# Features
- Constant Voltage + Constant Current mode output
- Metal housing design with functional Ground
- Built-in active PFC function
- No load / Standby power consumption <0.5W
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming (dim-to-off); Smart timer dimming; DALI
- Typical lifetime>50000 hours
- 5 years warranty

# Description
ELG-240 series is a 240W AC/DC LED driver featuring the dual mode constant voltage and constant current output. ELG-240 operates from 100～305VAC and offers models with different rated voltage ranging between 24V and 54V. Thanks to the high efficiency up to 93%, with the fanless design, the entire series is able to operate for -40℃ ~ +90℃ case temperature under free air convection. The design of metal housing and IP67/IP65 ingress protection level allows this series to fit both indoor and outdoor applications. ELG-240 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

# Model Encoding

```
ELG - 240 - 24 A -  
```

- Input wiring type
- Function mode option
- Blank:2-wire input for standard model
- 3Y:3-wire input for standard model
- Rated output voltage(24/36/42/48/54V)
- Rated wattage
- Series name

<table>
<thead>
<tr>
<th>Type</th>
<th>IP Level</th>
<th>Function</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>IP67</td>
<td>Io and Vo fixed.</td>
<td>In Stock</td>
</tr>
<tr>
<td>A</td>
<td>IP65</td>
<td>Io and Vo adjustable through built-in potentiometer.</td>
<td>In Stock</td>
</tr>
<tr>
<td>B</td>
<td>IP67</td>
<td>3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)</td>
<td>In Stock</td>
</tr>
<tr>
<td>AB</td>
<td>IP65</td>
<td>Io and Vo adjustable through built-in potentiometer &amp; 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)</td>
<td>In Stock</td>
</tr>
<tr>
<td>DA</td>
<td>IP67</td>
<td>DALI control technology.</td>
<td>In Stock</td>
</tr>
<tr>
<td>Dx</td>
<td>IP67</td>
<td>Built-in Smart timer dimming function by user request.</td>
<td>By request</td>
</tr>
<tr>
<td>D2</td>
<td>IP67</td>
<td>Built-in Smart timer dimming and programmable function.</td>
<td>In Stock</td>
</tr>
</tbody>
</table>
### SPECIFICATION

**MODEL**  
- **ELG-240-24**  
- **ELG-240-36**  
- **ELG-240-42**  
- **ELG-240-48**  
- **ELG-240-54**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTANT CURRENT Region Note.1</td>
<td>12 ~ 24V</td>
<td>18 ~ 36V</td>
<td>21 ~ 42V</td>
<td>24 ~ 48V</td>
<td>27 ~ 54V</td>
<td></td>
</tr>
<tr>
<td>RATED CURRENT</td>
<td>10A</td>
<td>6.66A</td>
<td>5.71A</td>
<td>5.0A</td>
<td>4.45A</td>
<td></td>
</tr>
<tr>
<td>RATED POWER</td>
<td>200VAC ~ 305VAC</td>
<td>239.76W</td>
<td>239.82W</td>
<td>240W</td>
<td>240.3W</td>
<td></td>
</tr>
<tr>
<td>RIPPLE &amp; NOISE (max.) Note.3</td>
<td>200mVp-p</td>
<td>200mVp-p</td>
<td>250mVp-p</td>
<td>250mVp-p</td>
<td>350mVp-p</td>
<td></td>
</tr>
<tr>
<td>VOLTAGE ADJ. RANGE</td>
<td>Adjustable for A/AB-Type only (via built-in potentiometer)</td>
<td>22.4 ~ 25.6V</td>
<td>33.5 ~ 38.5V</td>
<td>39 ~ 45V</td>
<td>44.8 ~ 51.2V</td>
<td></td>
</tr>
<tr>
<td>CURRENT ADJ. RANGE</td>
<td>Adjustable for A/AB-Type only (via built-in potentiometer)</td>
<td>5900mA</td>
<td>5900mA</td>
<td>5900mA</td>
<td>5900mA</td>
<td></td>
</tr>
<tr>
<td>VOLTAGE TOLERANCE Note.4</td>
<td>±2.0%</td>
<td>±2.0%</td>
<td>±2.0%</td>
<td>±2.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LINE REGULATION</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOAD REGULATION</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SETUP, RISE TIME Note.6</td>
<td>500ms, 100ms/230VAC, 100ms, 100ms/115VAC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOLD UP TIME (Typ.)</td>
<td>10ms/230VAC 10ms/115VAC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VOLTAGE RANGE** Note.5  
- 100 ~ 350VAC  
- 142 ~ 431VDC

**FREQUENCY RANGE**  
- 47 ~ 63Hz

**POWER FACTOR**  
- PF ≥ 0.97/115VAC, PF ≥ 0.95/230VAC, PF ≥ 0.92/277VAC (full load) (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)

**TOTAL HARMONIC DISTORTION**  
- THD< 20%(@load 50%/115VAC, 230VAC; @load 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)

**EFFICIENCY (Typ.)**  
- 92%  
- 92%  
- 92.5%  
- 93%  
- 93%

**AC CURRENT**  
- 2.2A / 115VAC  
- 1.5A / 230VAC  
- 1.2A / 277VAC

**INRUSH CURRENT (Typ.)**  
- COLD START 60A (width measured at 510μs measured at 50% Ileak) at 230VAC, Per NEMA 410

**MAX. No. of PSUs on 16A CIRCUIT BREAKER**  
- 4 units (circuit breaker of type B)  
- 6 units (circuit breaker of type C) at 230VAC

**LEAKAGE CURRENT**  
- <0.75mA / 277VAC

**NO LOAD / STANDBY POWER CONSUMPTION** Note.7  
- No load power consumption <0.5W for Blank / A / Dx / D-Type

**SHORT CIRCUIT**  
- Standby power consumption <0.5W for B / AB / DA-Type

**OVER VOLTAGE**  
- 27 ~ 34V  
- 42 ~ 49V  
- 47 ~ 54V  
- 54 ~ 63V  
- 60 ~ 67V

**OVER TEMPERATURE**  
- Shut down output voltage, re-power on to recover

**ENVIRONMENT**

<table>
<thead>
<tr>
<th>PROTECTION</th>
<th>WORKING TEMP.</th>
<th>MAX. CASE TEMP.</th>
<th>WORKING HUMIDITY</th>
<th>STORAGE TEMP., HUMIDITY</th>
<th>TEMP. COEFFICIENT</th>
<th>VIBRATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tcase=+90°C</td>
<td>Tcase=+90°C</td>
<td>20 ~ 95% RH non-condensing</td>
<td>-40 ~ +90°C, 10 ~ 95%, RH</td>
<td>±0.03%/°C (0 ~ 60°C)</td>
<td>10 ~ 500Hz, 5G 12m/s/cycle, period for 72min. each along X, Y, Z axes</td>
</tr>
</tbody>
</table>

**SAFETY & EMC**

<table>
<thead>
<tr>
<th>SAFETY STANDARDS</th>
<th>DALI STANDARDS</th>
<th>WITHSTAND VOLTAGE</th>
<th>ISOLATION RESISTANCE</th>
<th>EMC EMISSION</th>
<th>EMC IMMUNITY</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL8750(TYPE &quot;HL&quot;), CSA C222.2 No. 250.13-12; IEC/EN/AS/NZS 61347-1, IEC/EN/AS/NZS 61347-2-13 independent, EN62384; EAC TP TC 004, BSI S151885(for 24V/28V/36/38/42A/48/48A/54/54A only); GB19510.14, GB19510.1; IP65 or IP67; KC61347-1, KC61347-2-13 approved</td>
<td>Compliance to IEC62386-101, 102, 207 for DA-Type only</td>
<td>I/P-O: P: 3.75KVAC I/P-FG: 2.0KVAC O/P-FG: 1.5KVAC</td>
<td>I/P-O: P: 100Ωm / 500VDC / 25°C / 70% RH</td>
<td>Compliance to EN55015, EN61000-3-3 (Class C) @load (50%) = EN61000-3-3: GB17625.1, GB17743; EAC TP TC 020; KC KN15 KN61547</td>
<td>Compliance to EN61000-4-2, 4, 5, 6, 8, 11; EN61547, light industry level (surge immunity Line Earth 9kV, Line-Line 4kV); EAC TP TC 02; KC KN15 KN61547</td>
<td></td>
</tr>
<tr>
<td>MTFB</td>
<td>826.7K hrs min. Telcordia SR-332 (Bellcore); 200.8Khrs min. MIL-HDBK-217F (25°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIMENSION</td>
<td>244<em>71</em>37.5mm (L<em>W</em>H)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACKING</td>
<td>1.22Kg; 12pcs / 15.2Kg / 0.72CUFT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE**

1. All parameters NOT specially mentioned are measured at 230VAC input, rated 25°C and ambient temperature of 10°C.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair wire terminated with a 0.1uf & 47uf parallel capacitor.
4. Tolerance : includes set up tolerance, line regulation and load regulation.
5. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
6. Length of set up time is determined at first cold start. Tuning ON/OFF the driver may lead to increase of the set up time.
7. No load standby power consumption is specified for 230VAC input.
8. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
9. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly β point (or TEMP, per DILC), is about 70°C or less.
10. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com
11. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m (6600ft).
12. For any application note and IP water proof function installation caution, please refer our user manual before using.

This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems. Should there be any compatibility issues, please contact MEAN WELL.

Typical output current normalized by rated current (%)
### DIMMING OPERATION

∗ 3 in 1 dimming function (for B/AB-Type)
- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:
  - 0 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100μA (typ.)

○ Applying additive 0 ~ 10VDC

![Additive Voltage diagram](diagram1)

"DO NOT connect "DIM- to Vo-"

○ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):

![Additive PWM signal diagram](diagram2)

"DO NOT connect "DIM- to Vo-"

○ Applying additive resistance:

![Additive Resistance diagram](diagram3)

"DO NOT connect "DIM- to Vo-"

**Note:**
1. Min. dimming level is about 8% and the output current is not defined when 0% < Iout < 8%.
2. The output current could drop down to 0% when dimming input is about 0kΩ or 0Vdc, or 10V PWM signal with 0% duty cycle.
**DALI Interface (primary side; for DA-Type)**
- Apply DALI signal between DA+ and DA-.
- DALI protocol comprises 16 groups and 64 addresses.
- First step is fixed at 8% of output.

**Smart timer dimming function (for Dxx-Type by User definition)**
MEAN WELL Smart timer dimming primarily provides the adaptive proportion dimming profile for the output constant current level to perform up to 14 consecutive hours. 3 dimming profiles hereunder are defined accounting for the most frequently seen applications. If other options may be needed, please contact MEAN WELL for details.

Ex: **D01-Type**: the profile recommended for residential lighting

- **T1**: The power supply will switch to the constant current level at 100% starting from 6:00pm.
- **T2**: The power supply will switch to the constant current level at 70% in turn, starting from 0:00am, which is 06:00 after the power supply turns on.
- **T3**: The power supply will switch to the constant current level at 50% in turn, starting from 1:00am, which is 07:00 after the power supply turns on.
- **T4**: The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.

**D02-Type**: the profile recommended for street lighting

- **T1**: The power supply will switch to the constant current level at 50% starting from 5:00pm.
- **T2**: The power supply will switch to the constant current level at 80% in turn, starting from 6:00pm, which is 01:00 after the power supply turns on.
- **T3**: The power supply will switch to the constant current level at 100% in turn, starting from 8:00pm, which is 03:00 after the power supply turns on.
- **T4**: The power supply will switch to the constant current level at 60% in turn, starting from 1:00am, which is 08:00 after the power supply turns on.
- **T5**: The power supply will switch to the constant current level at 80% in turn, starting from 4:00am, which is 11:00 after the power supply turns on. The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.
**Ex: D03-Type: the profile recommended for tunnel lighting**

Set up for D03-Type in Smart timer dimming software program:

<table>
<thead>
<tr>
<th>TIME**</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
</tr>
</thead>
<tbody>
<tr>
<td>01:30</td>
<td>11:00</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>LEVEL**</td>
<td>70%</td>
<td>100%</td>
<td>70%</td>
</tr>
</tbody>
</table>

**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:

[1] The power supply will switch to the constant current level at 70% starting from 4:30pm.
[2] The power supply will switch to the constant current level at 100% in turn, starting from 6:00pm, which is 01:30 after the power supply turns on.
[3] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.

The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.
180~240W Constant Voltage + Constant Current LED Driver  

ELG-240 series

**OUTPUT LOAD vs TEMPERATURE (Note 10)**

- 230VAC input only
- 110VAC

**Ambient Temperature, Ta (°C)**

- If ELG-240 operates in Constant Current mode with the rated current, the maximum workable Ta is 60°C.

**STATIC CHARACTERISTIC**

- De-rating is needed under low input voltage.

**TOTAL HARMONIC DISTORTION (THD)**

- 48V Model, Tcase at 80°C

**EFFICIENCY vs LOAD**

ELG-240 series possess superior working efficiency that up to 93% can be reached in field applications.

- 48V Model, Tcase at 80°C

※ If ELG-240 operates in Constant Current mode with the rated current, the maximum workable Ta is 60°C.
180~240W Constant Voltage + Constant Current LED Driver

**LIFE TIME**

<table>
<thead>
<tr>
<th>Temperature (℃)</th>
<th>Lifetime (Kh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>120</td>
</tr>
<tr>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>120</td>
<td>0</td>
</tr>
</tbody>
</table>

*File Name: ELG-240-SPEC  2018-09-30*

Downloaded from Arrow.com.
### MECHANICAL SPECIFICATION

#### Blank-Type

CASE NO.: 262A  Unit:mm

- TC: Max. Case Temperature

#### A-Type

CASE NO.: 262A  Unit:mm

- TC: Max. Case Temperature

---

File Name: ELG-240-SPEC   2018-09-30

Downloaded from Arrow.com.
AB-Type

Max. Case Temperature

B/DA/D2-Type

Max. Case Temperature
**3Y Model (3-wire input)**

Note1: Please connect the case to PE for the complete EMC deliverance and safety use.

Note2: Please contact MEAN WELL for input wiring option with PE.

**INSTALLATION MANUAL**

Please refer to: http://www.meanwell.com/manual.html