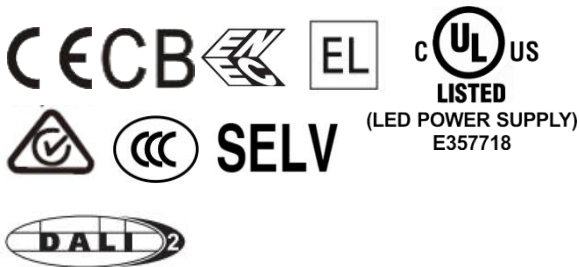


42W DALI + 0-10V+PUSH Dimming power supply



■ Approve

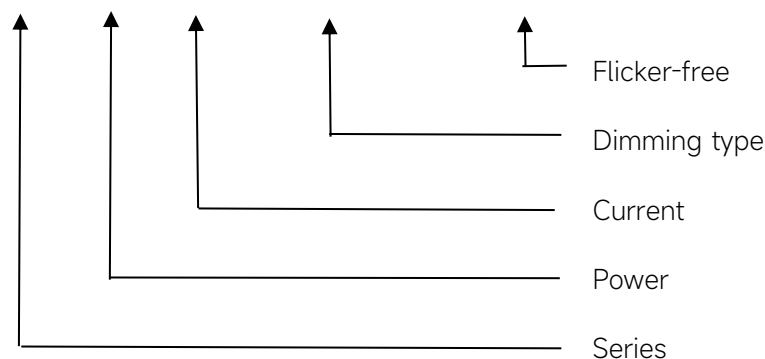


◆ Description

FLX-42-1050 DALI-2 0-10 LN PRO is a 42W constant current LED driver with 150 to 1050mA output current and a forward voltage range from 2.5 to 49Vdc. The output current is adjustable by NFC. With its dimensions from 97 x 43 x 30 mm. It is easy to integrate in LED Panel and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

FLX-42-1050 DALI-2 0-10 LN PRO



Features

- For luminaries of protection Class II, SELV, Built-in/Independent (With side caps)
- Input Voltage: 100-240VAC, 176-280VDC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: > 0.95
- Efficiency: 89%@full load,230VAC; 87%@Full load,120VAC
- Support DALI-2,Push Dimming,0-10V
- Suitable for emergency lighting acc. to EN 50172
- EOfi=15%
- DALI maintainace(Part 251,252,253)
- 5 years warranty

Applications

- LED panel, LED down light
- LED spot light

◆ Specification

Output	Constant Current (mA)	150-800mA	801-950mA	951-1050mA
	Voltage Range(VDC)	2.5-49VDC	2.5-44VDC	2.5-40VDC
	Unload voltage Max.(VDC)	59VDC		
	Current Accuracy	±7%@150-300mA;±5%@300-700mA;±3%@700-1050mA		
	Output HF current ripple(≥1KHz)	±10%		
	Output LF current ripple(≤120Hz)	±3%		
	SVM	≤0.1@Full Load		
	P _{st}	≤0.05@Full Load		
	Efficiency(Typ.)	89%@full load,230VAC; 87%@Full load,120VAC		
	EOFI	15%		
Input	Rated input voltage(VAC)	100-240VAC		
	Range of input voltage(VAC)	90-277VAC		
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition		
	Rated input voltage(VDC)	220-240VDC		
	Range of input voltage(VDC)	176-280VDC		
	Frequency(Hz)	0/50/60 Hz		
	Displacement factor	≥0.9@full load		
	Power Factor(Typ.)	0.95@full load		
	Input Current max	0.55A max		
	Start-up time	< 0.8S		
	Switch over time(AC/DC mode)	< 0.5S		
	Standby Power	≤0.5W, @230Vac		
	Network Standby Power	≤0.5W,@230Vac		
	THD (Typ.)	< 10%@full load		
	Dimming	YES		
Dimming	Dimming mode	DALI-2 (IEC 62386-101,102,207,Part 251,252,253) & Push Dimming (Corridor Function) & 0-10V		
	Dimming depth	5mA@≤500mA; 1%@ > 500mA		
	Dimming current range (DALI-2 & Push)	1~100%		
	Dimming current range (0-10V)	0,1~100%		
	Over Load Protection	103-120% YES/Latch off		
Protection	Over Voltage Protection	59VDC YES/Latch off		
	Short circuit Protection	YES/Latch off		
	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	85°C
	Storage Temperature	-40°C~+80°C
	Life time	> 50000h,@TC=80°C,120/230VAC
	Ripple&Noise	≤25dB(A)@20cm
Surface	Dimension	97 x 43 x 30 mm(With side caps) : 131X43X30mm
	material	PC
Standards	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;AS/NZS 61347- 1, AS/NZS 61347-2- 13;AS 61347.2.13;EN62384;UL 8750; UI1310
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN55015, EN61000-3-2, EN61000-3-3, EN61547,EN 62493;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, EN61547;FCC PART 15B
	ErP	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	1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature. 2.Ripple & Noise are measured at 20MHz of bandwidth. 3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered. 4.DALI protocol comprises 16 groups and 64 addresses.Up to 32 drivers can perform the PUSH dimming at the same time when utilizing one push button. 5.EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications. 6.All Eaglerise power supply are complied with EMI regulations. Since they are belong to component and will be installed inside system enclosure. When they are integrated into a system, the EMI characteristics of the system must be re-verified again.	

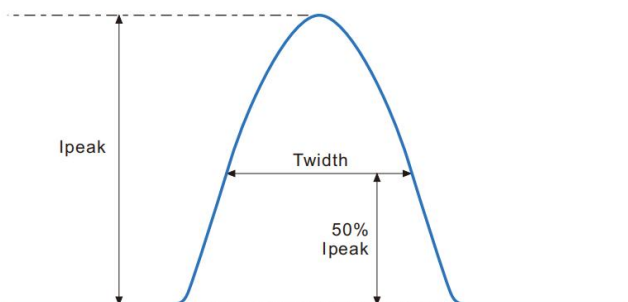
◆ Parameter

Number	Output			
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	150-800mA	2.5-49VDC	59	39.2
2	801-950mA	2.5-44VDC	59	41.8
*3	951-1050mA	2.5-40VDC	59	42

* Factory default

◆ Inrush Current

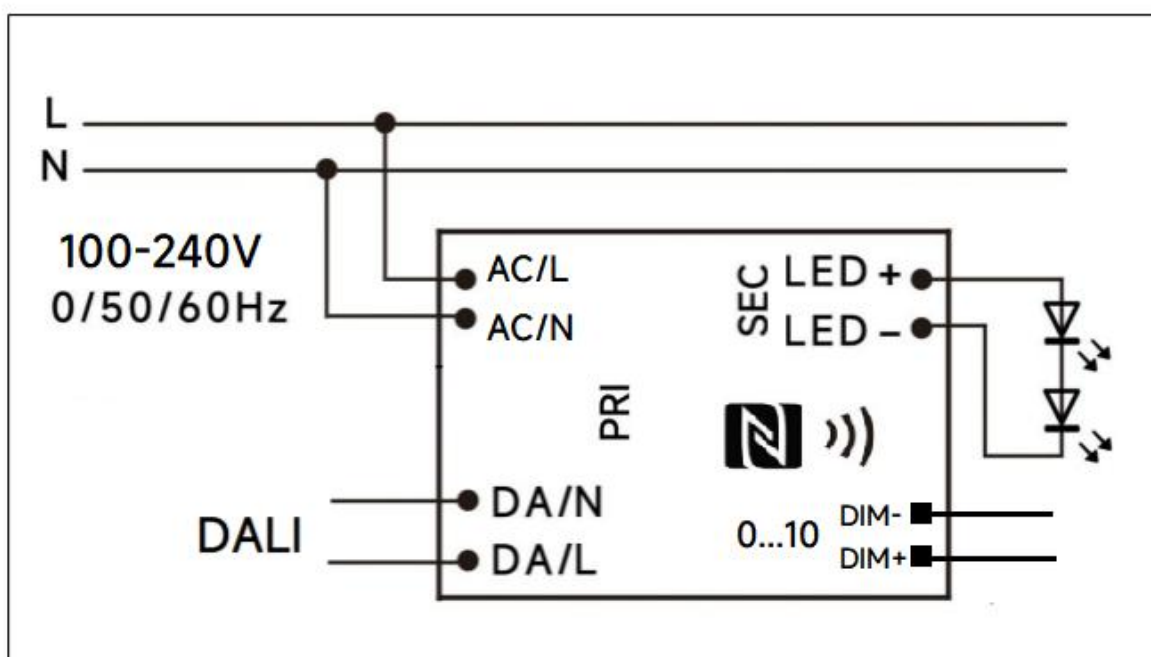
I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
11A	26.4μs	14pcs	23pcs	29pcs	14pcs	23pcs	29pcs



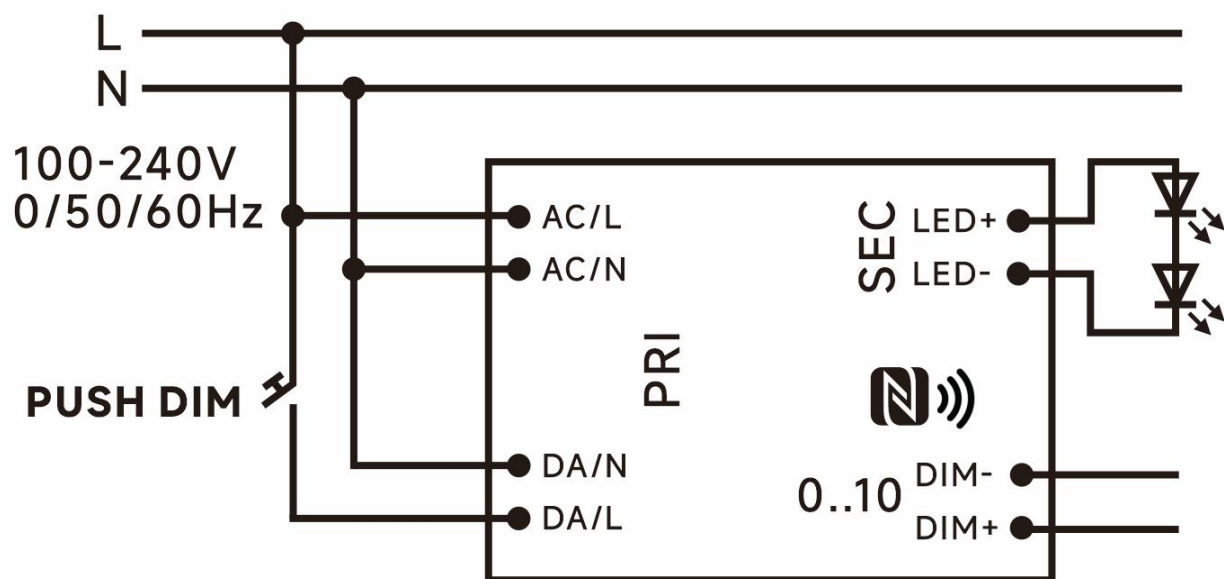
Remarks:

- 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.

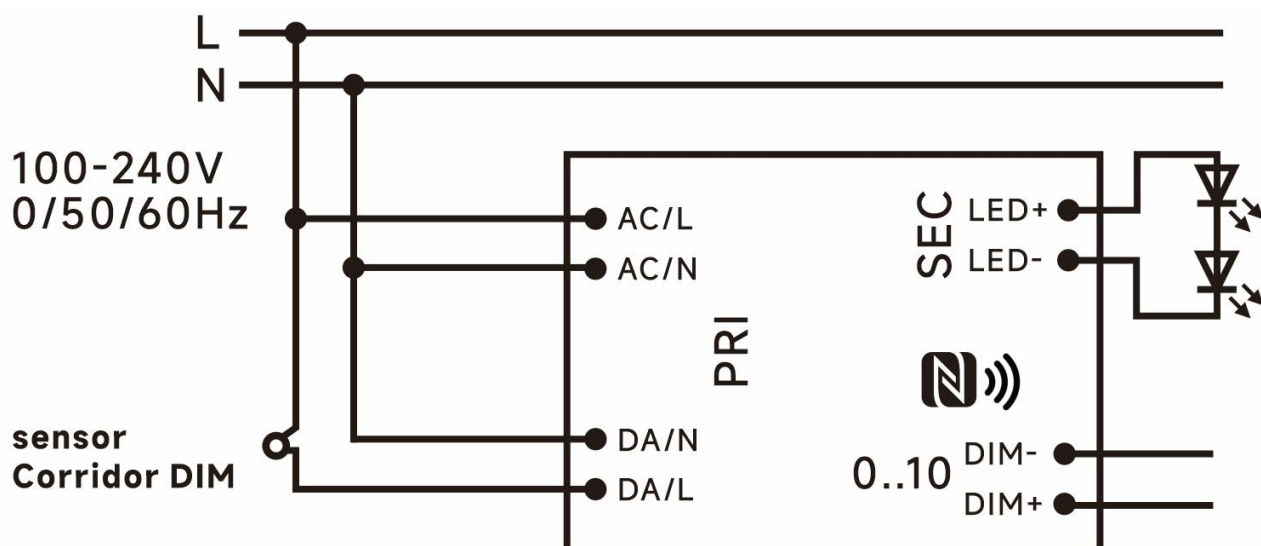
◆ Wiring diagram



DALI dimming application

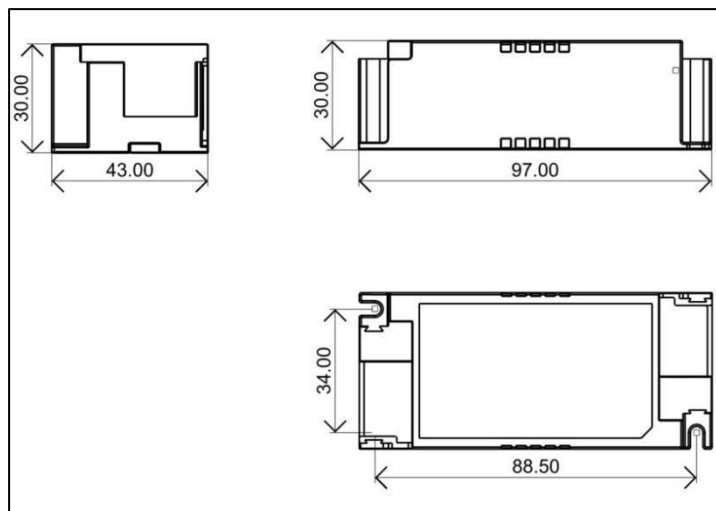


PushDIM dimming application

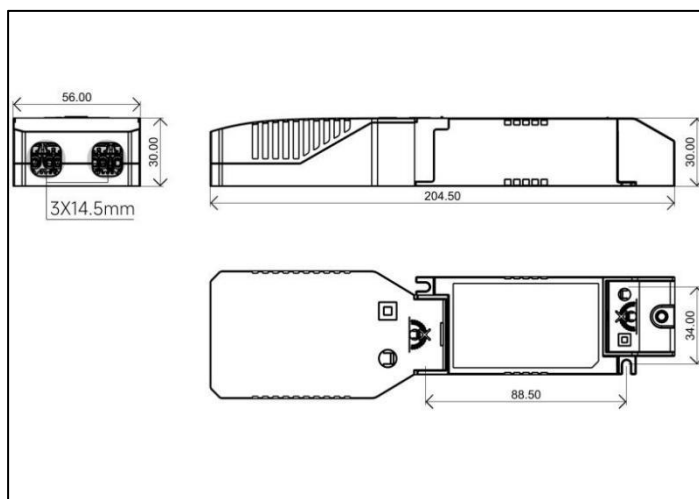
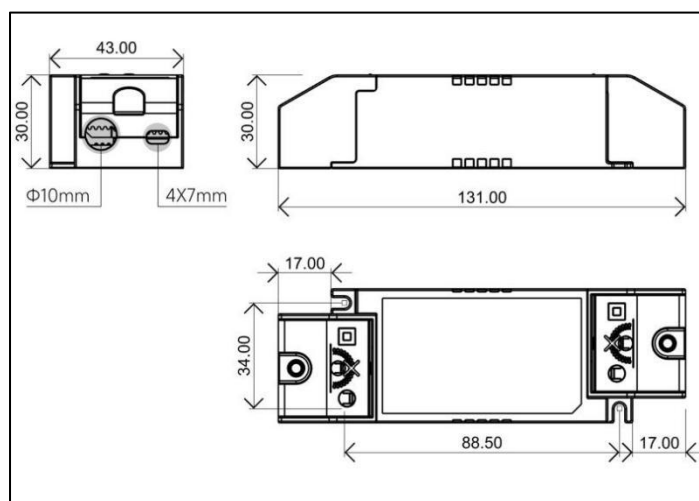


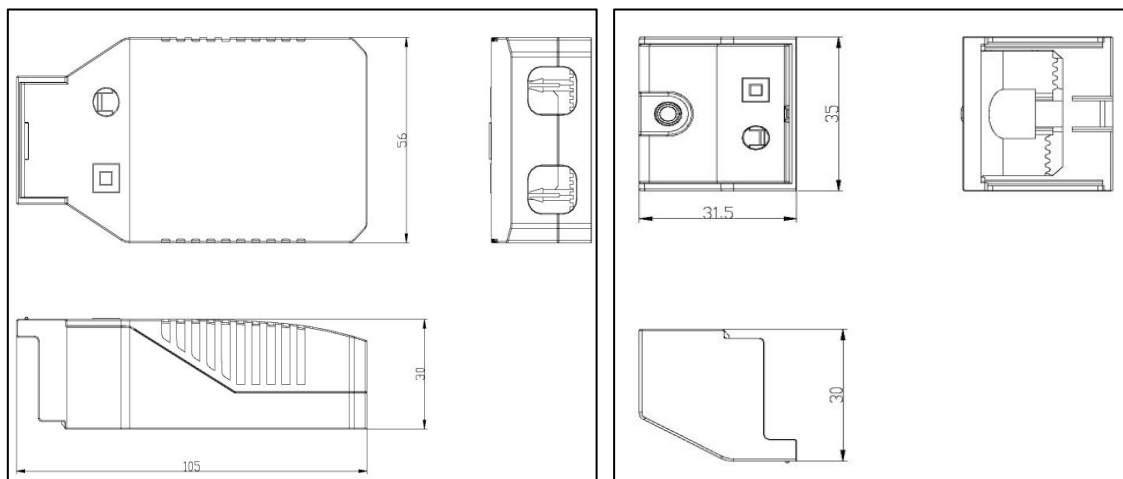
Corridor DIM dimming application

◆ 2D diagram



With side caps





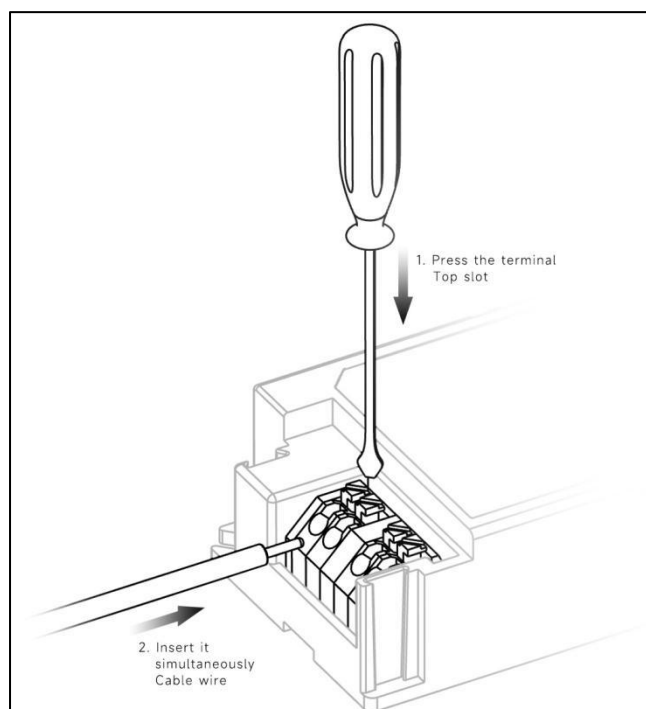
A caps

B caps

132021T0033-1	Bottom,Big,White
132021T0034-2	Top,Big,Grey
132021T0079-2	Top,Big,White
126016T0009	5P Terminal
132038T0046	Crimp Plate

132021T0197	Small, Grey ,with "Don't Cover" mark
132021T0181	Small, white,with "Don't Cover" mark
1270100280	Screws

Terminal



◆ Wiring & Connections

Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ² (With side caps: 0.75...1.5 mm ²)
	Input wire gauge.	16...20 AWG (With side caps: 16...22 AWG)
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

◆ Recommended wire

Small side cap of small hole	Wire type
0.5mm ²	H03VVH2-F 2 core&3 core H03VV-F 2 core&3 core
0.75mm ²	H03VVH2-F 2 core&3 core H03VV-F 2 core&3 core H05VV-F 2 core
1.0mm ²	H05VVH2-F 2 core
1.5mm ²	CCC 08(RV-90)

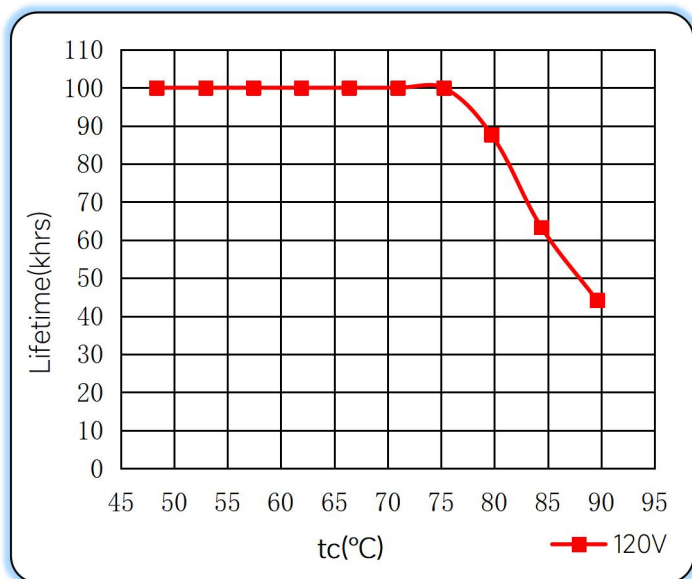
Small side cap of big hole	Wire type
0.75mm ²	H05VV-F 2 core&3 core&4 core
1.0mm ²	H05VV-F 2 core&3core
1.5mm ²	H05VV-F 2 core&3core

Big side cap	Wire type
0.5mm ²	H03VVH2-F 2 core&3 core H03VV-F 2 core&3 core
0.75mm ²	H03VVH2-F 2 core&3 core H03VV-F 2 core&3 core H05VV-F 2 core&3 core&4 core
1.0mm ²	H05VVH2-F 2 core&3 core
1.5mm ²	CCC 08(RV-90) H05VV-F 2 core&3core

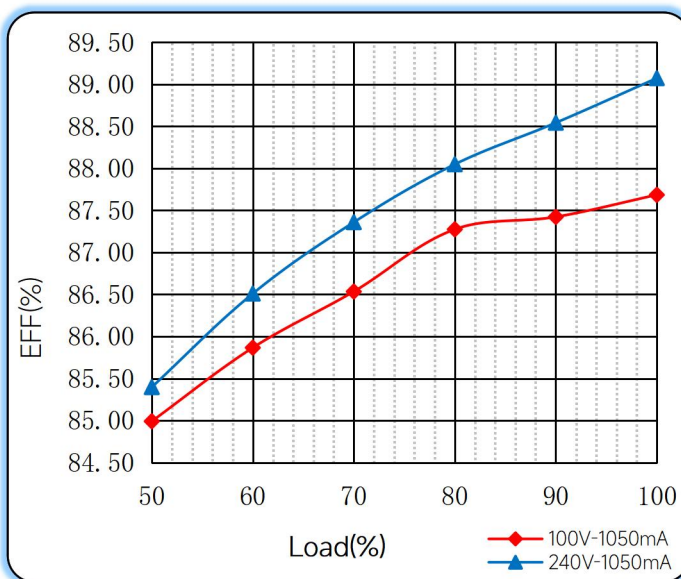
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for FLX-42-1050 DALI-2 0-10 LN PRO, $I_o=1050\text{mA}$

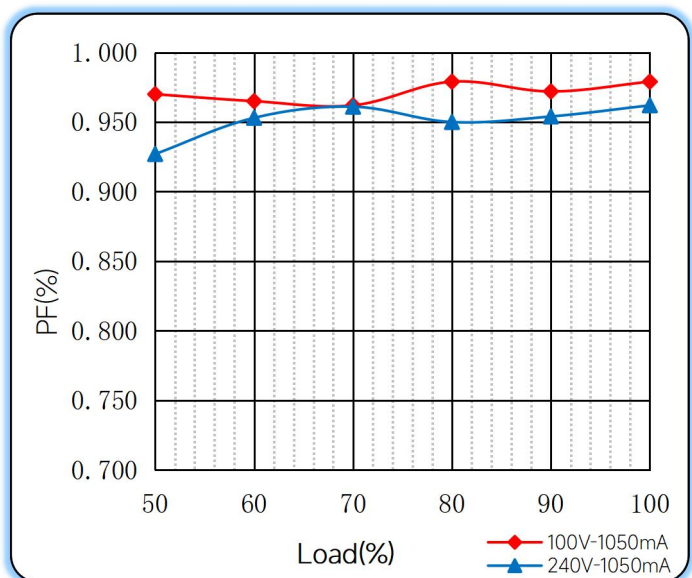
Lifetime vs. Temperature Curve



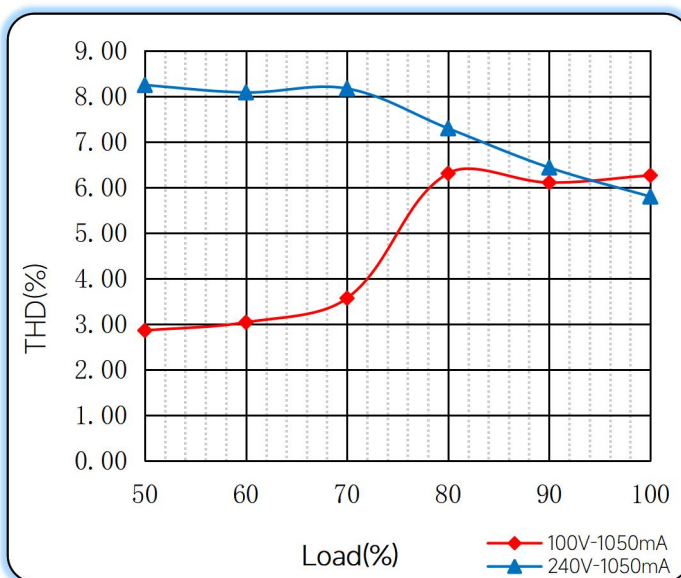
Efficiency vs. Load



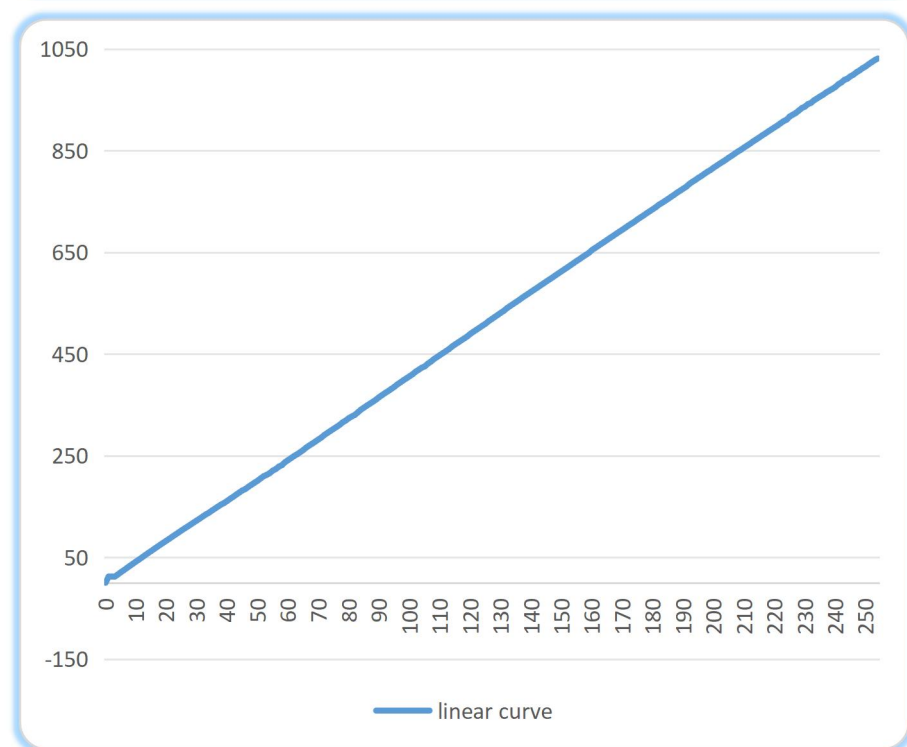
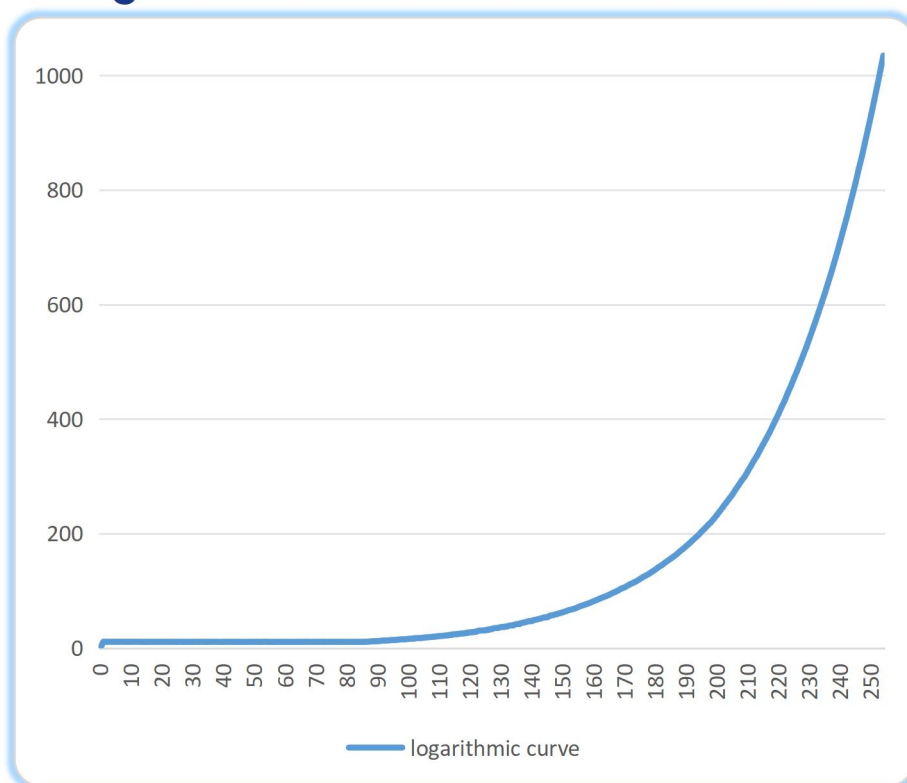
Power Factor Characteristics



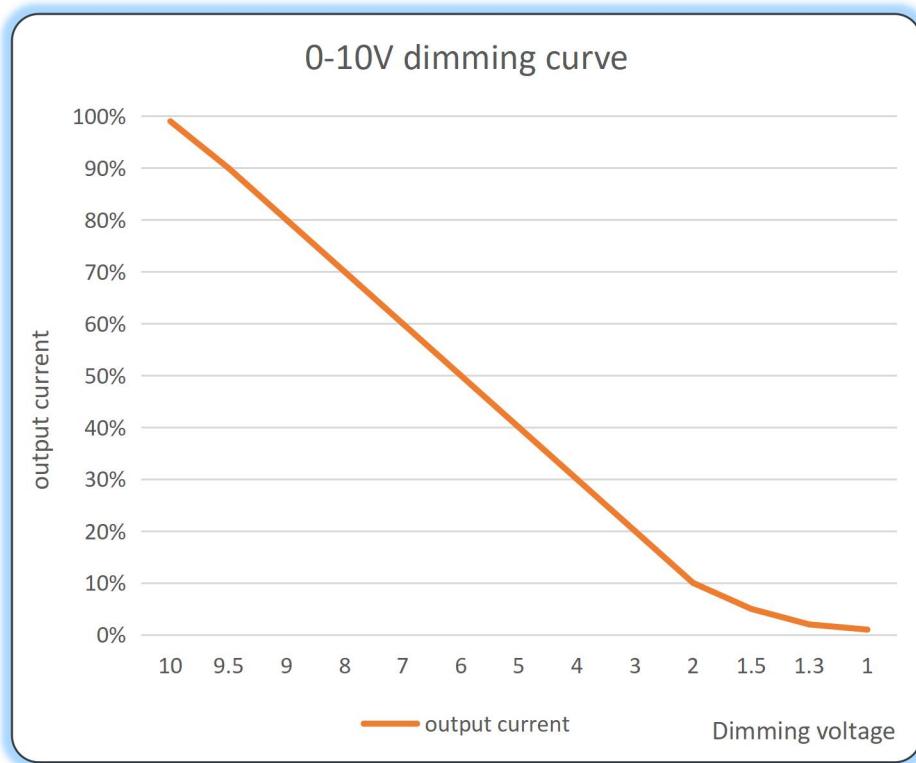
THD vs. Load



◆ DALI dimming Curve



◆ 0-10 dimming Curve

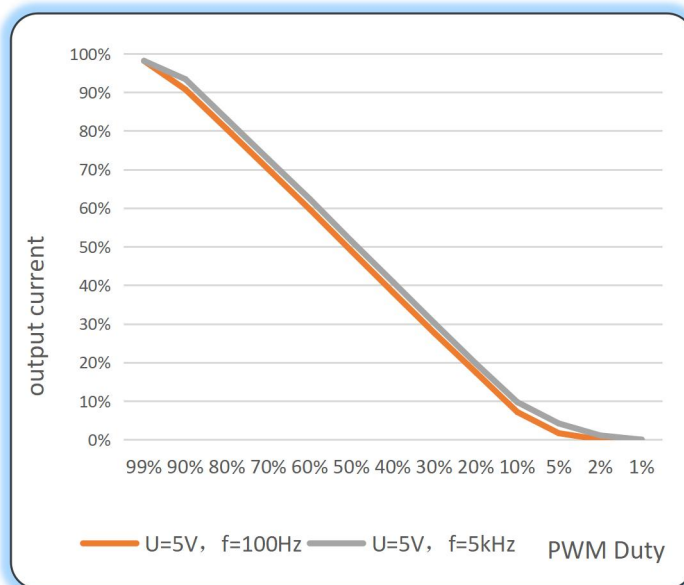


0-10V dimmer Note:

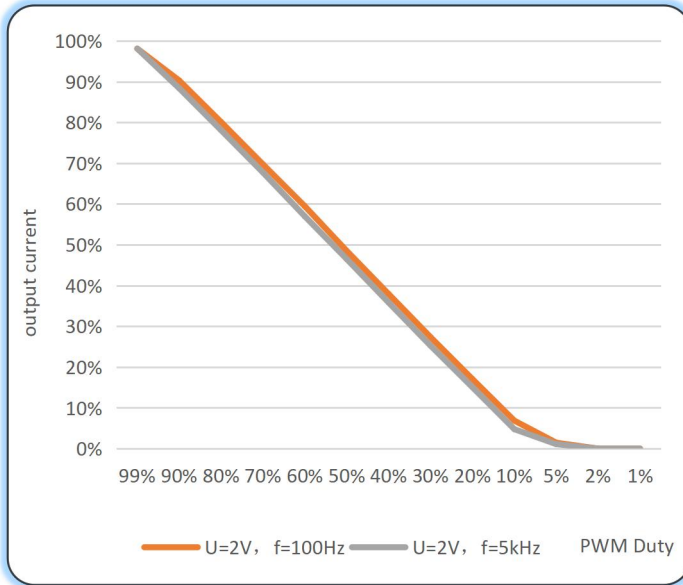
When the accessed 0-10V dimmer is an active dimmer, it is necessary to make the positive pole of the dimmer access to DIM+ and the negative pole access to DIM-, otherwise it may cause the 0-10V dimming function to be impaired.

◆ PWM dimming Curve

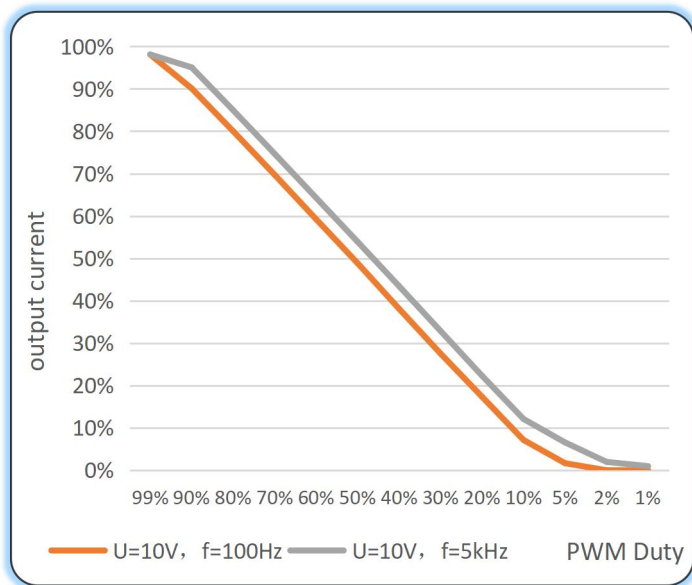
U=5V, f=100Hz



U=2V, f=100Hz



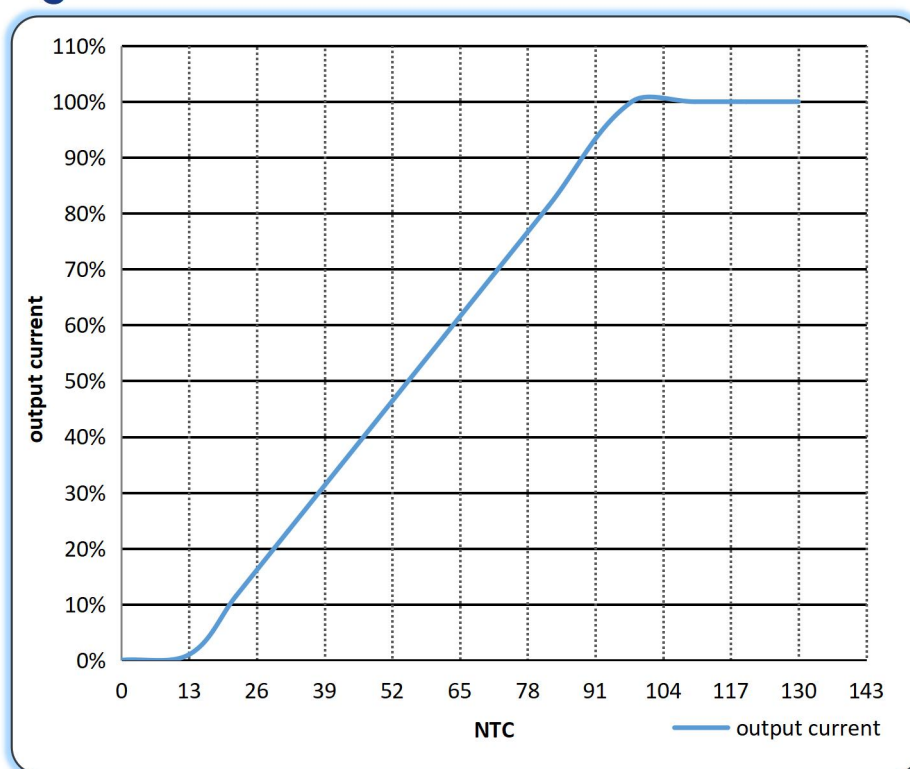
U=10V, f=100Hz



Note:

1. PWM amplitude of 2V-10V range, duty cycle of 1%-99% range.
2. PWM frequency range support 100Hz-5kHz.

◆ Rx dimming Curve



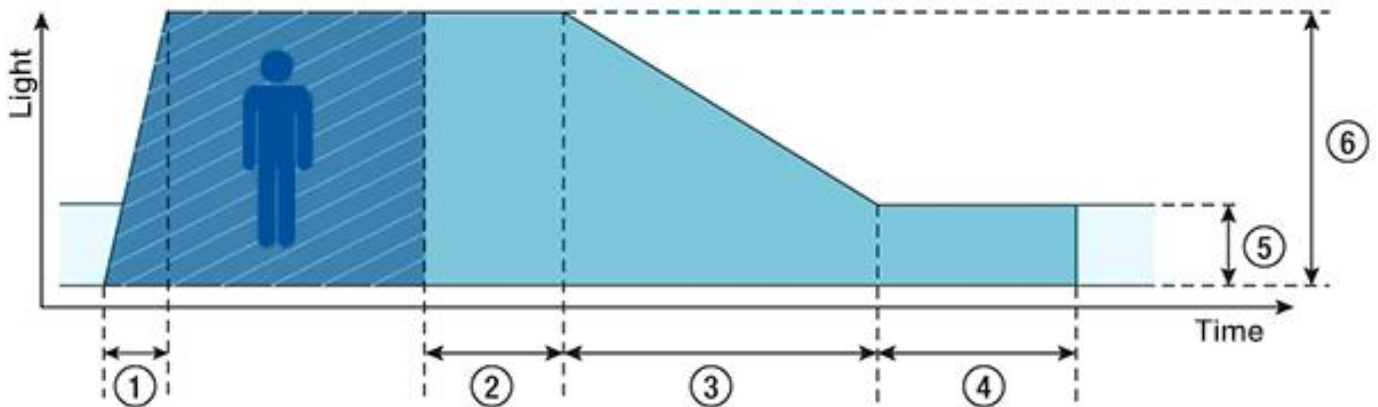
◆ Push dimming operation

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:

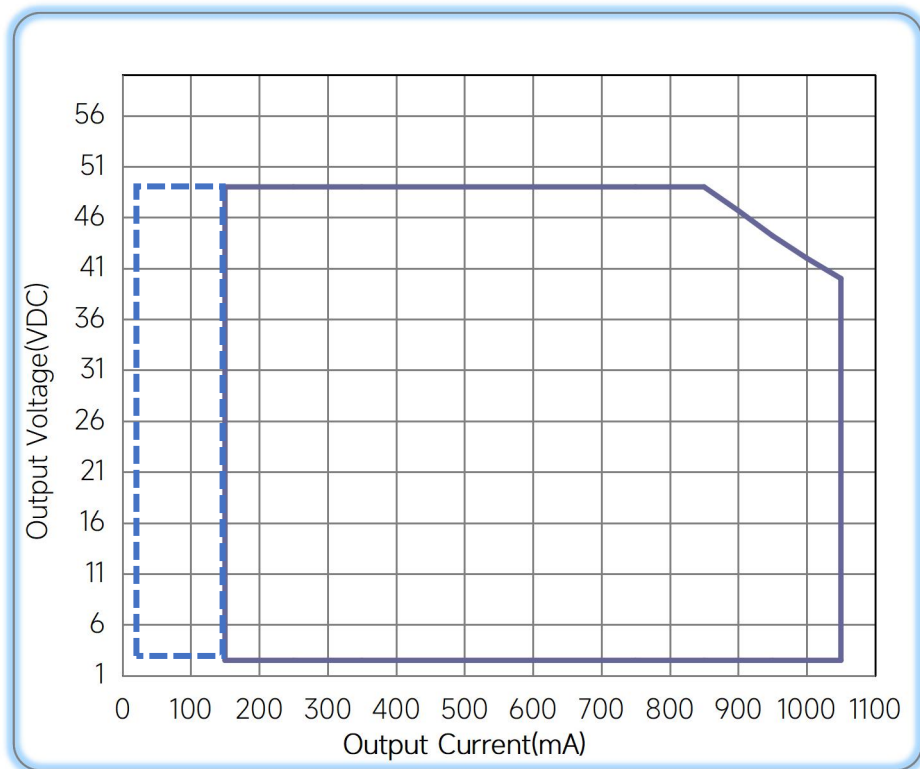
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ 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



— Operating Window 100%

- - - Minimum dimming current

◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/09/16
Update			B	2024/03/29
Life time	> 50000h,@TC=85°C	> 50000h,@TC=80°C	C	2024/06/17

Remark: The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

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