

44W DALI + PUSH Dimming power supply



■ Approve



Features

- For luminaires of protection Class I, II, SELV, built-in/independent (With side caps)
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor :0.95
- Efficiency: 87%
- Support DALI-2, Push Dimming
- 5 years warranty

Applications

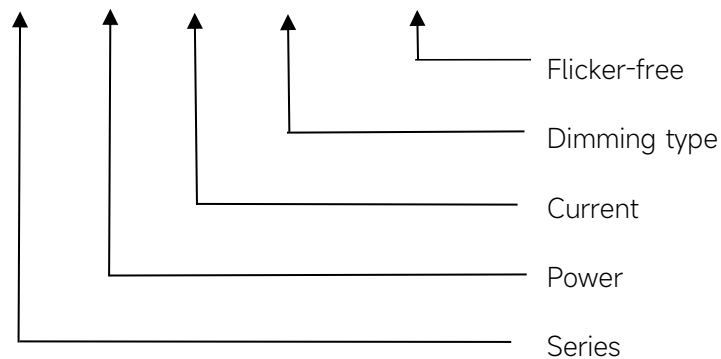
- LED panel, Spot light, Down light

◆ Description

FLS-44-1050 DALI-2 LD2 is a 44W constant current LED driver with 600 to 1050mA output current and a forward voltage range from 24 to 42VDC. The output current is adjustable by DIP Switch. With it's dimensions from 97 x 43 x 30 mm it is easy to integrate in LED panel, spot and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

FLS-44-1050 DALI-2 LD2



◆ Specification

	Constant Current (mA)	600	700	750	800	850	900	950	1000	1050
Output	Voltage Range	24-42VDC								
	Unload voltage Max.	59VDC								
	Current Accuracy	±5%								
	Output HF current ripple(≥1KHz)	±5%								
	Output LF current ripple(≤120Hz)	±3%								
	SVM	≤0.01								
	P _{st}	≤0.04								
	Flicker index	0.002								
	Efficiency(Typ.)	87%								
Input	Rated input voltage	220-240VAC								
	Range of input voltage	198-264VAC								
	Range of input voltage(DC)	198-280VDC								
	Frequency(Hz)	0/50/60 Hz								
	Displacement factor	≥0.9								
	Power Factor	>0.95								
	Input Current	0.25A max.								
	Start-up time	< 0.7S								
	No Load Power	≤0.5W								
	Standby Power	≤0.5W								
	Network standby power	≤0.5W								
	THD (Typ.)	6%								
Dimming	Dimming	YES								
	Dimming mode	DALI-2 (IEC 62386-101,102,207) & Push Dimming (Corridor Function)								
	Dimming depth	1%								
	Dimming current range	1 ~100%								
Protection	Over Load Protection	103-120%								
		YES/Latch off								
	Over Voltage Protection	> 59VDC								
		YES/Latch off								
	Short circuit Protection	YES/Auto Resume								
	Open circuit Protection	YES/Auto Resume								
Environment	Over Temperature Protection	YES/Auto Resume								
	Operating Temperature	-20°C~+50°C								
	Humidity	20%-90%RH								
	T _c	90°C								
	Storage Temperature	-40°C~+80°C								
	Lifetime	>50000h,@T _c =90°C								

Surface	Dimension	97X43X30mm (With side caps :131X43X30mm)
Standards	EN 61347-1,EN 61347-2-13;EN IEC 55015,EN IEC 61000-3-2,EN 61000-3-3;EN 61547	
Others	Surge	L-N:1kV, Conforms to class C
	ErP	EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
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 by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor. 3.Temperature test: tested at high temperature(50°C)/low temperature(-20°C)/normal temperature(25°C) 4.Data are typical values obtained from test samples	

◆ Parameter

Number	Output				Switch position			
	Current(mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3	4
1	600	24-42VDC	59VDC	25.2	ON	ON	ON	--
2	700			29.4	--	--	--	ON
3	750			31.5	ON	--	--	ON
4	800			33.6	--	ON	--	ON
5	850			35.7	ON	ON	--	ON
6	900			37.8	--	--	ON	ON
7	950			39.9	ON	--	ON	ON
8	1000			42	--	ON	ON	ON
*9	1050			44.1	ON	ON	ON	ON

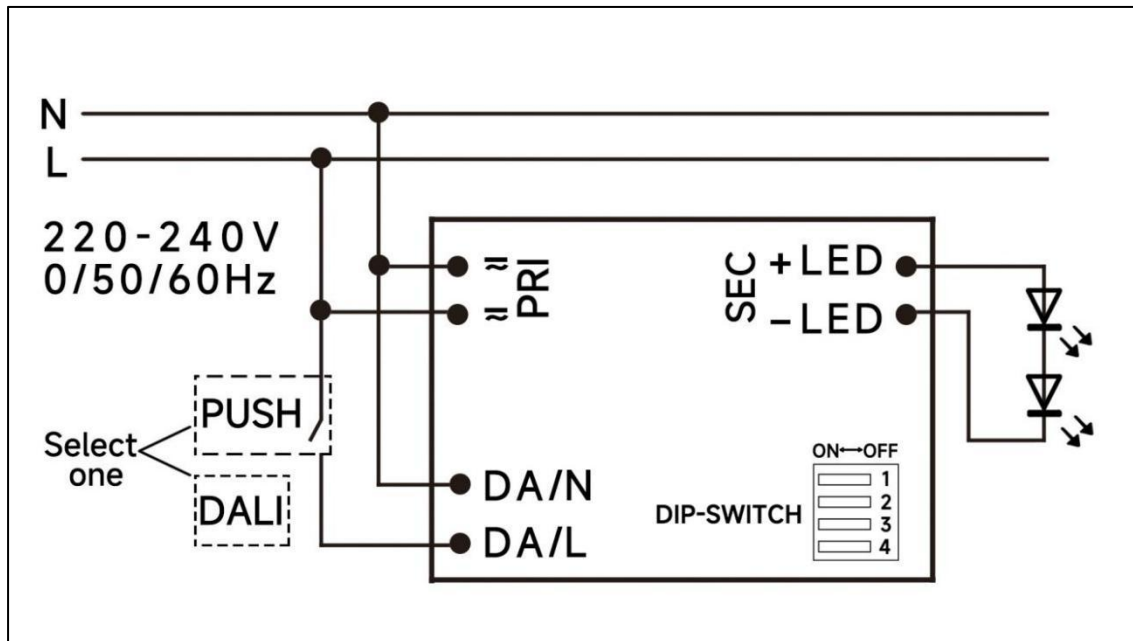
* Factory default

Refer to the test standard of RZB, there is 5 °C tolerance on the heat insulating test result

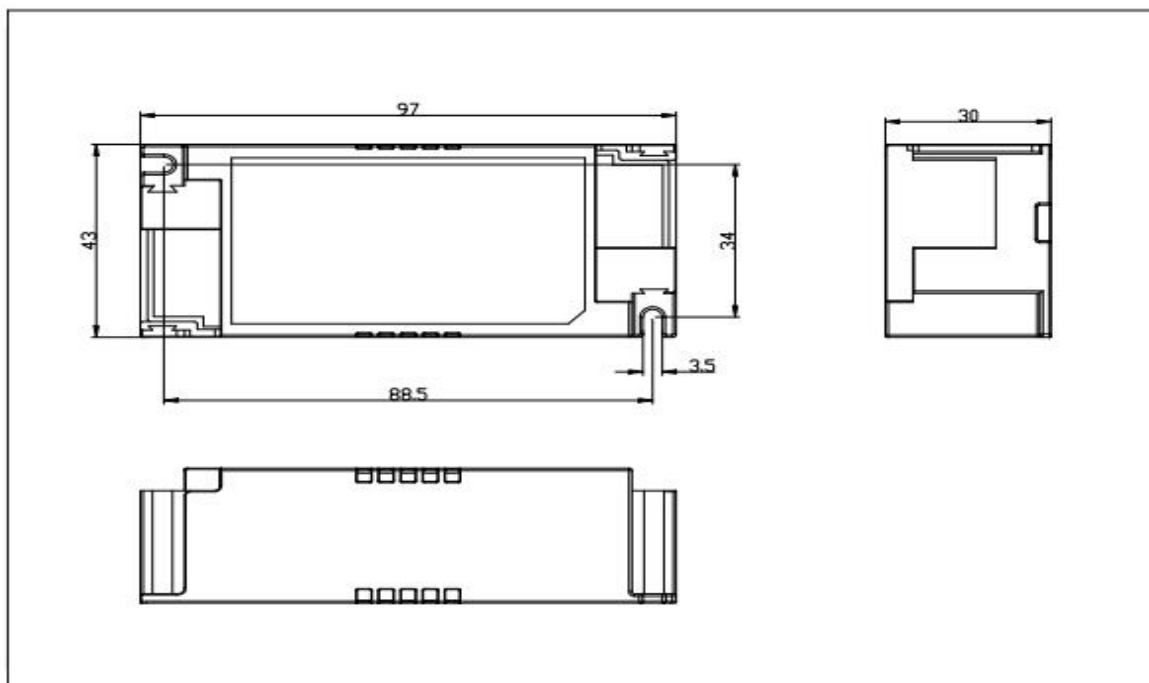
◆ Circuit Breaker

Ipeak	Twidth	B10	B16	B20	C10	C16	C20
4.82A	40μs	32pcs	51pcs	64pcs	32pcs	51pcs	64pcs

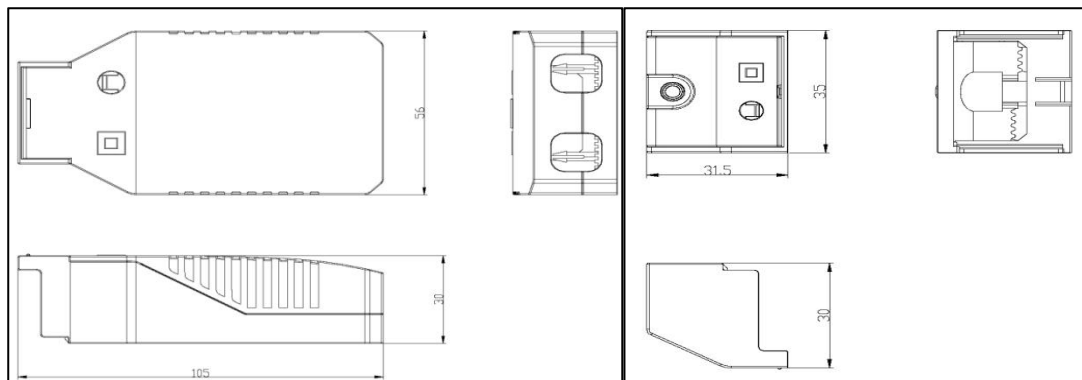
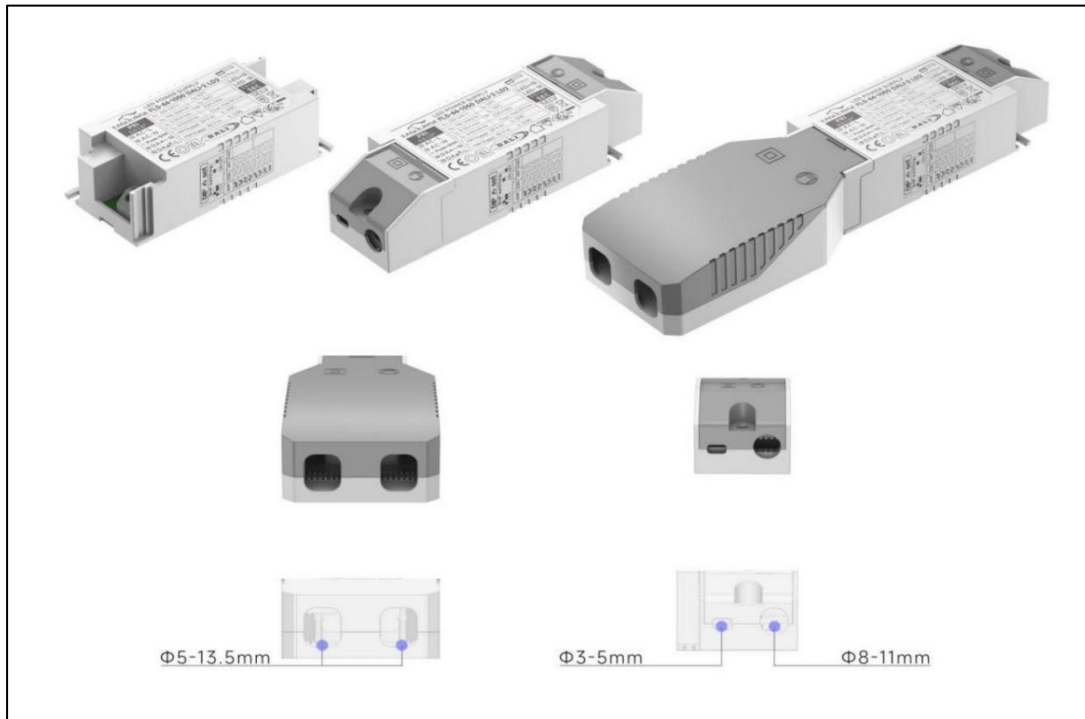
◆ Wiring diagram



◆ 2D diagram



With side caps



A caps

B caps

◆ Wiring & Connections

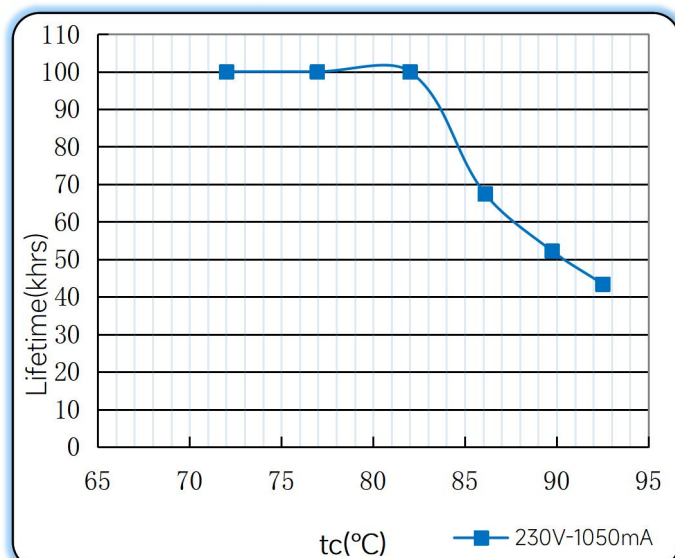
	Specification item	Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ² (With A side caps: 0.75...2.5 mm ²)
	Input wire gauge.	16...20 AWG (With A side caps: 14...20 AWG)
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

Common ways of wire clamping:

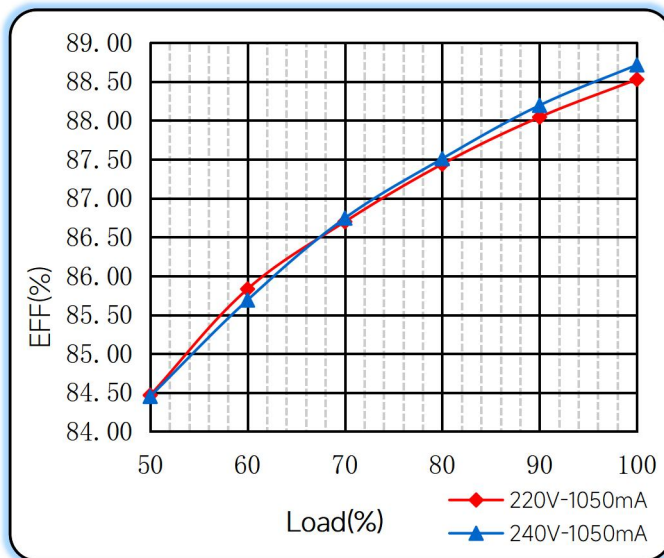
1. Tighten the screws to secure the side cover or clips, to clamp the cables
2. Through the main shell and side cover side teeth to clamp the cables

◆ Curve for FLS-44-1050 DALI-2 LD2, $I_o=1050\text{mA}$

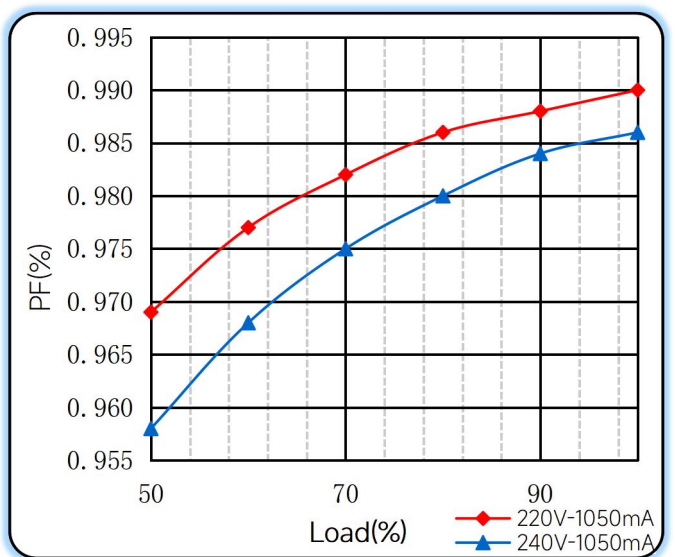
Lifetime vs. Temperature Curve



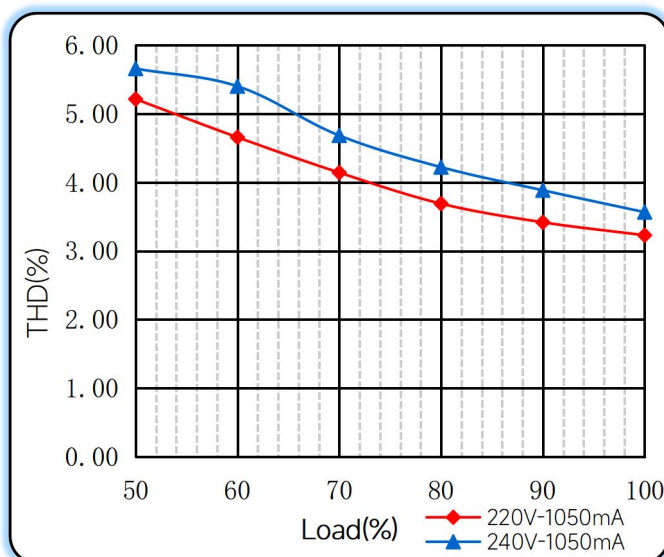
Efficiency vs. Load



Power Factor Characteristics



THD vs. Load



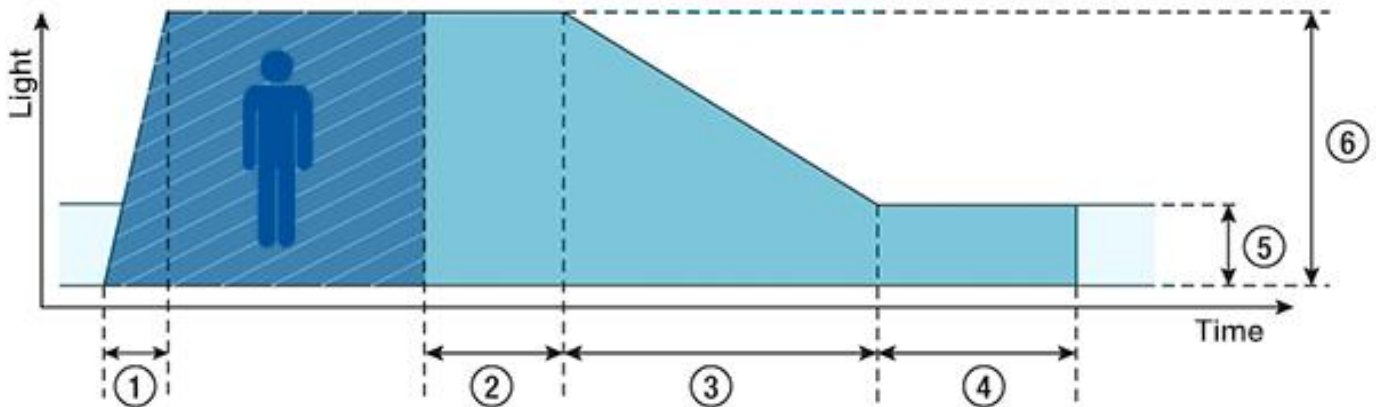
◆ Push dimming operation

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	<0.5s	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:

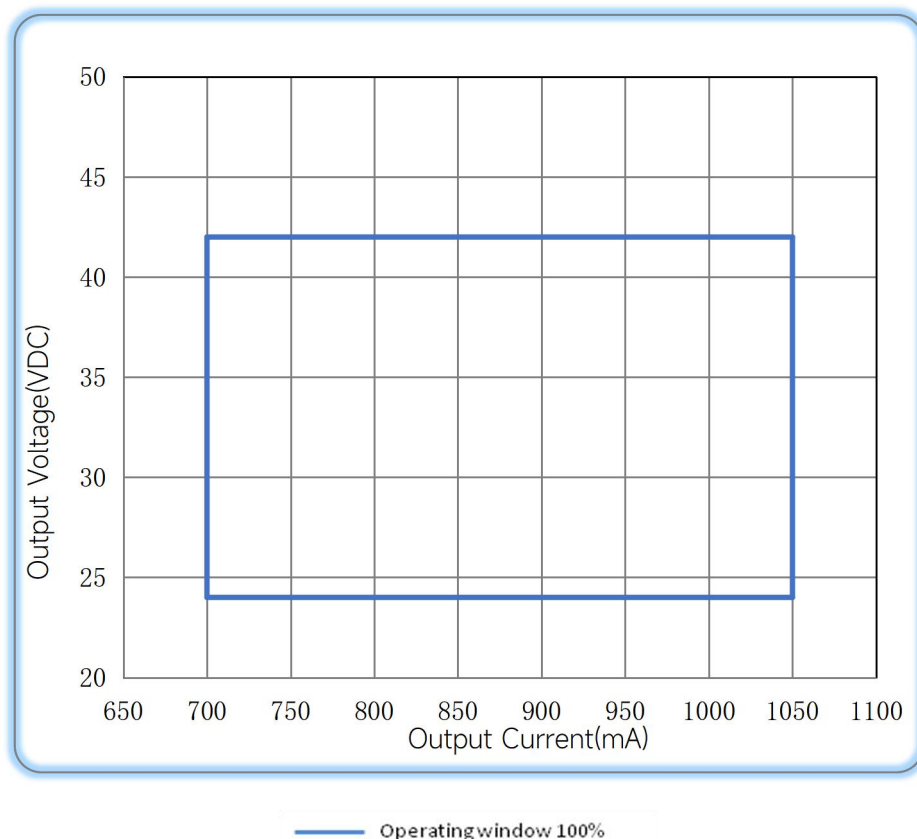
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ Corridor mode



- ◆ **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.
- ◆ **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.
- ◆ **Fade time(32s):** the time during which the luminous intensity is faded from the presence value to the absence value.
- ◆ **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.
- ◆ **Absence value(default: 10 %):** the luminous intensity when there is no person present.
- ◆ **Presence value (default: 100 %):** the luminous intensity when persons are present.

◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Start-up time	0.5S	0.7S	A	2022/08/12
		Heat insulating test added	B	2022/12/12

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Manual