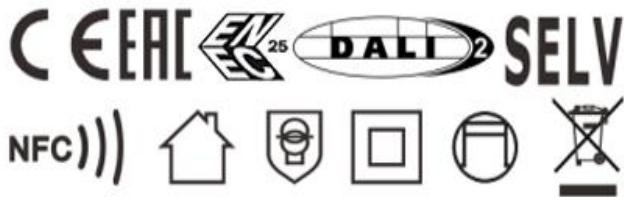

Constant Current Dimmable Driver
Model:SC42W300-1050CG-6X DALI DT8 NFC


| Model | Output Current (*Typical) | Input Current | Input Power | Output Power Range | PF | Efficiency | Output Voltage | No load Voltage |
|--|---------------------------|---------------|-------------|--------------------|------|------------|----------------|-----------------|
| SC42W300-1050CG-6W DALI DT8 NFC SC42W300-1050CG-6B DALI DT8 NFC SC42W300-1050CG-6G DALI DT8 NFC | 300mA | 0.07A | 15.4W | 3.00-12.60W | 0.86 | 85% | 10-42V | 59V |
| | 350mA | 0.08A | 17.9W | 3.50-14.70W | 0.87 | 86% | 10-42V | 59V |
| | 400mA | 0.09A | 20.5W | 4.00-16.80W | 0.88 | 87% | 10-42V | 59V |
| | 450mA | 0.10A | 22.8W | 4.50-18.90W | 0.89 | 87% | 10-42V | 59V |
| | 500mA | 0.11A | 25.3W | 5.00-21.00W | 0.90 | 87% | 10-42V | 59V |
| | 550mA | 0.12A | 27.8W | 5.50-23.10W | 0.91 | 87% | 10-42V | 59V |
| | 600mA | 0.14A | 30.4W | 6.00-25.20W | 0.92 | 89% | 10-42V | 59V |
| | 650mA | 0.15A | 32.5W | 6.50-27.30W | 0.93 | 89% | 10-42V | 59V |
| | 700mA | 0.16A | 35W | 7.00-29.40W | 0.94 | 90% | 10-42V | 59V |
| | 750mA | 0.17A | 37.5W | 7.50-31.50W | 0.94 | 90% | 10-42V | 59V |
| | 800mA | 0.18A | 40W | 8.00-33.60W | 0.95 | 90% | 10-42V | 59V |
| | 850mA | 0.18A | 40W | 8.50-34.00W | 0.95 | 90% | 10-40V | 59V |
| | 900mA | 0.2A | 42.4W | 9.00-36.00W | 0.96 | 90% | 10-40V | 59V |
| | 950mA | 0.2A | 44.7W | 9.50-38.00W | 0.96 | 90% | 10-40V | 59V |
| | 1000mA | 0.23A | 46.5W | 10.00-40.00W | 0.97 | 90% | 10-40V | 59V |
| | 1050mA | 0.24A | 48.8W | 10.50-42.00W | 0.97 | 90% | 10-40V | 59V |

*** Test result @230V, 50Hz, Full Load. Current setting @ 1mA-steps (NFC)**

1. Parameters

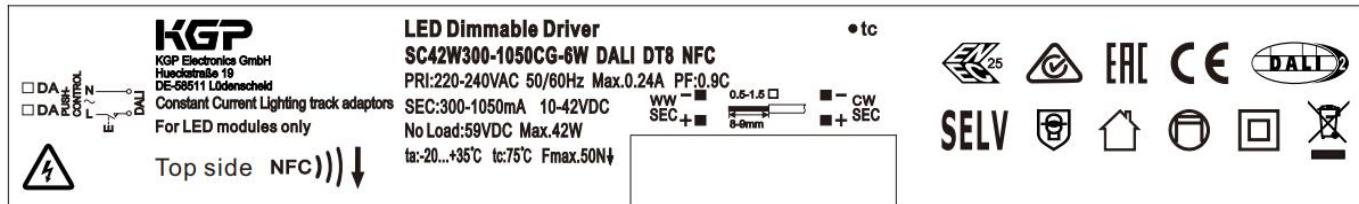
| Category | Item | Technical Norm |
|----------------|---------------------------|---|
| Features | Output Type | Constant Current |
| | Dimming Type | DALI-2 |
| | Output Features | Isolation |
| | IP Grade | IP20 |
| | Insulation Class | Class II |
| Input | Rated Input Voltage | 220-240VAC |
| | Range of Input Voltage | 198-264VAC or 180-280VDC |
| | Frequency | 50/60Hz |
| | Input Current | $\leq 0.24A$ (230VAC, full load) |
| | Input Power | $\leq 48.8W$ (230VAC, full load) |
| | Power Factor | ≥ 0.97 (230VAC, full load) |
| | THD | $\leq 15\%$ (230VAC, full load) |
| | Standby power(dim to off) | $\leq 0.5W$ @230VAC |
| Output | Output Voltage Range | 10-42VDC@300-800mA 10-40VDC@850-1050mA |
| | No Load Voltage | 59VDC Max. |
| | Output Current | 300mA -1050mA (Max. output) |
| | Max. Output Power | 42W |
| | Efficiency | $\geq 90\%$ (230VAC, full load) |
| | Current Ripple(< 120 Hz) | $\pm 5\%$ ($I_{max}-I_{min}$)/($I_{max}+I_{min}$) |
| | PstLM | ≤ 1 |
| | SVM | ≤ 0.4 |
| | Current Accuracy | $\pm 5\%$ |
| | Started Delay Time | $\leq 1S$ (230VAC, full load) |
| Control Method | Secondary PUSH dimming | Secondary PUSH dimming (Max. lead wire length : 20m,same port of DALI) |
| | PUSH-button | Max parallel connections qty for Push-dim 15 PCS |
| | DALI function DALI | DALI dimming (Max. lead wire length: 300m) logarithm or linear dimming curve selectable 251,252,253,CLO |
| | Dimming range | DALI dimming: 1%-100% ,DALI dimming to off. |
| | Current Interface | Near field communication (NFC) |
| | Adjustable output current | 1mA-steps (NFC) |
| | Short Circuit Protection | Auto Recovery |
| | Overload Protection | Auto Recovery |
| Protection | No-load Protection | Auto Recovery |
| | Insulation voltage | 3000V 5mA 60S between P-S |
| | Insulation resistance | $>100M\ \text{ohm}$ @ 500VDC |
| | Leakage current | $< 250\mu A$, I/P to O/P or I/P to PE @230V input |
| | Ta/Operation Temperature | -25....+35°C |
| | Ts/Storage Temperature | -35....+85°C |

| | | |
|--------------|--------------------------|--|
| | Tc/Enclosure Temperature | 75°C |
| | Humidity | 10%....90%RH |
| | Atmosphere | 86-108KPa |
| | Connection Method | Push-in Terminal |
| Construction | Installation | Independent |
| | SEC Wire preparation | 0.5-1.5mm ² |
| | Dimension | 238*31*45mm (L*W*H) |
| | Certification | CE, ENEC, SAA, UKCA, CB |
| Standards | Safety Standards | EN 61347-1:2015/A1:2021 EN 61347-2-13:2014/A1:2017 EN IEC 62384:2020 EN 62493:2015 AS61347.2.13:2018 AS/NZS61347.1:2016 Inc A1 BS EN 61347-1:2015/A1:2021 BS EN 61347-2-13:2014/A1:2017 BS EN 62493:2015 BS EN IEC 62384:2020 |
| | EMC Standards EMC | EN IEC 55015:2019 EN IEC 55015:2019/A11:2020 EN IEC 61000-3-2:2019/A1:2021 EN 61000-3-3:2013/A2:2021 EN 61547:2009 |
| | Performance | EN62384:2020 |
| | Surge | L-N/2KV |
| | RoHS | complied to 2011/65/EU |
| | Life Time | 50000h @Ta35°C |
| | Warranty | 5years ,F.R. < 10000ppm |
| | Noise | ≤ 24dB @Background noise ≤18dB , Interval≥15cm |
| | Remark: | 1. All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature. 2.LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again. 3.During the PUSH DIM test, the number of parallel connections must be less than 15PCS |

2. Connected quantities of different circuit Breaker

| TYPE | Connected quantities of different circuit Breaker | | | | | Input Voltage | Inrush Current | Time |
|--------|---|--------------------|--------------------|--------------------|------------------|---------------|----------------|-------|
| | current (A) | 10 | 13 | 16 | 20 | | | |
| | Installation wire diameter | 1.5mm ² | 2.5mm ² | 2.5mm ² | 4mm ² | | | |
| TYPE B | 9 | 12 | 15 | 18 | 23 | @230VAC | 65 | 200μs |
| TYPE C | 15 | 19 | 24 | 30 | 37 | | | |
| TYPE D | 24 | 31 | 38 | 47 | 59 | | | |

3. Label

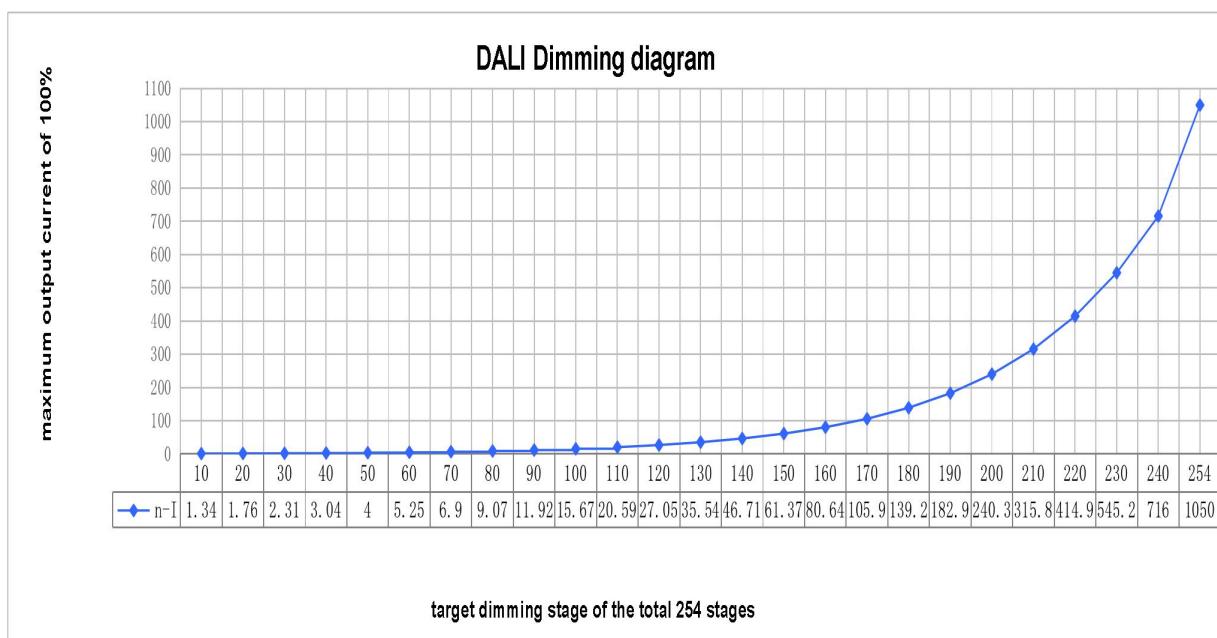


4. DALI dimming curve

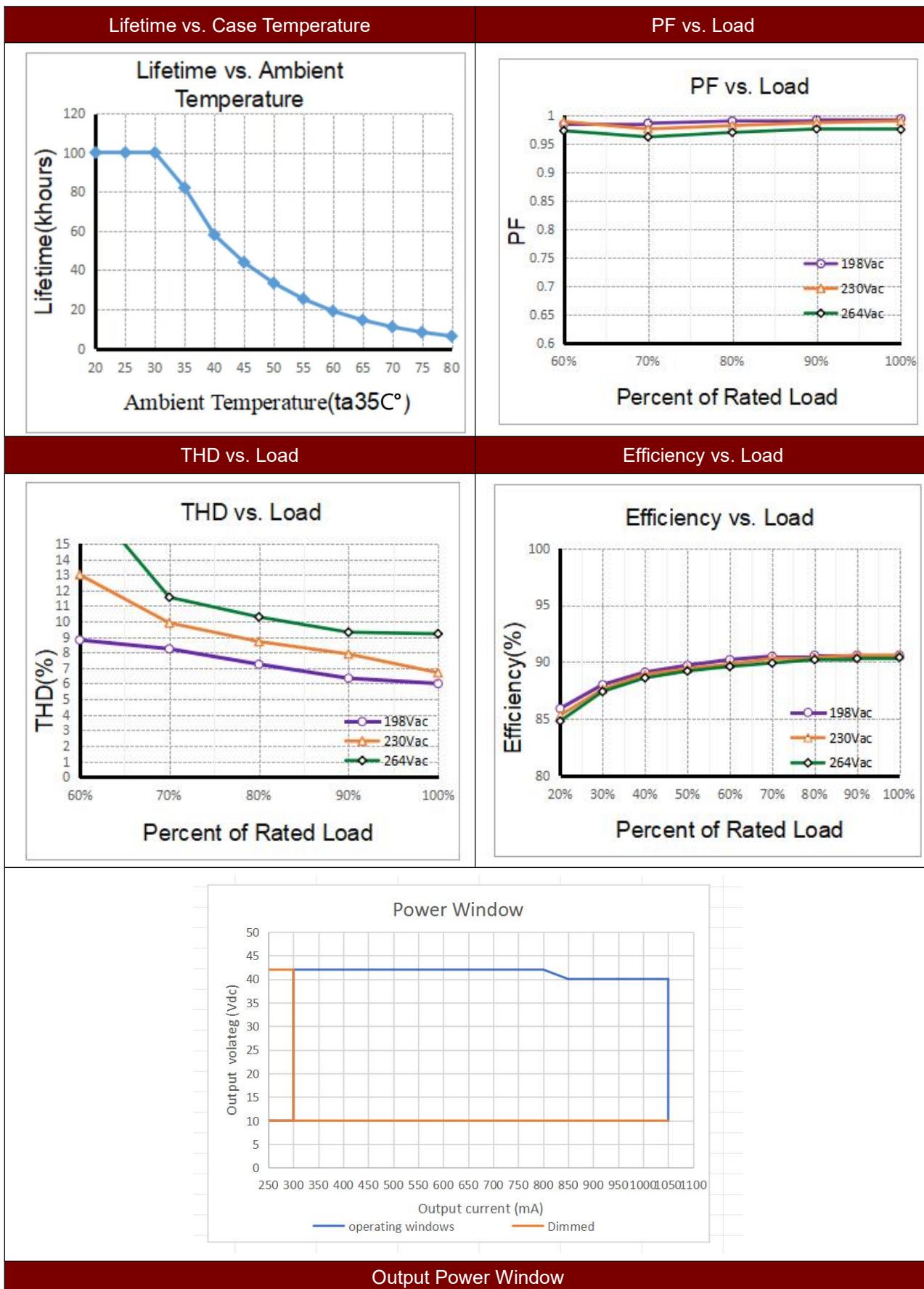
formula for DALI dimming.

$$X(n)=10^{\{[(n-1)/(253/3)]-1\}}$$

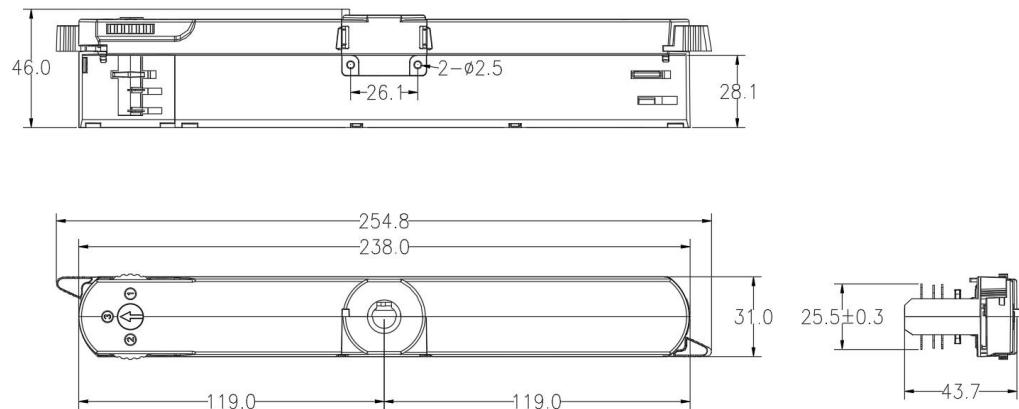
Here, n means the target dimming stage of the total 254 stages. X(n) means the percent of the maximum output current



5. Electrical values



6. Dimension



7. Packing information

| Packing way | Model | Colour | Carton L*W*H(mm) | Pcs/ Carton | Net weight/ Pcs(kg) | Net weight/ Carton(kg) | Gross weight/ Carton(kg) |
|-------------|---------------------------------|--------|-------------------|-------------|---------------------|------------------------|--------------------------|
| industrial | SC42W300-1050CG-6W DALI DT8 NFC | White | L420*W28 5*H220 | 40 | 0.161 | 6.44 | 7.74 |
| | SC42W300-1050CG-6B DALI DT8 NFC | Black | | | | | |
| | SC42W300-1050CG-6G DALI DT8 NFC | Grey | | | | | |

8. Wiring Diagram

Fig. A: Push Dimming

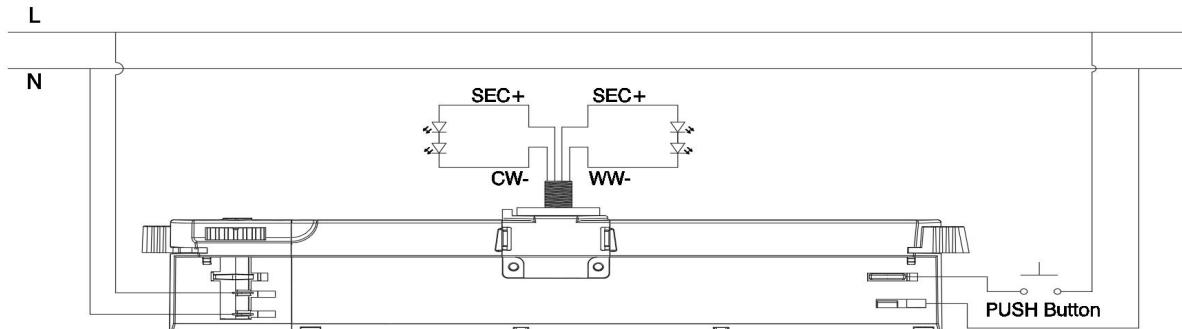
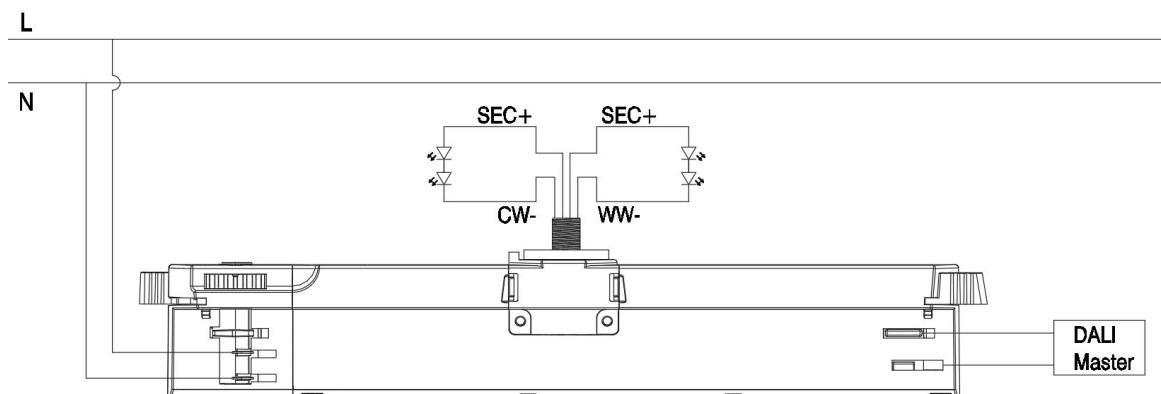


Fig. B: DALI Dimming



9. Suitable for following tracks

| Serial number | Brand | Track model | System |
|---------------|---------------|-------------|--------|
| 1 | Global | XTSC611 | 3P |
| 2 | A.A.G STUCCHI | 9000-1-ST | 3P |
| 3 | Unipro | T32B | 3P |
| 4 | PowerGEAR | Pro-D631R | 3P |

Remark:

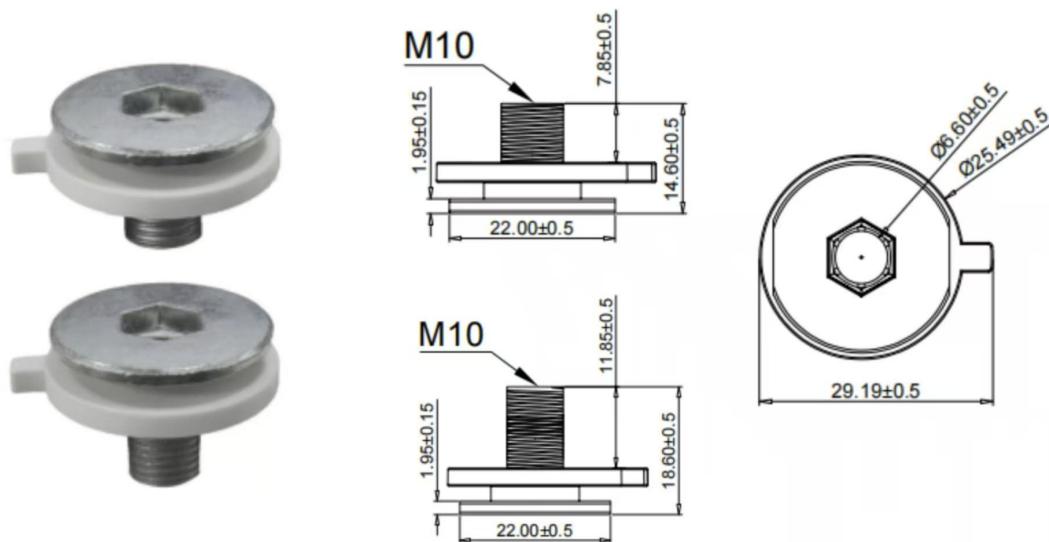
- 1.The model name is XTSC611 tracks, and its brand is Global.
- 2.The model name used is the 9000-1-ST track, and its brand is A.A.G STUCCHI.
- 3.The model name is T32B tracks, and its brand is Unipro.
- 4.The model name is Pro-D631R tracks, and its brand is PowerGEAR.

10. Lamp Screw Type

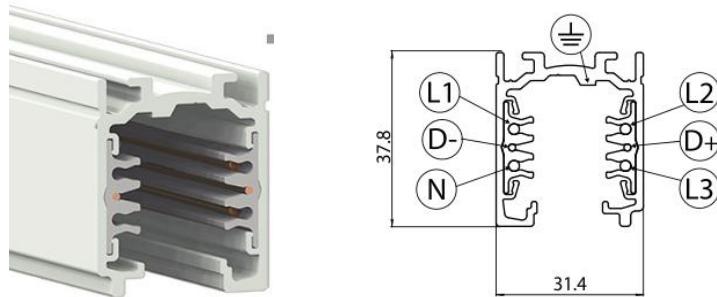
- Optional threaded sleeve for luminaire mounting
- Suitable for M10x1x8 threaded nut
- Additional mounting equipment,e.g.M10x1x12
- aluminium, black, white
- further on request

Ordering data

| Type | Colour | Qty/ctn | Weight/pcs |
|----------|--------|---------|------------|
| M10x1x8 | White | 2500 | 9.31 |
| | Black | 2500 | 9.31 |
| | Grey | 2500 | 9.31 |
| M10x1x12 | White | 2500 | 10.01 |
| | Black | 2500 | 10.01 |
| | Grey | 2500 | 10.01 |



11. Phase track light rail specification:



12. Wiring instructions

- All connections must be kept as short as possible to ensure good EMI behaviour
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Advice the maximum length of output wires is 3 m
- Secondary switching is not permitted (Except for constant voltage)
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metals parts, metal cable clips, louver, etc.)
- Hot plug-in is not supported due to residual output voltage of > 0 V up to mains voltage. Danger to life.
- When connecting an LED load, restart the device to activate the LED output.
- This can be done via mains reset or via interface (DALI, DSI, switch DIM).

13. Replace LED module

- Mains off
- Remove LED module
- Wait for 30 seconds
- Connect LED module again
- Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs

14. NFC instructions

REMARK:

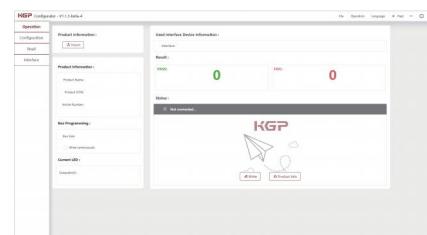
You are advised to set DALI parameters when the power supply is not enabled

Make sure your phone has NFC capability and has it activated.

NFC Reader (optional)

Feature:

Easily on-line read a output current from a driver or write a new current data to a driver throughout KGP NFC reader within few seconds.



| Product | Description | Interface | Matching antenna | Zhaga approval | Usage |
|-------------------|--|------------------|-------------------|----------------|------------------------------------|
| ID CPR30+ | Desktop programmer | USB | Integrated | Yes | Single Programming on Desktop |
| ID ISC.PRH101-USB | Handheld programmer | USB | Integrated | Yes | Single Programming by Handheld |
| ID ISC.MR102-USB | Middle range programmer, for connecting external antenna | USB | RF-MANT12786 | Yes | Single Programming on Product line |
| ID ISC.LR1002-E | Long range programmer, for connecting external antenna | USB,RS232,TCP/IP | ID ISC.ANT310/310 | Yes | Multi Programming System |

APP NFC

Feature:

Quickly check output current of a LED driver simply via iPhone smart phone, as well as, correct or setup a new current data immediately with no extra equipment at any job site.

ICON



Main



Download method

1. Scan the QR code to download



2. On your iPhone, search for KGP NFC in APP Store to download it



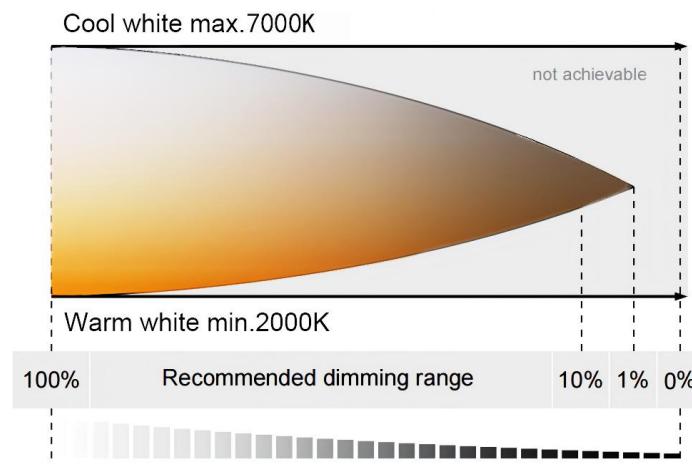
KGP NFC

iPhone smartphones with NFC can be downloaded and used directly

An iPhone smartphone without NFC requires the following devices to use it

| Product | Description | Interface | Matching antenna | Zhaga approval | Usage |
|----------------------|------------------------------|------------------------------|------------------|----------------|---|
| ID ECCO Smart HF-BLE | Handheld wireless programmer | USB,Bluetooth LE V4.2 & V5.0 | Integrated | Yes | Handheld programming, installation and maintenance work |

15. Function - Tunable White



The driver has 2 output channels used to control the dimming level
And the color temperature (cool white and warm white).
It respond to DALI-2 DT8 commands.

16. Functions

16.1 OEM Identification

The OEM (Original Equipment Manufacturer) can set his own identification number.

DALI Part 251: Memory bank 1 extension.

16.2 OEM GTIN

The Original Equipment Manufacturer (OEM) can set his own Global Trade Item Number (GTIN).

DALI Part 251: Memory bank 1 extension.

16.3 Luminaire data

This function provides the asset management with accurate data about the luminaire.

DALI Part 251: Memory bank 1 extension.

DALI Part 253: Luminaire maintenance data.

16.4 LED current

The LED output current must be adapted to the connected LED module.

The value is limited by the current range of the respective device.

The output current of the LED driver can be adjusted in a certain range.

Adjustment is done by KGP Configurator via NFC.

16.5 Switch DIM

Integrated Switch DIM function allows a direct connection of a push button for dimming and switching.

Brief push (< 0.6 s) switches LED driver ON and OFF. The dim level is saved at power-down and restored at power-up.

When the push button is held, LED modules are dimmed. After repush the LED modules are dimmed in the opposite direction.

In installations with LED drivers with different dimming levels or opposite dimming directions (e.g. after a system extension), all LED drivers can be synchronized to 50 % dimming level by a 10 s push.

Use of push button with indicator lamp is not permitted.

16.6 Corridor FUNCTION

With the Corridor FUNCTION and a commercially available motion detector, it is easy to adapt the lighting in one area to its use.

That is, when the area is entered by a person, the lighting dims instantly to the desired brightness and is available in full strength.

After the area is left by the person, the brightness dims slowly to a smaller value or switches off completely.

The individual parameters of the desired profile, such as brightness values or delay times, can be adjusted flexibly and individually.

16.7 Constant Light Output (CLO)

With this function the light output of the LED module can be kept equal over the lifetime.

The light output of an LED module reduces over the course of its lifetime.

The Constant Light Output (CLO) function compensates for this natural decline by constantly increasing the output current of the LED driver throughout its lifetime.

CLO shall be achieved by limitation of the LED current at the commissioning of the LED driver and providing a linear interpolation of the current over the time, depending on the data points given by the user.

The user has to insert up to eight pairs of data (time, level).

The output curve is the result of connecting the user data points linear.

Detailed description for CLO see product manual.

The minimal CLO starting point is limited by the smallest output current of the LED driver.

16.8 Dimming curve

DALI: The desired dimming behaviour is selected via two different dimming curves (logarithmic or linear). DALI: The desired dimming behaviour is selected via two different dimming curves (logarithmic or linear).

The default setting of the dimming behaviour is logarithmic.

16. REVISION HISTORY

| DATE | REV | Modification details |
|------------|------|--------------------------|
| 2023-03-18 | V1.0 | Initial release. |
| 2024-04-26 | V1.1 | Add color temperature |
| 2024-04-30 | V1.2 | Update color temperature |
| 2024-05-08 | V1.3 | Update parameters |
| 2024-05-10 | V1.4 | Update nipple dimension |
| 2024-05-14 | V1.5 | Update ta and label info |
| 2024-05-21 | V1.6 | Update format |
| 2024-12-31 | V1.7 | Update nipple |