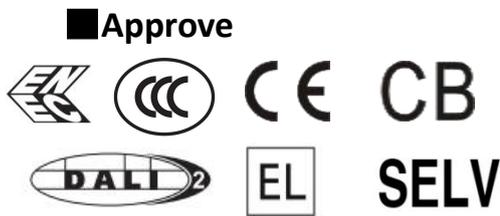
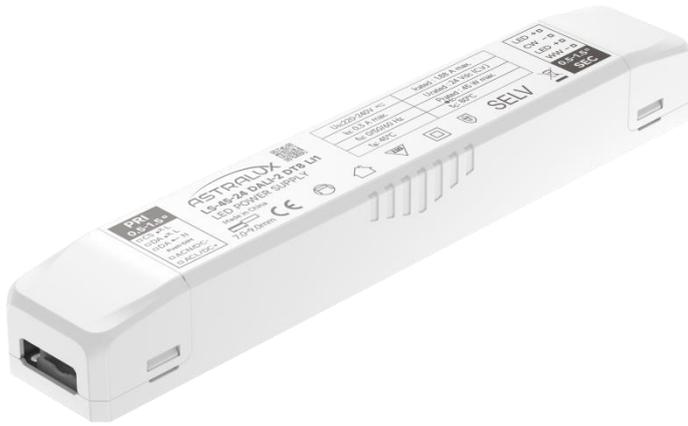


45W DT8+PUSH Dimming constant Voltage



Features

- For luminaries of protection Class II , SELV, Independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OTP/OVP
- Power Factor: ≥ 0.95 (Typ.)
- Efficiency: $\geq 89\%$ (Typ.)
- Support Tunable White DT8, Push Dimming
- DALI maintainace(Part 251,252,253)
- 5 years warranty

Applications

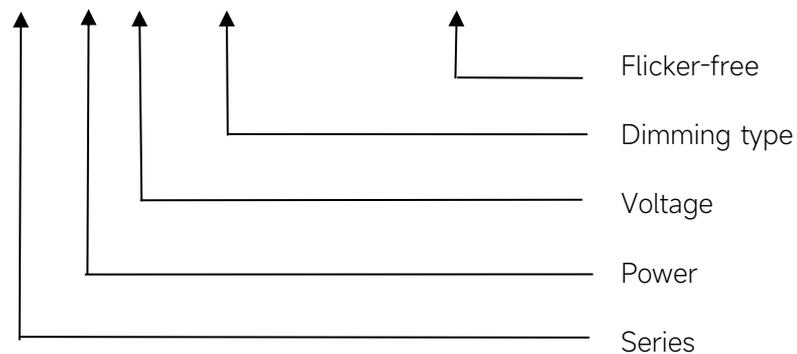
- LED strips

◆ Description

LS-45-24 DALI-2 DT8 LI1 is a 45W constant voltage LED driver that operates from 198-264Vac input with 24V output voltage. With it's compact dimensions from 227 x 38 x 30 mm. It is easy to integrate in LED strips products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

LS-45-24 DALI-2 DT8 LI1



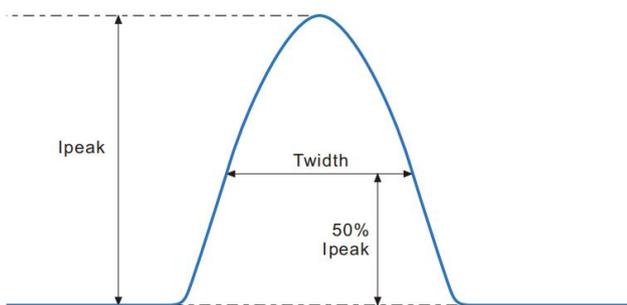
◆ Specification

| | | |
|-------------|----------------------------------|---|
| Output | Constant Voltage | 24VDC |
| | Current Range | 0-1.88A |
| | Voltage Accuracy | ±5% |
| | Output HF voltage ripple(≥1KHz) | ±1% |
| | Output LF voltage ripple(≤120Hz) | ±1% |
| | SVM | ≤0.4 |
| | Pst | ≤1 |
| | Efficiency(Typ.) | ≥89%@Full load,230V |
| | EOF1 | 15% |
| Input | Rated input voltage | 220-240V |
| | Range of input voltage | 198-264VAC |
| | Maximum voltage | 300VAC@1 h maximum,unit might not operate in this abnormal condition |
| | Range input voltage(VDC) | 176-280VDC |
| | Frequency(Hz) | 0/50/60 Hz |
| | Displacement factor | ≥0.9 |
| | Power Factor | ≥0.95@full load, 230Vac |
| | Input Current max | 0.3A @full load, 240Vac |
| | Start-up time | < 0.8S |
| | Switch over time(AC/DC mode) | < 0.4S |
| | Standby Power | ≤0.5W, @DIM TO OFF, 230VAC |
| | Network Standby Power | ≤0.5W, @DIM TO OFF, 230VAC |
| | THD (Typ.) | < 10% @230Vac, Full load |
| Dimming | Dimming | YES |
| | Dimming mode | DALI-2 (IEC 62386-101,102,207,251,252,253) &Push Dimming (Corridor Function) |
| | Dimming depth | 1% |
| | Dimming current range | 1-100% |
| Protection | Over Load Protection | 105-150% YES/Auto Resume |
| | Short circuit Protection | YES/Auto Resume |
| | Over Temperature Protection | YES/Auto Resume |
| capability | Surge capability (L-N) | 1KV |
| | Surge capability (L/N-Ground) | NA |
| Environment | Operating Temperature | -20°C~+45°C |
| | Humidity | 20%-90%RH |
| | Tc | 80°C |
| | Storage Temperature | -30°C~+85°C |
| | Life time | > 50000h@Tc=80°C,230VAC,full load |

| | | |
|------------------|--|---|
| | Ripple & Noise | ≤25dB(A)@20cm |
| Surface | Dimension | 227X38X30(LXWXH)mm |
| | material | PC |
| Standards | Safety | IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN61347- 1, EN61347-2- 13, EN62384;GB19510. 1, GB19510. 14; |
| | EMC | GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;GB/T17743;GB17625. 1; |
| | Energy Efficiency | Erp2.0 EU 2019/2020 |
| | RoHS | RoHS (2011/65/EU) (EU)2015/863 |
| DALI performance | EN 62386-101 (DALI-2) EN 62386-102 (DALI-2) EN 62386-207 (DALI-2,including part251,252,253) | |
| Note | <p>1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.</p> <p>3.Switch and dimmer are not recommended to connect between this product output and luminaries.</p> <p>4.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.</p> | |

◆ Inrush Current

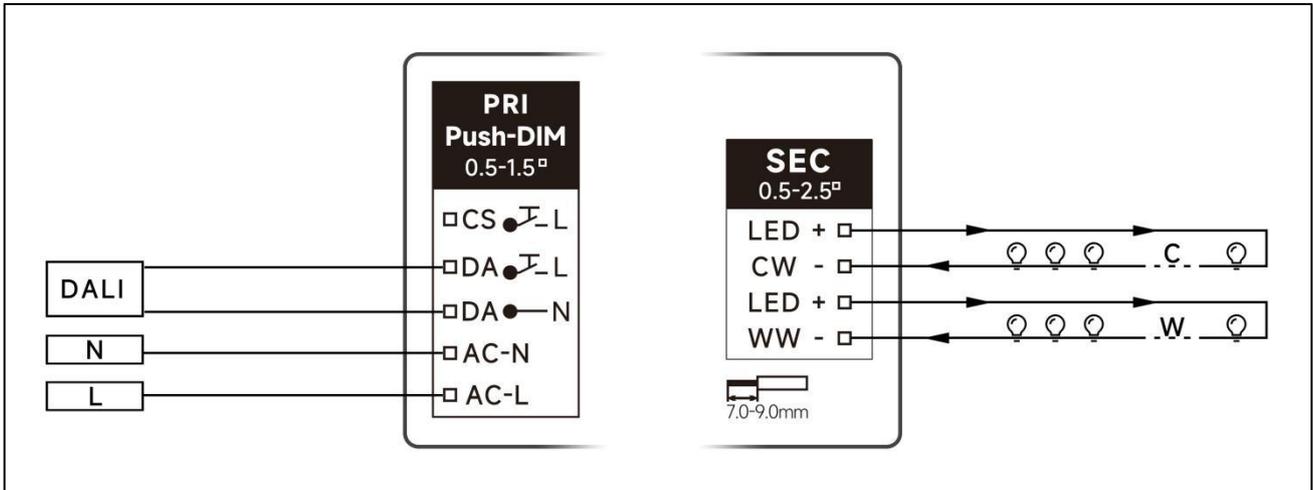
| I _{peak} | T _{width} | B10 | B16 | B20 | C10 | C16 | C20 |
|-------------------|--------------------|-------|-------|-------|-------|-------|-------|
| 24.2A | 246μs | 13pcs | 21pcs | 27pcs | 22pcs | 36pcs | 45pcs |



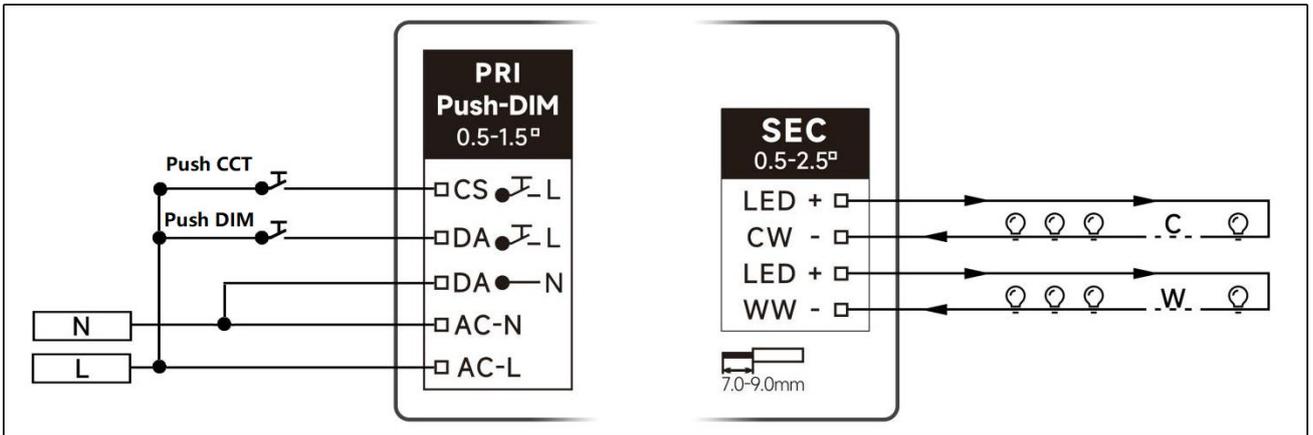
Remarks:

- 1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- 2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Wiring diagram

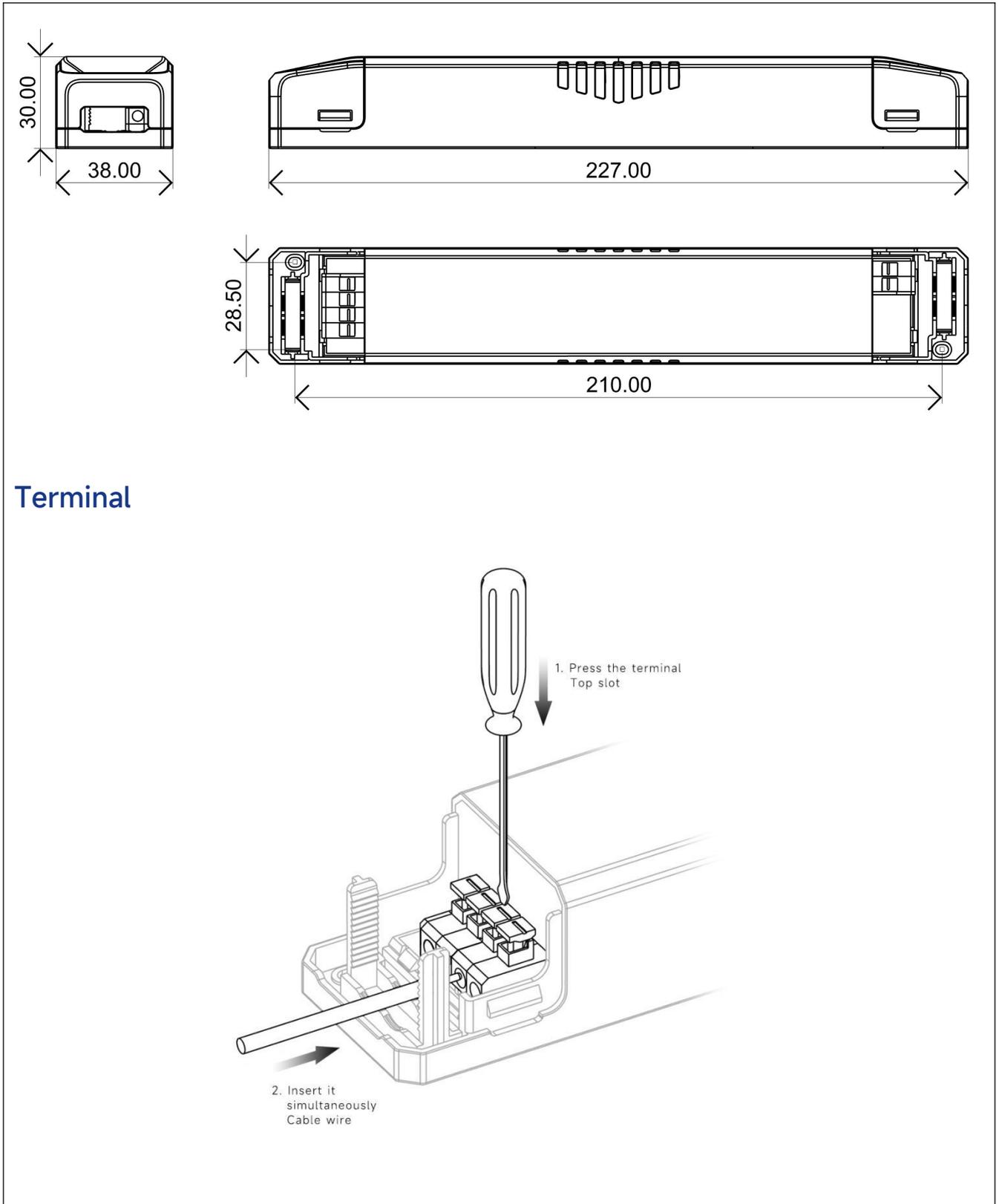


DALI Connection



push DIM/CCT Connection

◆ 2D diagram



Terminal

◆ Wiring & Connections

| | Specification item | Value (Unit) |
|--------|---------------------------|---------------------------|
| Input | Input wire cross-section | 1.0...1.5 mm ² |
| | Input wire gauge. | 16...18 AWG |
| | Input wire strip length | 7...9mm |
| Output | Output wire cross-section | 1.0...1.5 mm ² |
| | Output wire gauge. | 16...18 AWG |
| | Output wire strip length | 7...9mm |

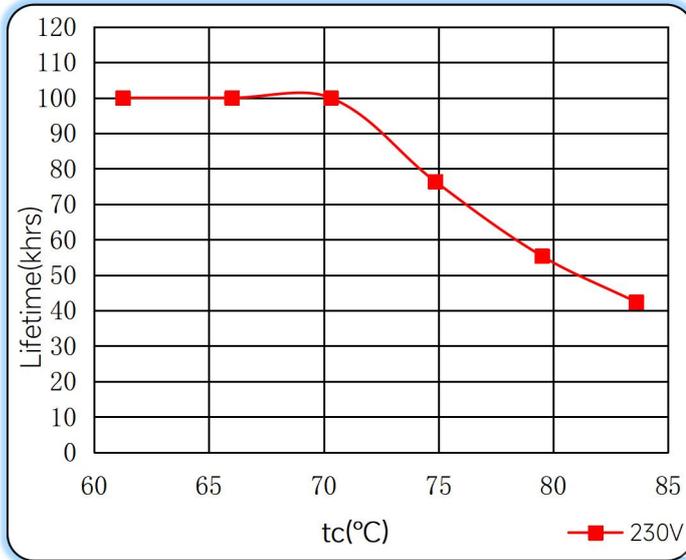
◆ Recommended wire

| Wire cross-section | Wire type |
|-----------------------------|-----------------|
| 2*0.5mm ² | H03VVH2-F 2core |
| 2*0.75mm ² | H03VVH2-F 2core |
| 1.5mm ² | CCC 08(RV-90) |
| 16AWG(1.25mm ²) | UL1015 |

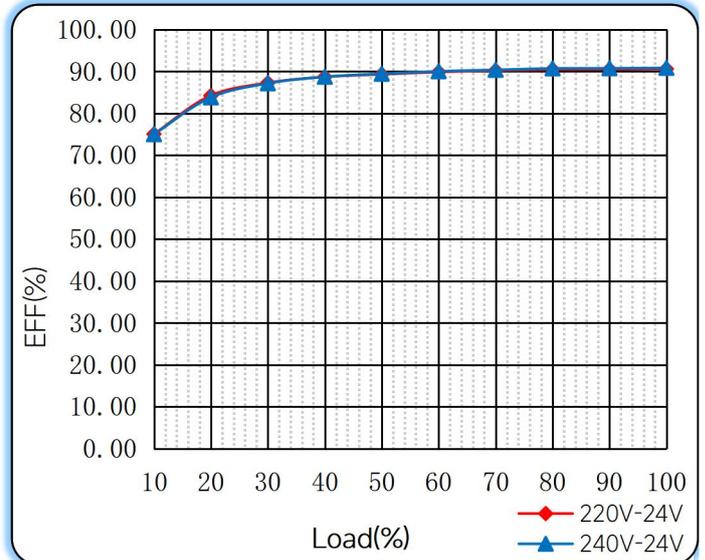
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for LS-45-24 DALI-2 DT8 LI1

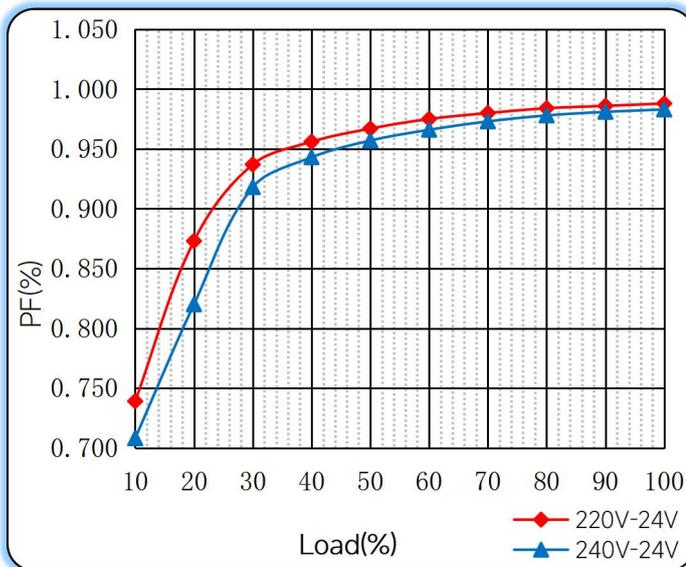
Lifetime vs. Temperature Curve



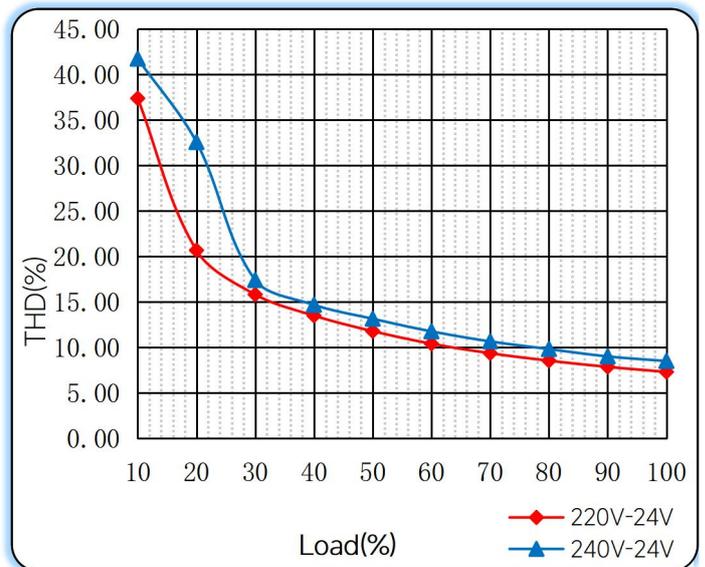
Efficiency vs. Load



Power Factor Characteristics



THD vs. Load



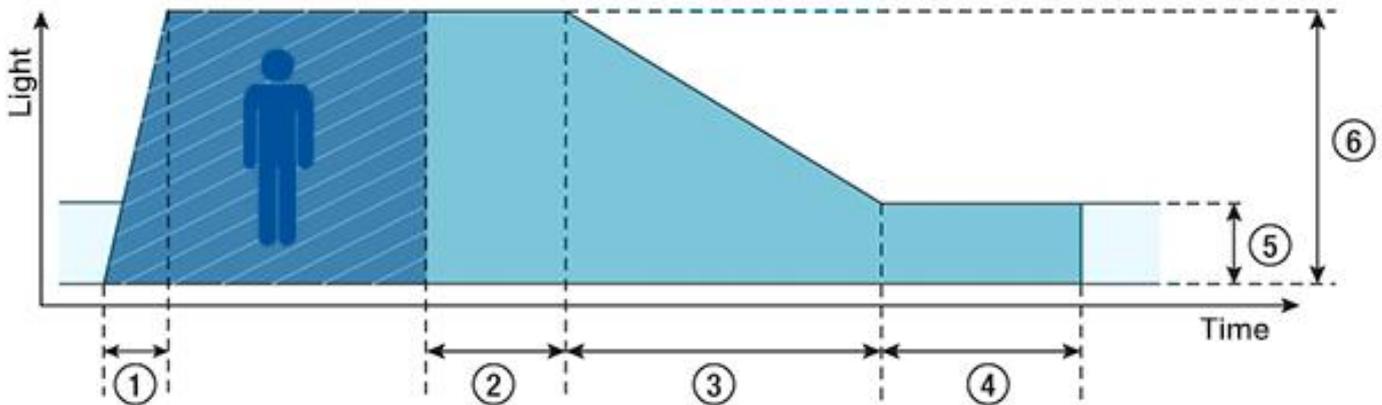
◆ Push dimming operation

| Action | Action duration | Function |
|-----------------------|-----------------|---|
| Short push | <0.5s | Turn on/off |
| Short push twice | <0.5s | LED on: Save current brightness level LED off: Delete saved level and turn on at 100% brightness |
| Short push five times | <3s | Quit Corridor mode |
| Long push | 0.5-14s | Dimming up or down |
| Long push | 15s-2mins | Sync all LEDs to be 100% brightness |
| Long push | >2mins | Enter Corridor mode - LED keep 100% brightness for 2mins. Then brightness will turn to be 10% within 32s if no action during 2mins 100% brightness. |

Note:

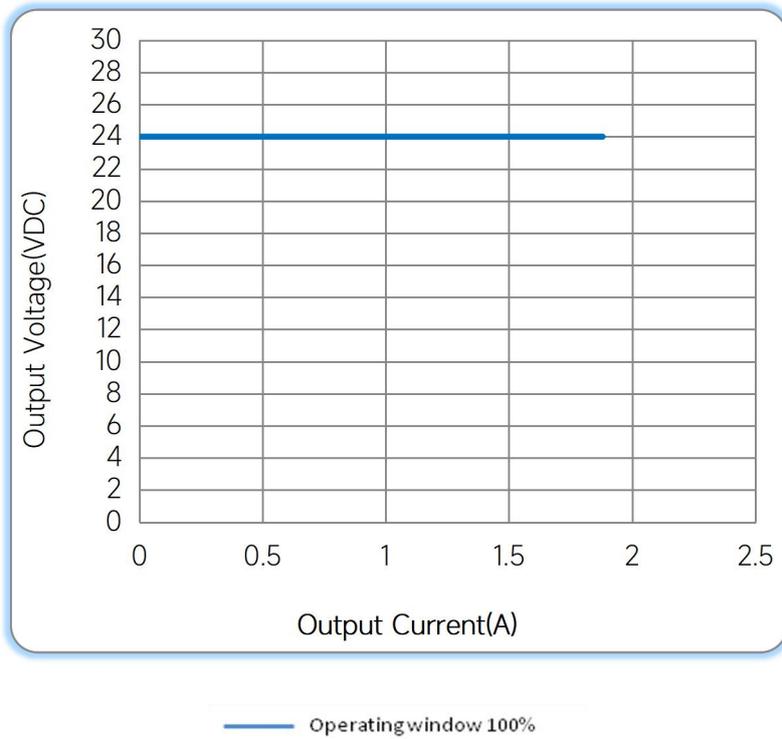
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ Corridor mode



- ◆ ① **Fade-in time(0.5s)**: the time that starts as soon as the presence of a person is detected. During the fade-in time the luminous intensity is faded up to the presence value.
- ◆ ② **Run-on time(120s)**: the time that starts as soon as the presence of a person is no longer detected. If the presence of a person is detected again during the run-on time the run-on time is restarted from zero. If no presence is detected during the run-on time the fade time is started as soon as the run-on time expires.
- ◆ ③ **Fade time(32s)**: the time during which the luminous intensity is faded from the presence value to the absence value.
- ◆ ④ **Switch-off delay (Never Off)**: the time during which the absence value is held before the lighting is switched off. Depending on the profile selected the switch-off delay may have different values or may not be defined.
- ◆ ⑤ **Absence value(default: 10 %)**: the luminous intensity when there is no person present.
- ◆ ⑥ **Presence value (default: 100 %)**: the luminous intensity when persons are present.

◆ Operating window



◆ Revision Updates

| ITEM | BEFORE | AFTER | VERSION | DATE |
|---------|--------|-------|---------|------------|
| Initial | | | A | 2024/07/12 |
| | | | | |

Remark: The final interpretation of the contents of the specification belongs to Astralux.

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