TX 75087 USA	t: (972) 771 4544 f: (972) 421 1805 e: salesusa@excelsys.com
---	---	---	--

**Dimming Implementation Diagrams**

**LED Power  
96W**



Specifications are subject to change without notice  
LXD96 Datasheet Pre Release 18 March 2011



<b>Europe/Asia</b>		<b>North America</b>	
Excelsys Technologies Ltd	t: +353 21 4354716	Excelsys Technologies	t: (972) 771 4544
27 Eastgate Drive	f: +353 21 4354864	519 Interstate 30, #309	f: (972) 421 1805
Eastgate Business Park	e: sales@excelsys.com	Rockwall, TX 75087	e: salesusa@excelsys.com
Little Island, Cork, Ireland		USA	
<b>IRELAND</b>			