

Features

DALI Power Supply

- Universal AC input range: 90-264VAC
- Suitable for DALI installation
- EN61347-1 certified
- Cooling by free air convection
- Over current and short circuit protected

RECOM
AC/DC Converter

RELV4-16

DALI Bus Power Supply



EN61347-1 certified
EN61347-2-11 certified
EN55015 certified
EN61547 certified

Description

The RELV4-16 is designed to power a DALI digital lighting control bus. The output is current limited to 200mA, sufficient to power a complete DALI zone with up to 64 addressable DALI devices. The universal input voltage range from 90V to 264VAC enables the RELV4-16 to be used anywhere in the world. Due to its compact design with mounting tabs, it can be easily and conveniently integrated into any DALI network. An indicator LED shows Power OK and DALI bus traffic to aid installation and commissioning. The RELV4-16 comes with a 5 year warranty.

Selection Guide

Part Number	Input Voltage Range [VAC]	Input Current (@ 115VAC) [mA]	Output Voltage [VDC]	Output Current [mA]	Output Power [W]	Efficiency typ. [%]
RELV4-16	90-264	110	16	200	3.2	68

Specifications (measured @ Ta= 25°C and 230VAC)

BASIC CHARACTERISTICS				
Parameter	Condition	Min.	Typ.	Max.
Input Voltage Range		90VAC	230VAC	264VAC
Output Voltage Range	full load		16VDC	
DC Voltage Range		13.6VDC		18.4VDC
Inrush Current	115VAC 230VAC			21A 42A
DC Output Current Range	13.6VDC 18.4VDC		240mA 180mA	
Start-up Time	115VAC 230VAC			1s 0.5s
Rise and Fall Times		10µs		100µs
Input Frequency Range		47Hz		63Hz
Ripple and Noise ⁽¹⁾				150mVp-p
Notes:				
Note1: Ripple and Noise is measured @20MHz BW by using a 12" twisted pair-wire terminated with 0.1µF & 47µF parallel capacitor				

REGULATIONS

Parameter	Condition	Value
Output Accuracy ⁽²⁾		±15% typ.
Current Tolerance		+20% / -10% typ.
Notes:		
Note2: Voltage Tolerance includes line regulation, load regulation and set-up tolerance		

Specifications (measured @ Ta= 25°C and 230VAC)

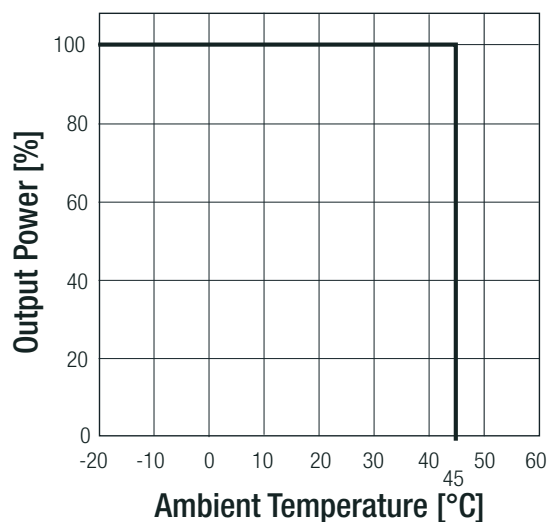
PROTECTION

Parameter	Condition	Value
Short Circuit Protection (SCP)	with terminal switch (80°C typ.)	Limiting Current Mode
Over Current Protection (OCP)	240mA max.	Limiting Current Mode
Isolation Voltage		3.75kVAC / 1 Minute
Isolation Resistance	500VDC at 25°C	100MΩ
Isolation Grade		Double Isolated for SELV Output

ENVIRONMENTAL

Parameter	Condition	Value
Operating Temperature Range		-20°C to +45°C
Max. Case Temperature		+65°C
Operating Humidity	non-condensing	20% to 90% RH
IP Rating		IP20
Vibration		10-500Hz, 2G, 60Min. along X, Y and Z
MTBF	MIL-HDBK-217F, at 25°C	200 x 10 ³ hours

Derating Graph



SAFETY AND CERTIFICATIONS

Certificate Type (Safety)	File Number	Standard
Lamp Controlgear - Part 1: General and safety requirements		EN61347-1:2015
Lamp Controlgear - Part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires		IEC61347-2-11:2001, 1st Edition EN61347-2-11:2001
RoHS 2+		RoHS 2011/65/EU + AM2015/863

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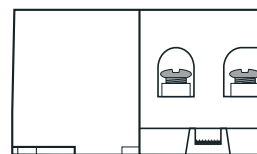
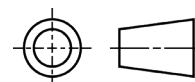
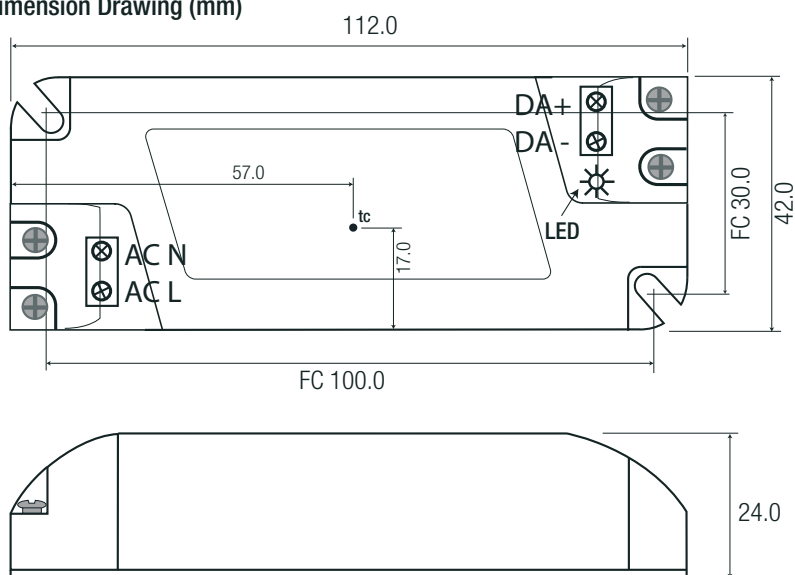
Specifications (measured @ Ta= 25°C and 230VAC)

EMC Compliance	Conditions	Standard / Criterion
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment		EN55015:2013 + A1:2015
Limitations on the amount of electromagnetic interference allowed from digital and electronic devices		FCC 47 CFR Part 15
Equipment for general lighting purposes – EMC immunity requirements		EN61547:2009
ESD Electrostatic discharge immunity test	Air $\pm 2, \pm 4, \pm 8\text{kV}$ Contact $\pm 2, \pm 4\text{kV}$	IEC61000-4-2:2008, Criteria A
Radiated, radio-frequency, electromagnetic field immunity test	3V/m (80-1000MHz)	IEC61000-4-3:2006, Criteria A
Fast Transient and Burst Immunity	AC Power Port: $\pm 0.5\text{kV}$	IEC61000-4-4:2012, Criteria A
Surge Immunity	AC Power Port: L-N $\pm 0.5\text{kV}, \pm 1\text{kV}$	IEC61000-4-5:2005, Criteria A
Immunity to conducted disturbances, induced by radio-frequency fields	AC Power Port: 3V	IEC61000-4-6:2008, Criteria A
Power Magnetic Field Immunity	50, 60Hz, 3A/m	IEC61000-4-8:2009, Criteria A
Voltage Dips and Interruptions	Voltage Dips 30%	IEC61000-4-11:2004, Criteria B
Voltage Dips and Interruptions	Voltage Interruptions >95%	IEC61000-4-11:2004, Criteria B
Limits of Harmonic Current Emissions		EN61000-3-2:2014
Limits of Voltage Fluctuations & Flicker		EN61000-3-3:2013

DIMENSION and PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material	PCB case	plastic resin with fibreglass, (UL94 V-0) plastic, (UL94 V-2)
Dimension (LxWxH)		112.0 x 42.0 x 24.0mm
Weight		80g typ.

Dimension Drawing (mm)



Screw Terminal Information

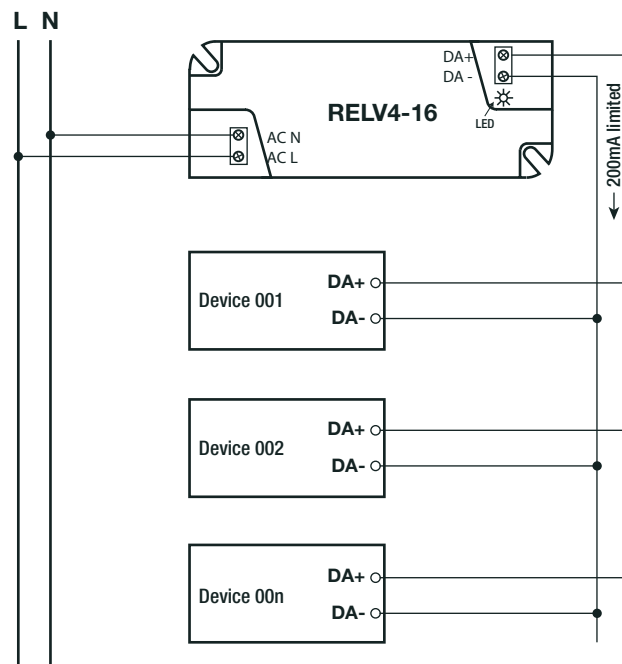
Function	Wire Diameter	AWG
AC N	0.5-1.5mm ²	14~26
AC L	0.5-1.5mm ²	14~26
DA+	0.5-1.5mm ²	14~26
DA-	0.5-1.5mm ²	14~26

wire stripping length: 5~6mm
tc= case temperature measuring point
FC= fixing centers
Tolerance: xx.x= $\pm 0.5\text{mm}$
xx.xx= $\pm 0.35\text{mm}$
2 mounting screws are included

Specifications (measured @ Ta= 25°C and 230VAC)

INSTALLATION and APPLICATION

Connection



PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	cardboard box	256.0 x 124.0 x 84.0mm
Packaging Quantity		10 pcs
Storage Temperature Range		-40°C to +80°C
Storage Humidity	non-condensing	10% - 90% RH

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