

### Product features

- Built-in isolated adjustable power LED driver
- Supports DALI-2 D4i DALI parts 150, 250, 251, 252, 253
- Current adjustment via NFC
- Flicker free LED driver
- Output current 150...1050 mA
- Max. output power 24 W
- Constant lumen output (CLO)
- DC emergency: Current output decreased to 15% (other values can be programmed)
- Current output default value 150 mA
- For luminaires with protection class I, II
- Auxiliary 24 V, 3 W power supply
- 5 years warranty
- Season Control, supports scheduled brightness control for lower energy consumption at midnight.



### Product specifications

#### 163465 ID ECSCB 24/230/150-1050 D4i NFC OUT

| Output current | Input voltage                  | Output voltage | Efficiency @ full load   | Current accuracy | Power factor                       | Dimension L X W X H (mm) |
|----------------|--------------------------------|----------------|--------------------------|------------------|------------------------------------|--------------------------|
| 150...1050 mA  | 220...240 Vac<br>220...240 Vdc | 8...48 Vdc     | 88.5% ( @ 48V<br>500 mA) | ± 5%             | Output Power @<br>full load > 0.95 | 122.8 x 76.3 x<br>31.0   |

### Electrical specifications

#### Mains voltage supply

|                           |                                         |
|---------------------------|-----------------------------------------|
| Rated input voltage range | 220...240 Vac; performance range        |
| Max. input voltage range  | 198...264 Vac; operational safety range |
| Rated frequency range     | 0/50/60 Hz                              |
| Max. input current        | 0.14 A @ 230 Vac                        |

#### Battery operation

|                       |                                         |
|-----------------------|-----------------------------------------|
| DC voltage range      | 220...240 Vdc; performance range        |
| Max. DC voltage range | 176...276 Vdc; operational safety range |

#### Protection against voltage peaks

|                      |                                                                                                     |
|----------------------|-----------------------------------------------------------------------------------------------------|
| Withstand voltage    | I/p-O/p: 3 kVac, < 5 mA 60 sec, I/p-Da: 1.5 kVac, < 5 mA 60 sec,<br>O/p-Da: 1.5 kVac, < 5 mA 60 sec |
| Mains surge immunity | L-N 6 kV, L-FG 10 kV, N-FG 10 kV                                                                    |

#### Total harmonic distortion (THD)

|                                          |       |
|------------------------------------------|-------|
| At rated input voltage range @ full load | < 10% |
|------------------------------------------|-------|

### Output data

|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| Output current tolerance | $\pm 5\%$ at rated input voltage range              |
| No load output voltage   | $< 55 \text{ Vdc}$                                  |
| Ripple output current    | 5% (ripple = peak/average total 100 Hz)             |
| Output PstLM             | $\leq 1$ at full load @ rated input voltage         |
| Output SVM               | $\leq 0.4$ at full load @ rated input voltage       |
| DC emergency level       | DALI current output decreased to 15% (programmable) |

### Protection functions output side

|                          |                                                                                                                       |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Overvoltage protection   | The output voltage is less than or equal to 55 V                                                                      |
| Overpower protection     | The output power is less than or equal to 28 W                                                                        |
| Short circuit protection | Hiccup mode. Protection device will trigger when short circuit and will auto recover after the fault mode is removed. |

### Dimming operation and interface

|                           |                                    |
|---------------------------|------------------------------------|
| Standby power consumption | $< 0.3 \text{ W}$ (@ DALI BUS OFF) |
| Dimming mode              | DALI-2                             |
| Dimming method            | Amplitude dimming                  |
| Dimming current range     | 1%...100% (min. 10 mA)             |

### Integrated DALI bus power supply

|                                          |                                                 |
|------------------------------------------|-------------------------------------------------|
| Maximum allowed DALI bus supply current: | Max 250 mA (@ All D4i DALI bus current combine) |
| Typical output current                   | 55 mA                                           |
| Output voltage                           | 13.6 ... 18.4 Vdc                               |

### AUX power supply

|                        |                                      |
|------------------------|--------------------------------------|
| Typical output voltage | 24 Vdc (voltage accuracy $\pm 5\%$ ) |
| Output current         | Nor 125 mA , Peak 250 mA             |

### Connection terminals

|                          |                                                                                                                    |
|--------------------------|--------------------------------------------------------------------------------------------------------------------|
| Connection terminal type | 45° push in terminal                                                                                               |
| Wire cross section       | Input wire: 0.5...1.5 mm <sup>2</sup> ; Output wire: 0.2...1.5 mm <sup>2</sup> (0.2...0.5 mm <sup>2</sup> For NTC) |
| Wire stripping length    | 8...9 mm                                                                                                           |

### Degree of protection

|                   |      |
|-------------------|------|
| Protection rating | IP20 |
|-------------------|------|

### Operating data

|                      |                                                     |
|----------------------|-----------------------------------------------------|
| Output current range | NFC control adjusts the current: 150...1050 mA      |
| Default current      | 150 mA                                              |
| Output voltage range | 8...48 Vdc                                          |
| Noise level          | $< 24 \text{ dBA}$ , at full load @ 100 cm distance |

### Circuit breaker / Inrush current

|                      |                                           |     |                                            |     |     |
|----------------------|-------------------------------------------|-----|--------------------------------------------|-----|-----|
| MCB loading quantity | Inrush current I <sub>peak</sub> : 34.4 A |     | Inrush current T <sub>width</sub> : 176 us |     |     |
|                      | MCB type                                  | B10 | C10                                        | B16 | C16 |
|                      | Units                                     | 17  | 29                                         | 28  | 46  |

### Supplementary instructions

- The luminaire manufacturer is responsible for measuring and verifying the EMI compliance of the complete luminaire, as the level of radio interference will vary depending on the luminaire construction. Especially primary and secondary cable lengths and their routing may have a significant effect on radio interference.
- For the push DIM function, please follow our instructions, which can be downloaded from [www.cupower.com](http://www.cupower.com).
- External NTC are supported for temperature protection of the LED module or luminaire.
- Mind the polarity of the DALI lines. DA+ to DA+, DA- to DA- only.
- The luminaire manufacturer must ensure that condensation water cannot be created within the fixture.
- LEDset and NTC functionality share the same connection terminal; both features are not simultaneously available.
- LEDset functionalities are limited only to the current setting, via codified resistor.

### Environmental specifications

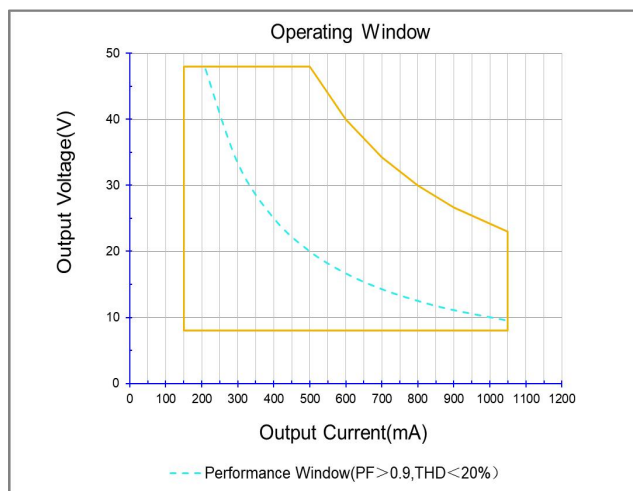
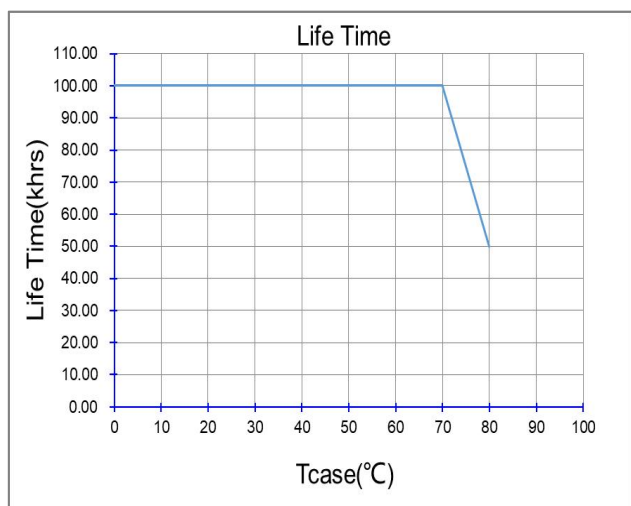
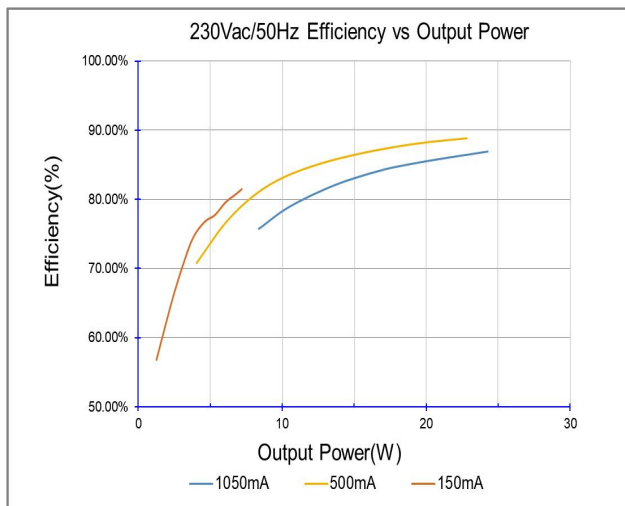
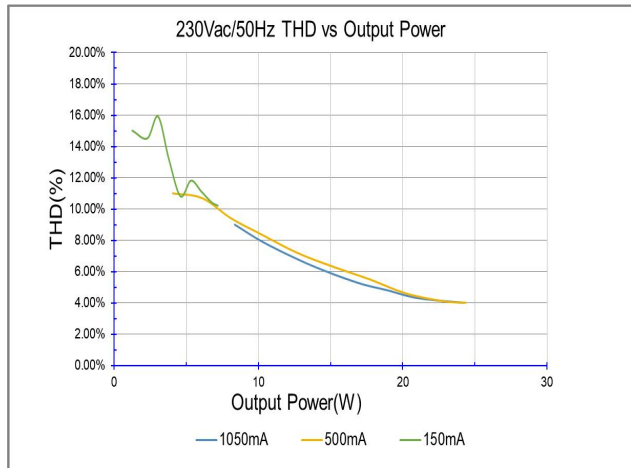
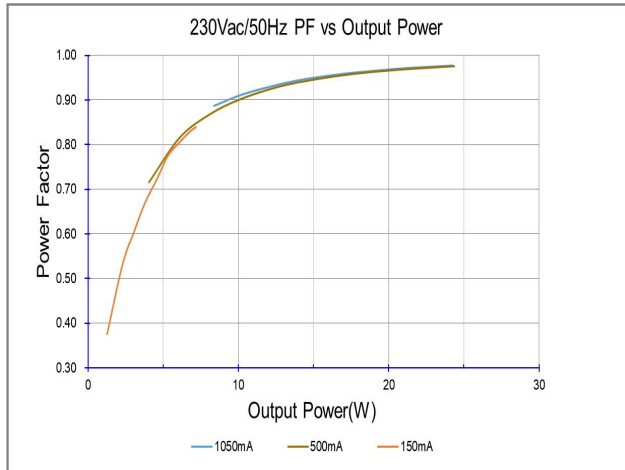
|                                    |                                                                                   |
|------------------------------------|-----------------------------------------------------------------------------------|
| Operating temperature              | -40...+60°C                                                                       |
| Storage temperature                | -40...+85°C                                                                       |
| Working humidity                   | 5%...85%                                                                          |
| Store humidity                     | 5%...95%                                                                          |
| Lifetime                           | at T <sub>c</sub> 80°C: 50,000 hrs; at T <sub>c</sub> 70°C: 100,000 hrs @ 230 Vac |
| Maximum T <sub>c</sub> temperature | 80°C                                                                              |

### Safety & EMC compliance

| ENEC+CE                       | CCC | SAA |
|-------------------------------|-----|-----|
| EN 61347-1:2015/A1:2021       |     |     |
| EN 61347-2-13:2014/A1:2017    |     |     |
| EN 300 330 V2.1.1:2017        |     |     |
| EN 62479:2010                 |     |     |
| EN 50663:201                  |     |     |
| EN 301 489-1 V2.2.3:2019      |     |     |
| EN 301 489-3 V2.3.2:2023      |     |     |
| EN IEC 55015:2019/A11:2020    |     |     |
| EN IEC 61547:2023             |     |     |
| EN IEC 61000-3-2:2019/A2:2024 |     |     |
| EN IEC 61000-3-3:2013/A2:2021 |     |     |
| EN IEC 62384:2020             |     |     |



### Technical information (DALI bus power supply deactivated. No-load on AUX power supply.)



It's important to set the output current (AOC value) according to the LED voltage and make sure the power is within 24 W + 5%.

#### Example of AOC settings

| V LED (Vdc) | AOC max | Pout (W) |
|-------------|---------|----------|
| 48          | 500 mA  | 24       |
| 30          | 800 mA  | 24       |
| 26.6        | 900 mA  | 23.9     |
| 22          | 1050 mA | 23.1     |