

ALCV400 LED DRIVER SERIES

DALI DIMMABLE IP67 CONSTANT VOLTAGE LED DRIVER

ALCV400-0xx-67-DALI

FEATURES

- IP67 rated
- DALI-2 dimmable
- High Efficiency 93%
- Active PFC design
- Universal AC Input Range 90 ~ 305Vac
- Cooling by Free Air Convection (Metal Housing)
- Standby power consumption < 0.5W at 230Vac
- The output and dimming lines are compliant with the new regulations with isolation
- Protections: OVP / OCP / SCP / OTP

APPLICATION

- Can be used with LED Strips (aled KIDEFLEX)
- Indoor or outdoor installations



SELV

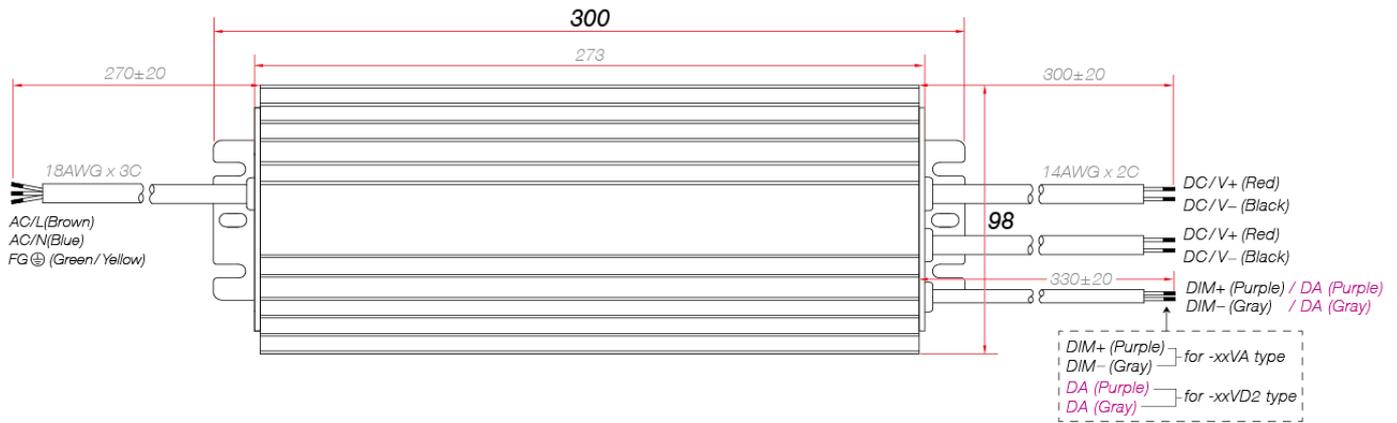
Technical Data

| Product Code | | ALCV400-012-67-DALI | ALCV400-024-67-DALI |
|------------------------|---|---|---------------------|
| Output | DC Voltage | 12V | 24V |
| | Rated Current | 0~26.7A | 0~16.7A |
| | Rated Power | 320.4W | 400.8W |
| | Ripple & Noise (Max.) Note.2 | 300mV | 350mV |
| | Efficiency at 230VAC (Typ.) | 92.5% | 93% |
| | Voltage Tolerance Note.3 | ± 5% | ± 5% |
| | PWM Dimming (optional) | > 1600 Hz (for dimmable version) | |
| | Set up time (Max.) | 0.7s / 230VAC, at full load | |
| Input | Rated Voltage | 100 ~ 277VAC | |
| | Voltage Range | 90 ~ 305VAC | |
| | Frequency Range | 47 Hz ~ 63 Hz | |
| | AC Current (Max.) | 4.5A at 115VAC / 2.3A at 230VAC | |
| | Power Factor | >0.98 at 115VAC / >0.94 at 230VAC at full load. PF-0.9 at 70% load | |
| | Total Harmonic Distortion | THD < 15% at 230VAC, full load. <i>Note 4</i> | |
| | Inrush Current (Typ.) | Cold Start 90A (Td=960us measured at 50% Ipeak) at 230VAC | |
| | Max. Number of PSUs on Circuit Breaker | B type : 1 unit (10A) / 1 unit (16A) / 2 units (25A), C type : 1 unit (10A) / 3 units (16A) / 4 units (25A), D type : 3 units (10A) / 6 units (16A) / 9 units (25A) at 230VAC | |
| | Leakage Current | <1mA / 240VAC | |
| DIM. Control (DALI) | DALI2 Standards | Compatibility with IEC 62386-101, 102, and 207 | |
| | DALI bus current consumption | < 2mA | |
| Protections | Over Current | 105~180% rated current. Type: Hiccup mode (Auto recover after fault condition disappeared). | |
| | Short Circuit | Type: Hiccup mode & recovers after fault condition disappeared. | |
| | Over Voltage | 13~19V | 26~38V |
| | | Type: Hiccup mode (re-power on to recover). | |
| | Over Temperature | Tcase: 95°C ± 10°C Type: Latch off mode (re-power on to recover). | |
| Environment | Operation Temp. | -30°C ~50°C (Refer to output load derating curve). | |
| | Operation Humidity | 20% ~ 90% RH non-condensing. | |
| | Storage Temp. | -40 ~ +80°C | |
| | Storage Humidity | 10% ~ 90% RH | |
| | Vibration | 10~500 Hz, 2G 10 min./1 cycle, period for 60 min. each along X, Y, Z axes. | |

NOTES

1. All specifications not specially mentioned are measured at 230VAC full load and 25°C ambient temperature.
2. Ripple & Noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with 0.1uf & 47uf parallel capacitor.
3. Voltage Tolerance: includes line regulation, load regulation and set-up tolerance.
4. THD < 25% at 277VAC, full load.

Dimensions

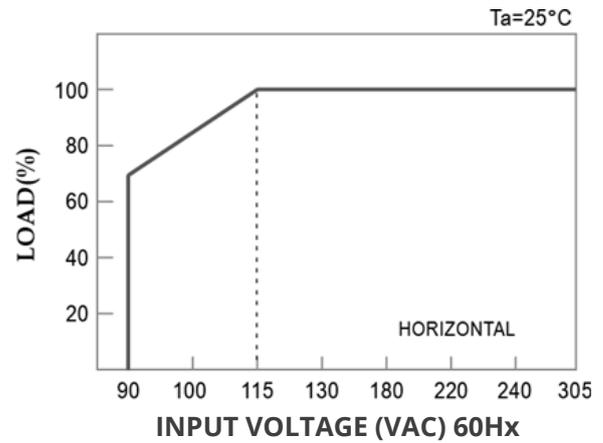
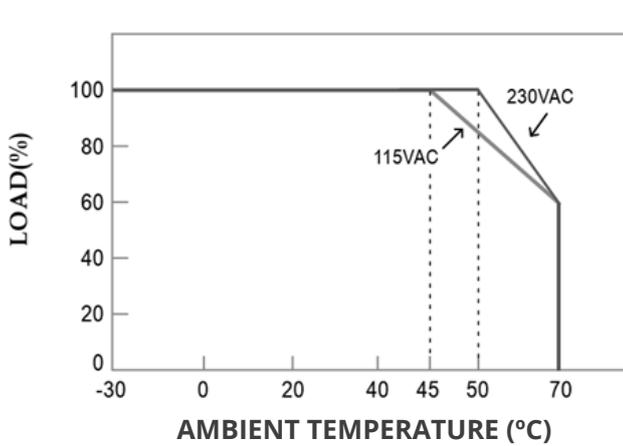


| | |
|--------|--------|
| Length | 300mm |
| Width | 98mm |
| Height | 38.5mm |
| Weight | 1308g |

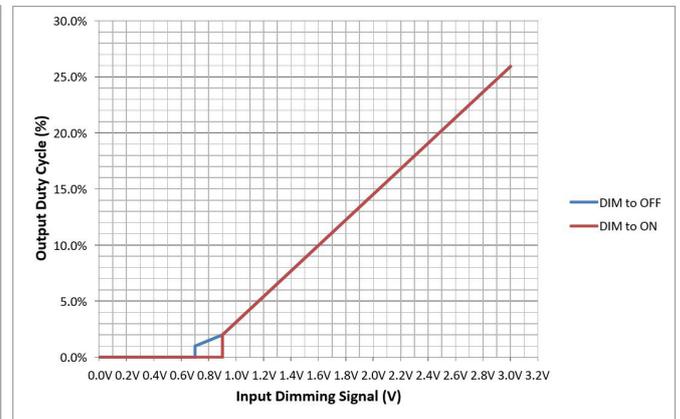
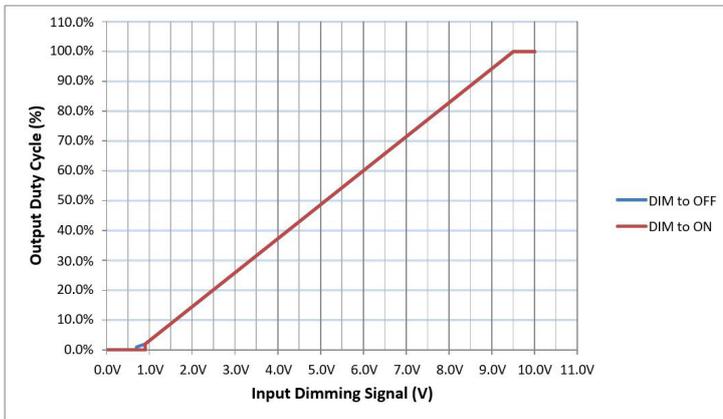
| Safety | |
|----------------------------|---|
| Safety Standards | EN61347-1, EN61347-2-13, independent, IP67 Approved. |
| Withstand Voltage | I/P-O/P: 3.75KVAC I/P-FG: 1.88KVAC O/P-FG: 0.5KVAC |
| Isolation Resistance | I/P-O/P, I/P-FG, O/P-FG: 100M ohms / 500VDC at 25°C |
| EMI Conduction & Radiation | Compliance to EN55015, FCC part 15 |
| Harmonic Current | Compliance to EN61000-3-2 Class C (≥75% load), EN61000-3-3 |
| EMS Immunity | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547, criteria B |

| Others | |
|----------|---------|
| Warranty | 5 years |

Derating Curve

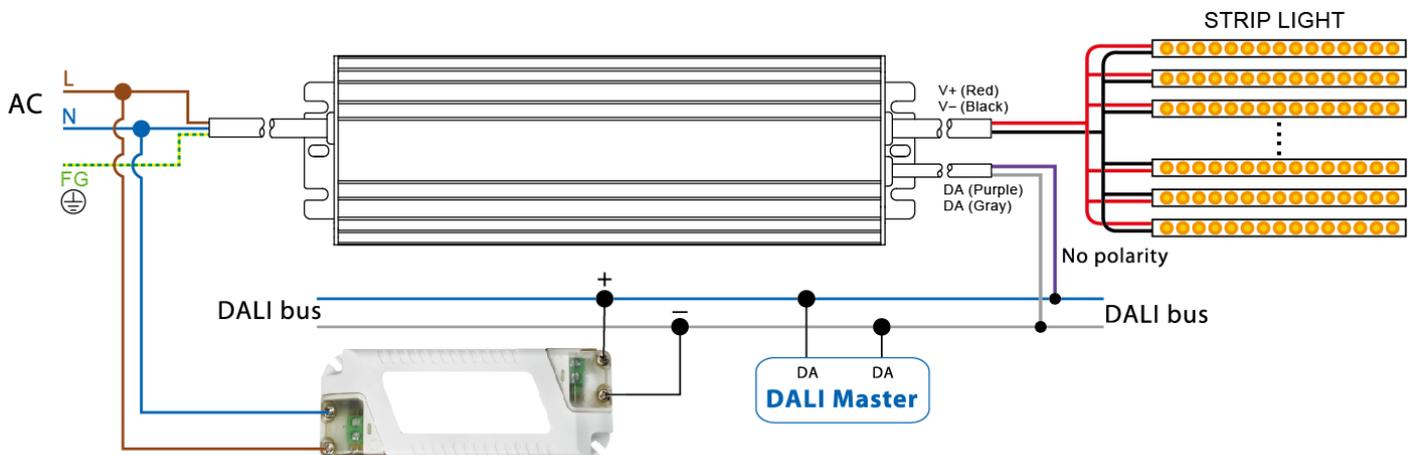


Dimming Curves

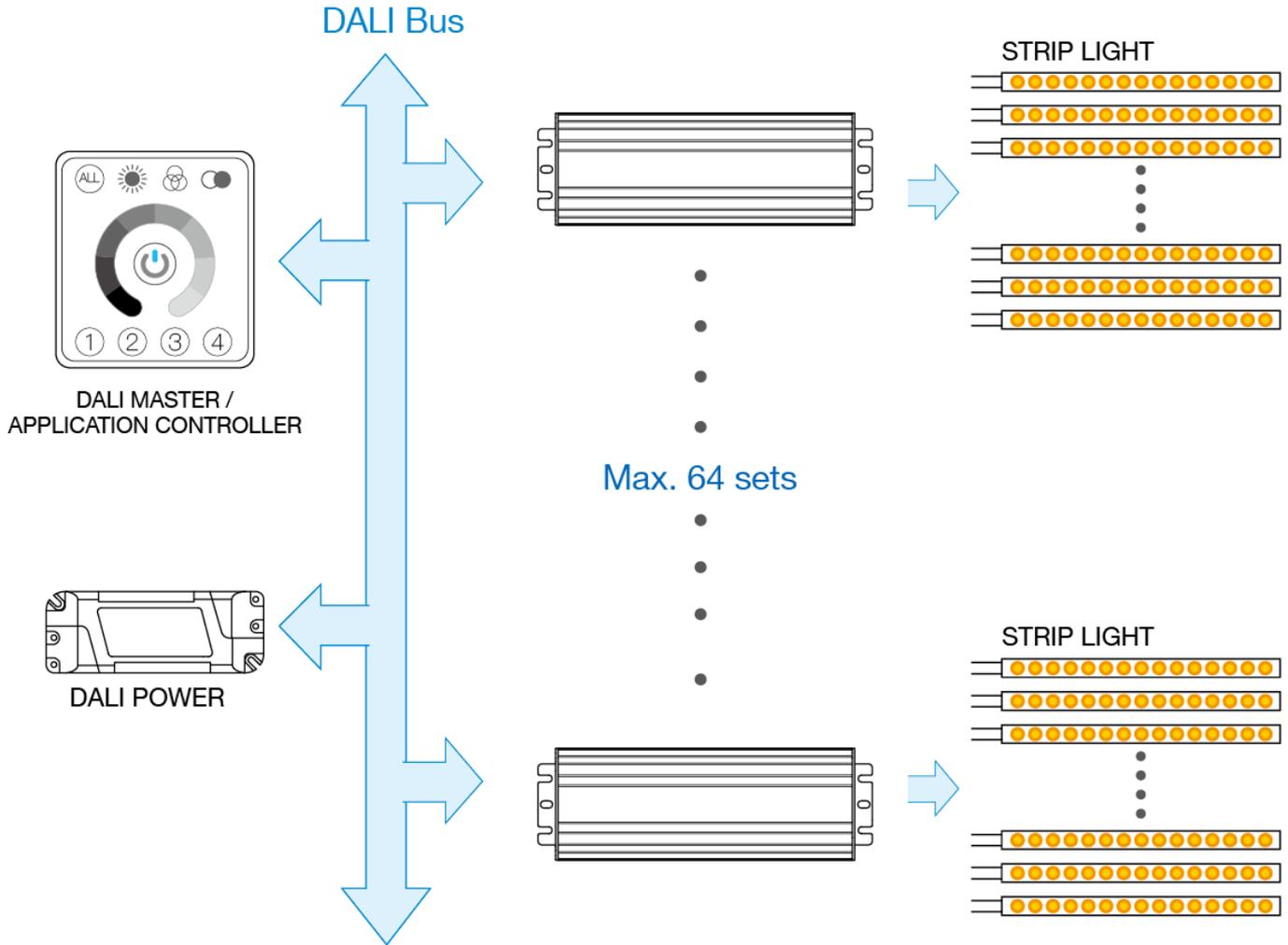


DALI Interface

1. Apply DALI signal between DA wires
2. First step is fixed at 1% of output
3. Wiring diagram



Application Diagram



Electrical Label

| | | | | |
|--|--|---|----------------------|---|
| <ul style="list-style-type: none"> ● AC L (BROWN) ● AC N (BLUE) ● (GREEN/YELLOW) | | <p>ALCV400-024-67-DALI Constant Voltage DALI-2 Dimming Driver PRI: 100-240VAC 6.3A 50-60HZ SEC: 16700mA 24VDC 400.8W</p> | SELV IP67 | <ul style="list-style-type: none"> ○ V+ (RED) ○ V- (BLACK) ○ SEC ○ DA(PURPLE) ○ DA(GRAY) |
| <p>tc: 90°C ta: 45°C (100-200VAC) ta: 50°C (200-240VAC, 277VAC) ARRANT-LIGHT OY WWW.LIGHT.FI MADE IN CHINA</p> | | | | |