SC42W300-1050CG-6X DALI DT8 NFC

Constant Current Dimmable Driver

Model:SC42W300-1050CG-6X DALI DT8 NFC

Model	Output Current	Input Current	Input Power	Output Power Range	PF	Efficiency (*Typical)	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

KGP Electronics GmbH
Hueckstraße 19
DE-58511 Lüdenscheid

	Range of Input Voltage	198-264VAC or 180-280VDC
	Frequency	50/60Hz
	Input Current	≤0.24A (230VAC，full load)
	Input Power	≤48.8W (230VAC，full load)
	Power Factor	≥0.97 (230VAC，full load)
	THD	≤15% (230VAC，full load)
	Standby power(dim to off)	≤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	≥90% (230VAC，full load)
	Current Ripple(< 120 Hz)	±5% (Imax-Imin)/(Imax+Imin)
	PstLM	≤1
	SVM	≤0.4
	Current Accuracy	±5%
	Started Delay Time	≤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% ,Dim to off .
	Suitable for emergency escape lighting systems acc	The emergency function of this product is turned off
	Current Interface	Near field communication（NFC）
	Adjustable output current	1mA-steps (NFC)
Protection	Short Circuit Protection	Auto Recovery
	Overload Protection	Auto Recovery
	No-load Protection	Auto Recovery
	Insulation voltage	3000V 5mA 60S between P-S
	Insulation resistance	>100M ohm @ 500VDC
	Leakage current	I/P to O/P <0.7mA
Environment	Ta/Operation Temperature	-20….+35℃
	Ts/Storage Temperature	-25….+85℃
	Tc/Enclosure Temperature	75℃
	Humidity	10%....90%RH
	Atmosphere	86-108KPa
Construction	Connection Method	Push-in Terminal
	Installation	Independent
	SEC Wire preparation	0.5-1.5□
	Dimension	238*31*45mm (L*W*H)

Standards	Certification	CE ENEC SAA EAC
	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 IEC 61547:2023
	Performance	EN62384:2020
	Surge	L-N/2KV
Others	RoHS	complied to 2011/65/EU
	Life Time	50000h @Ta35℃
	Warranty	5years ,F.R. < 10000ppm
	Noise	≤ 24dB @Background noise ≤18dB , Interval≥15cm

Remark:

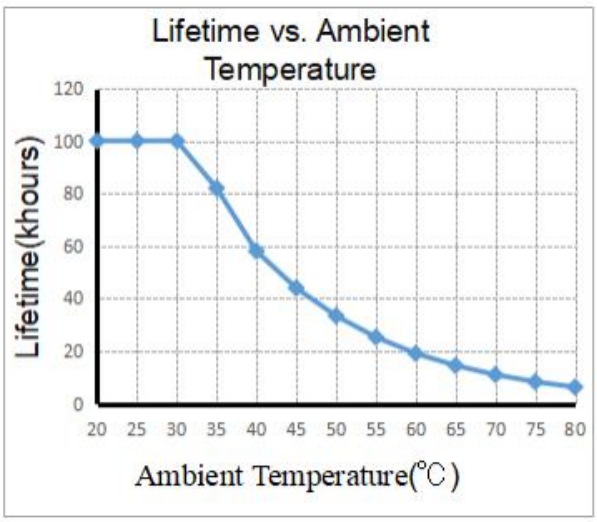
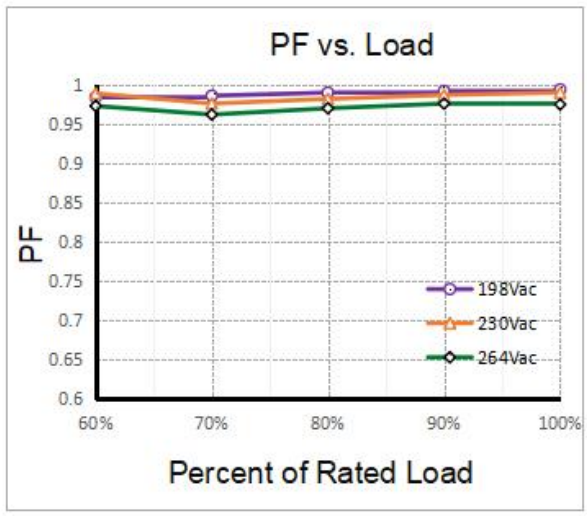
1. All Parameters, if not specified, are measured at 230VAC/50Hz and 25℃ ambient temperature.
2. LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
3. During the PUSH DIM test, the number of parallel connections must be less than 15PCS

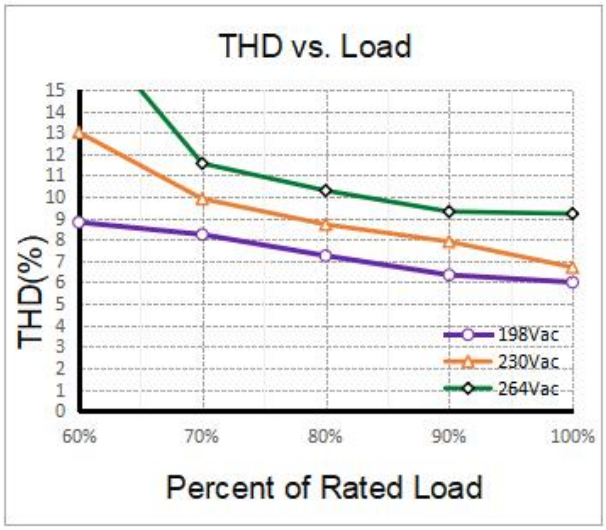
2. Connected quantities of different current Breaker

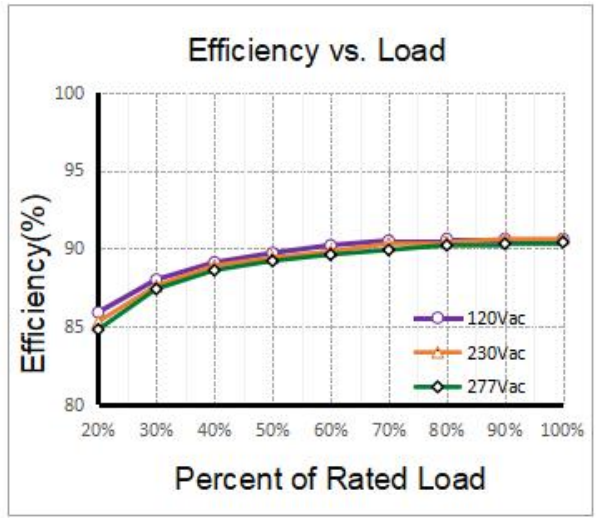
TYPE	Connected quantities of different current Breaker						Input Voltage	Inrush Current (A)	Time
	current (A)	10	13	16	20	25			
	Installation wire diameter	1.5mm²	2.5mm²	2.5mm²	4mm²	4mm²			
TYPE B		9	12	15	18	23	@230VAC	65	200US
TYPE C		15	19	24	30	37			
TYPE D		24	31	38	47	59			

3. Label

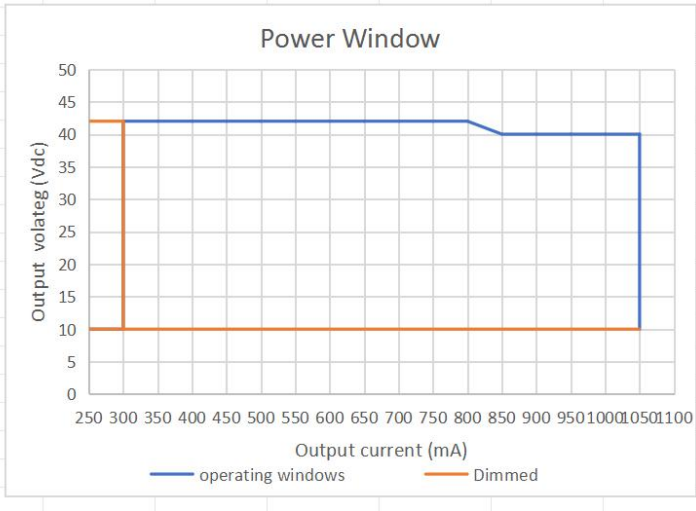
4. Graph

Lifetime vs. Ambient Temperature	PF vs. Load
	
THD vs. Load	Efficiency vs. Load





Output Power Window



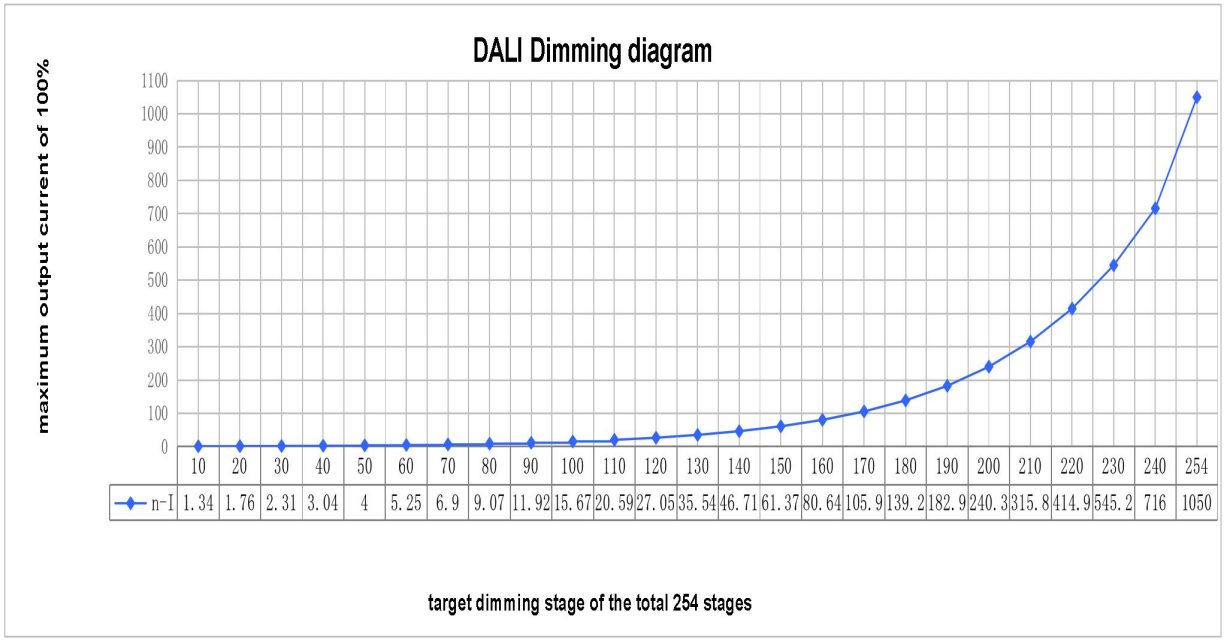
5. DALI dimming curve

formula for DALI dimming.

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

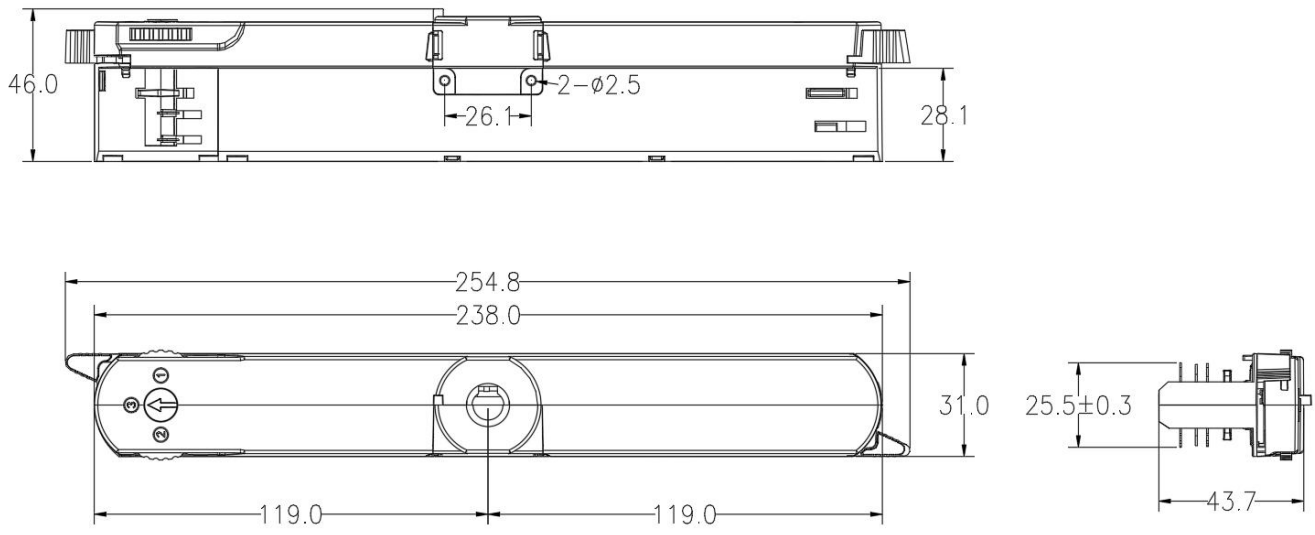
Here,n means the target dimming stage of the total 254 stages.

X(n) means the percent of the maximum output current



	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	254
n-I	1.34	1.76	2.31	3.04	4	5.25	6.9	9.07	11.92	15.67	20.59	27.05	35.54	46.71	61.37	80.64	105.9	139.2	182.9	240.3	315.8	414.9	545.2	716	1050

6. Dimension



7. Wiring Diagram

Fig. A: Push Dimming

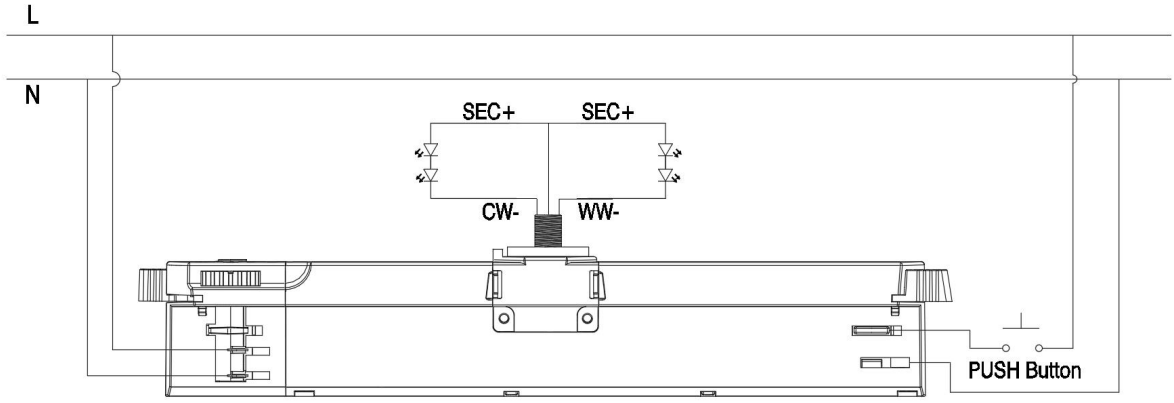
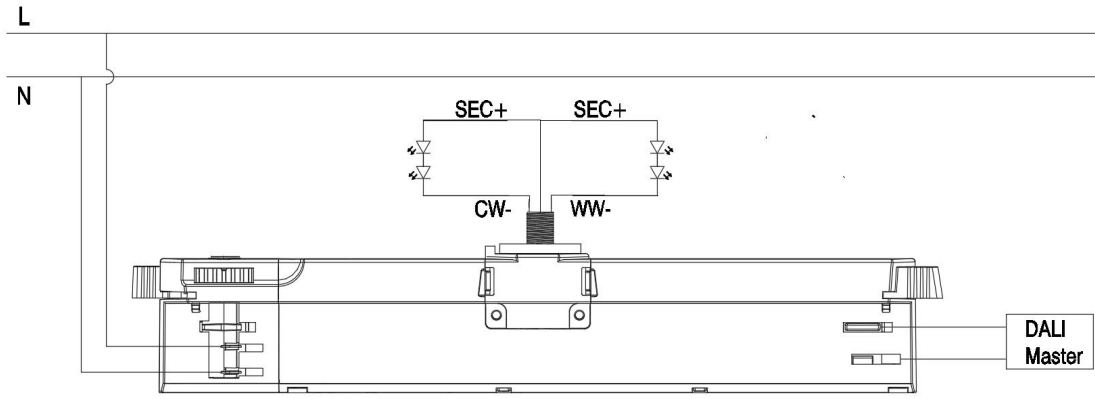


Fig. B: DALI Dimming



1. The factory default brightness is at 100%.
2. Up to 15 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

8. Packing information

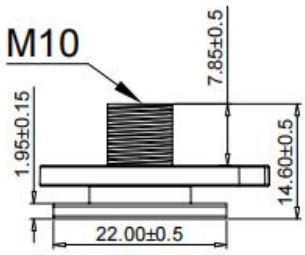
Packing way	Model	Colour	Carton L*W*H(mm)	Pcs/ Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight/ Carton(kg)
industrial	SC42W300-1050CG-6 W DALI DT8 NFC	White	L420*W285 *H220	40	0.161	6.44	7.74
	SC42W300-1050CG-6B DALI DT8 NFC	Black					
	SC42W300-1050CG-6 G DALI DT8 NFC	Grey					

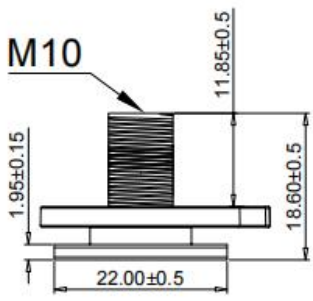
9. Lamp Screw Type

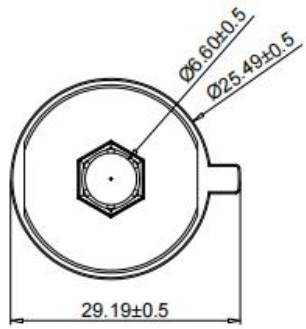
- Optional threaded sleeve for luminaire mounting
- Suitable for M10x1x8 threaded nut
- Additional mounting equipment,e.g.M10x1x12
- gray, black, white
- further on request

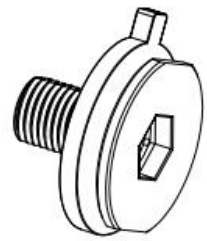
Ordering data

Type	Colour	Article number	Qty/ctn	Weight(g)/pcs
M10x8	White	ZN	PC	5.47
	Black	ZN	PC	5.47
	Gray	ZN	PC	5.47
M10x12	White	ZN	PC	6.13
	Black	ZN	PC	6.13
	Gray	ZN	PC	6.13



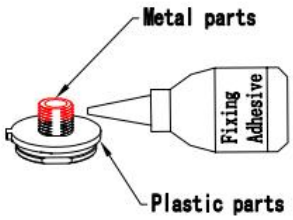




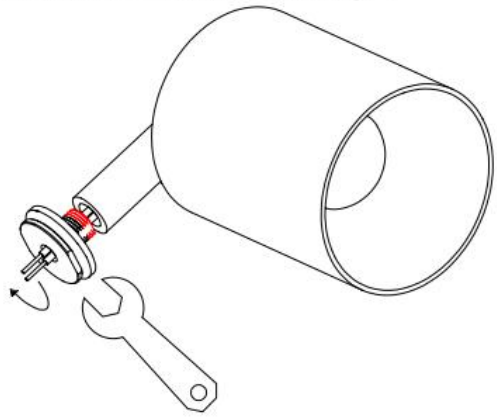


Wiring Diagram

Note: If the luminaire connector requires the use of fixing adhesive (ensure to use fixing adhesive that does not cause chemical reactions with PC material leading to cracking), the amount should be limited to half of the thread length. It must not drip or seep onto the plastic parts, as indicated in the red area of the diagram below.



①.he wire passes through the nipple and is securely fastened to the fixture. (The connection must be firm and resistant to reverse loosening) .



10. Suitable for following tracks

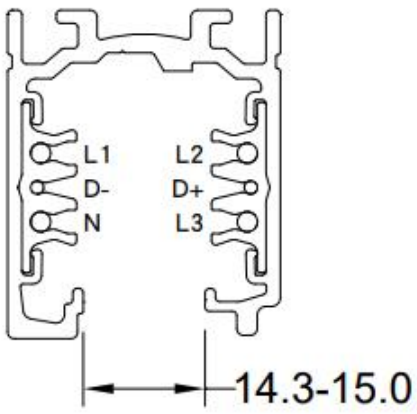
Serial number	Brand	Track model	System
1	Global	XTSC611	3P
2	A.A.G STUCCHI	9000A-2-ST	3P
3	PowerGEAR	Pro-D631R	3P
4	UNIPRO	TC312W	3P

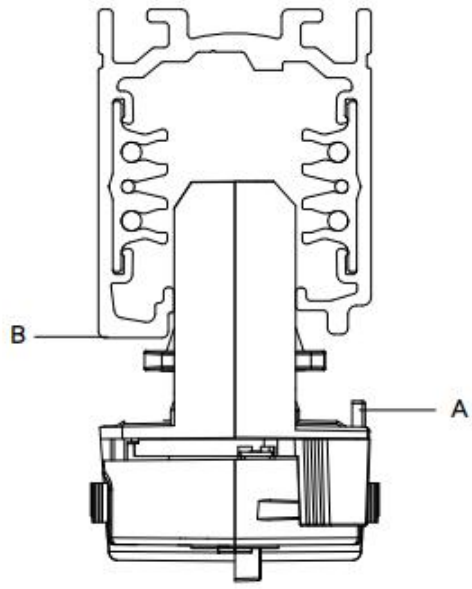
Remark:

1. The model name is XTSC611 tracks, and its brand is Global.
2. The model name used is the 9000A-2-ST track, and its brand is A.A.G STUCCHI.
3. The model name is Pro-D631R tracks, and its brand is PowerGEAR.
4. The model name is TC312W tracks, and its brand is UNIPRO.
5. If other brands are suitable, please communicate and consult first

KGP does not guarantee the compatibility of the tracks and the track-adapter, because manufacturing tolera nces of the tracks or changes made at the tracks by the manufacturer could affect the compatibility between the tracks and the adapter.

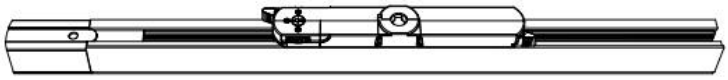
11. Phase track light rail specification:





The adaptor shall be given that the use is limited to the track system specified.

12. Lighting track adapter and rail system installation diagram：



13. 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).

14. 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

15. Functions

15.1 OEM Identification
The OEM (Original Equipment Manufacturer) can set his own identification number.
DALI Part 251: Memory bank 1 extension.

15.2 OEM GTIN

The Original Equipment Manufacturer (OEM) can set his own Global Trade Item Number (GTIN).
DALI Part 251: Memory bank 1 extension.

15.3 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.

15.4 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.

15.5 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.

15.6 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.

15.7 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.

15.8 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.
2024-11-15	V1.1	Updating guide bar information
2024-12-26	V1.2	Matching rail bar models added.
2025-07-02	V1.3	Update the lifespan curve chart
2025-11-11	V1.4	Update the input current and Ta temperature