Constant current independent dimmable driver

DLL Series suffix DB(DALI-2+pushDIM+1-10V/10V PWM/Rx+EL+CLO+corridorDIM+ DALI PROG+Wieland quick install connector)

Features

- Support DALI-2+pushDIM+1-10V /10V PWM+100K potentiometer dimming mode
- Support advanced functions such as corridorDIM,EL, CLO
- The output current programming configuration of the driver can be realized through the DALI interface
- The output interface is Wieland (gesis) pluggable quick connector
- 16-level current output can be realized by DIP-switch
- Flicker-free output,which meets the requirement of flicker-free standard
- Using HPC patented technology, at any dimming level, the brightness of the lights is the same
- Dimming range 2~100%, output current accuracy 1%
- Standby power input<0.5W, meets the requirements of ErP certification
- Excellent pushDIM software processing,good synchronization effect, suppore small gap switch action
- Intelligent LED hot-plug protection function
- SELV and Class II design, suitable for use inside of the light
- Passed CE,ENEC,UKCA,RCM,DALI-2,EL and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5-year guarantee

Interfaces

- DALI-2(DALI-2 DT6)
- PUSH(pushDIM)
- 1-10V 3in1(1-10V/10V PWM/Rx)

Functions

- Support central emergency application (dimming normal or fixed output of programming under in DC input)
- Support self-contained emergency application
- Emergency lighting(EL)
- Constant light output function(CLO)
- Corridor dimming (corridorDIM)
- Configure via DALI (PROG)
- Protective features (short-circuit, overload,no-load, hot plug-in protection)

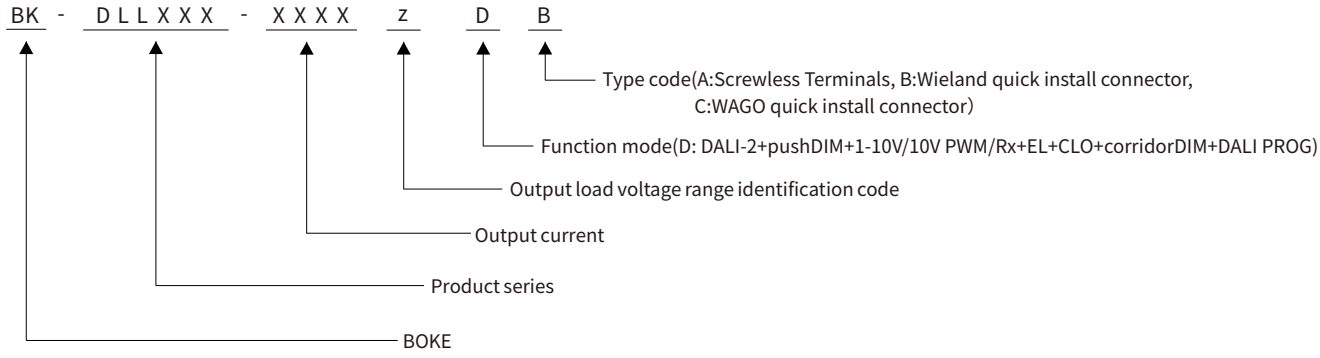
Suitable for lights

- Suitable for lights with independent drivers such as downlights, spotlights, panel lights, etc
- Not suitable for lights with built-in drivers

Typical applications

- LED indoor lighting
- LED office lighting
- LED architectural lighting
- LED commercial lighting

Model coding rules of DLL series



Function list

Model	Suffix	Wired dimming			Advanced functions				Device Configuration
		DALI-2	pushDIM	1-10V 3in1	AOC	EL	CLO	corridorDIM	DALI interfaces
BK-DLL042 BK-DLL052	DA DB **DC**	√	√	√	√	√	√	√	√

* The description in this specification is only applicable to the products with the suffix DC and the model are DLL042 and DLL052 .

Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension	Certification
BK-DLL042-1050BDA	200-240VAC/DC	44.1W MAX.	6-42/44/46/49/52/54VDC	0.3-1.05A	L133*W75*H30mm	CE,ENEC,UKCA,RCM,DALI-2,EL
BK-DLL052-1300BDA	200-240VAC/DC	54W MAX.	6-40/42/44/46/48/50/54VDC	0.55-1.3A	L133*W75*H30mm	CE,ENEC,UKCA,RCM,DALI-2,EL
BK-DLL042-1050BDB	200-240VAC/DC	44.1W MAX.	6-42/44/46/49/52/54VDC	0.3-1.05A	L133*W75*H30mm	CE,ENEC,UKCA,RCM,DALI-2,EL
BK-DLL052-1300BDB	200-240VAC/DC	54W MAX.	6-40/42/44/46/48/50/54VDC	0.55-1.3A	L133*W75*H30mm	CE,ENEC,UKCA,RCM,DALI-2,EL
BK-DLL042-1050BDC	200-240VAC/DC	44.1W MAX.	6-42/44/46/49/52/54VDC	0.3-1.05A	L133*W75*H30mm	CE,ENEC,UKCA,RCM,DALI-2,EL
BK-DLL052-1300BDC	200-240VAC/DC	54W MAX.	6-40/42/44/46/48/50/54VDC	0.55-1.3A	L133*W75*H30mm	CE,ENEC,UKCA,RCM,DALI-2,EL

* The description in this specification is only applicable to the products with the suffix DC and the model are DLL042 and DLL052 .

Technical data

Product model	BK-DLL042-1050BDB	
Output parameters		
Regulation method	Constant Current	
Rated output current range	0.3-1.05A	
Rated output voltage range	6- 42/44/46/49/52/54VDC	
Rated output power	44.1W Max	
Output current adjustment	DIP S.W(16 levels)	
Output current ripple LF	±2%	
Output current accuracy	±1%	
Linear regulation	±1%	
Load regulation	±1%	
No load output voltage	63VDC	
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.138%, Flicker index(IEEE 1789)=0.001, Pst LM = 0.000, SVM = 0.003, (The above parameters are obtained from testing the panel lights)	
Input parameters		
Rated input voltage range	200-240VAC 200-240VDC	
Input votage range	180-264VAC 180-264VDC	
Input votage shock	<380 V AC	
Input current	<0.28A (Rated input voltage input)	
Input frequency	0/50/60Hz	
Input PF/Input DF	PF>0.95 (230V AC & Full load), DF>0.98 (230V AC & Full load)	
Input THD	10% (230V AC & Full load)	
Efficiency(typical)	88.5% (230V AC & Full load)	
In-rush current	10.7A peak ,179us duration(50 % Ipeak), see the description below for details	
Start/Switchover/Turn off	<0.7s(AC start),<0.7s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)	
Switching cycles	> 50,000 switching cycles	
Power consumption	Full load(Pin):49.5W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-O/P(LED):3750V AC, I/P-DALI: 1500V AC,O/P-DALI: 1500VAC	
Mains surge capability	L-N:2KV(Performance criterion:A)	
Leakage current	0.2mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	Voltage range: 9.5-22.5V, typical 16V, interface current consumption: 1.8mA	
pushDIM dimming port	Voltage range: 180-264V 50/60Hz	
1-10V 3in1 dimming port	Voltage range: 0-10V,Maximum output current: ⩽0.3mA	
Auxiliary power supply	N/A	
Dimming range	2-100%	
Dimming drive mode	AM(amplitude modulation)	
Emergency support		
Central emergency system	Supported(dimming normal or fixed output of programming under in DC input)	
Self-contained emergency	Supported	
Environment & Life time		
Operating temperature	Ta=-20-45°C	
Case temperature	Tc=85°C	
Operating humidity	5-85% RH, not condensed	
Storage temp./humidity	-40-80°C, 5-85% RH, not condensed	
IP grade	IP20	
MTBF	500,000H,MIL-HDBK-217F(25°C)	
Life-time	Nominal life-time up to 100,000 h, see the description below for details	
Vibration resistant	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes	
Acoustic Noise	<25dB(30cm, Full load)	
Environmental protection	RoHS	
Certifications and standards		
Certified	CE,ENEC,UKCA,RCM,DALI-2,EL	
Safety	EN61347-1, EN61347-2-13, EN62384	
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547	
DALI-2	IEC 62386-101(DALI-2), IEC 62386-102(DALI-2), IEC 62386-207(DALI-2)	
EL	Compatible IEC 61347-2- 13 Annex J , compatible with EN 60598-2-22 and EN 50172	
RF	N/A	

Remarks

1.By default, all parameter are measured at 230VAC input, full load and 25°C of ambient temperature.
2.The driver can not be installed inside the light. when the driver is used with the light, the EMC of the whole light needs to be tested.

Technical data

Product model	BK-DLL052-1300BDB	
Output parameters		
Regulation method	Constant Current	
Rated output current range	0.55-1.3A	
Rated output voltage range	6- 40/42/44/46/48/50/54VDC	
Rated output power	54W Max	
Output current adjustment	DIP S.W(16 levels)	
Output current ripple LF	±2%	
Output current accuracy	±1%	
Linear regulation	±1%	
Load regulation	±1%	
No load output voltage	63VDC	
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.173%, Flicker index(IEEE 1789)=0.000, Pst LM = 0.000, SVM = 0.004, (The above parameters are obtained from testing the panel lights)	
Input parameters		
Rated input voltage range	200-240VAC 200-240VDC	
Input votage range	180-264VAC 180-264VDC	
Input votage shock	<380 V AC	
Input current	<0.32A (Rated input voltage input)	
Input frequency	0/50/60Hz	
Input PF/Input DF	PF>0.95 (230V AC & Full load), DF>0.98 (230V AC & Full load)	
Input THD	10% (230V AC & Full load)	
Efficiency(typical)	88.5% (230V AC & Full load)	
In-rush current	11.4A peak ,190us duration(50 % Ipeak), see the description below for details	
Start/Switchover/Turn off	<0.7s(AC start),<0.7s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)	
Switching cycles	> 50,000 switching cycles	
Power consumption	Full load(Pin):60W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-O/P(LED):3750V AC, I/P-DALI: 1500V AC,O/P-DALI: 1500VAC	
Mains surge capability	L-N:2KV(Performance criterion:A)	
Leakage current	0.26mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	Voltage range: 9.5-22.5V, typical 16V, interface current consumption: 1.8mA	
pushDIM dimming port	Voltage range: 180-264V 50/60Hz	
1-10V 3in1 dimming port	Voltage range: 0-10V,Maximum output current: ⩽0.3mA	
Auxiliary power supply	N/A	
Dimming range	2-100%	
Dimming drive mode	AM(amplitude modulation)	
Emergency support		
Central emergency system	Supported(dimming normal or fixed output of programming under in DC input)	
Self-contained emergency	Supported	
Environment & Life time		
Operating temperature	Ta=-20-45°C	
Case temperature	Tc=85°C	
Operating humidity	5-85% RH, not condensed	
Storage temp./humidity	-40-80°C, 5-85% RH, not condensed	
IP grade	IP20	
MTBF	500,000H,MIL-HDBK-217F(25°C)	
Life-time	Nominal life-time up to 100,000 h, see the description below for details	
Vibration resistant	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes	
Acoustic Noise	<25dB(30cm, Full load)	
Environmental protection	RoHS	
Certifications and standards		
Certified	CE,ENEC,UKCA,RCM,DALI-2,EL	
Safety	EN61347-1, EN61347-2-13, EN62384	
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547	
DALI-2	IEC 62386-101(DALI-2), IEC 62386-102(DALI-2), IEC 62386-207(DALI-2)	
EL	Compatible IEC 61347-2- 13 Annex J , compatible with EN 60598-2-22 and EN 50172	
RF	N/A	

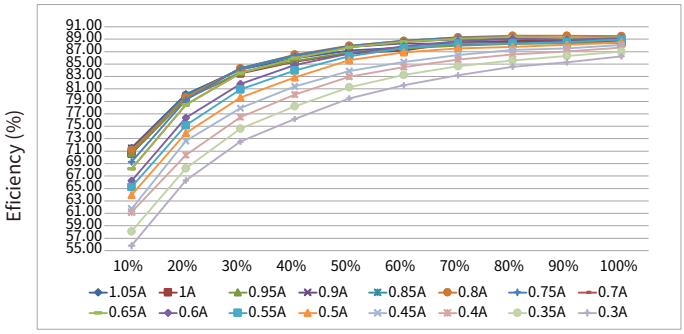
Remarks

1.By default, all parameter are measured at 230VAC input, full load and 25°C of ambient temperature.
2.The driver can not be installed inside the light. when the driver is used with the light, the EMC of the whole light needs to be tested.

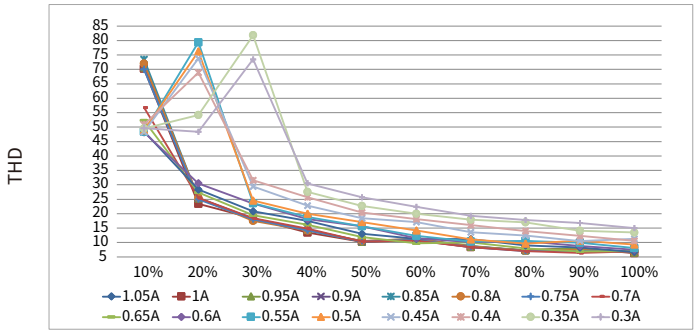
Electrical values

BK-DLL042-1050BDB

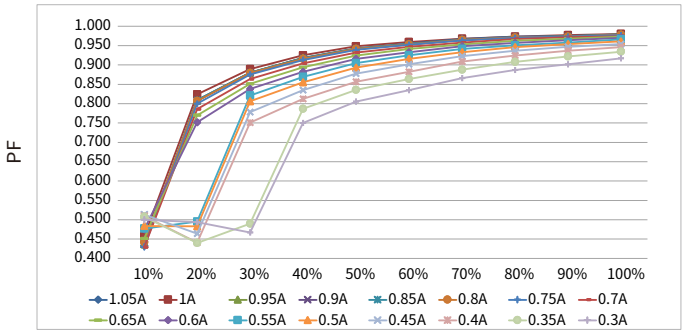
Efficiency vs load



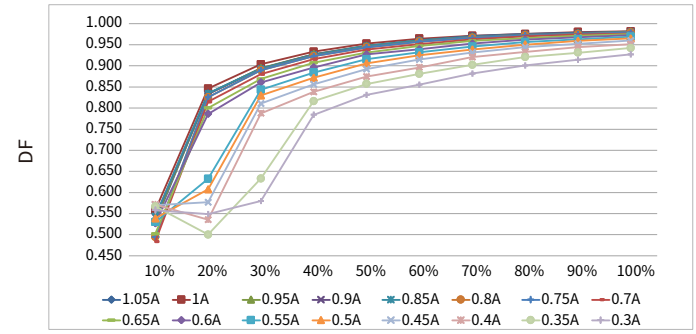
THD vs. Load



Power factor vs. Load

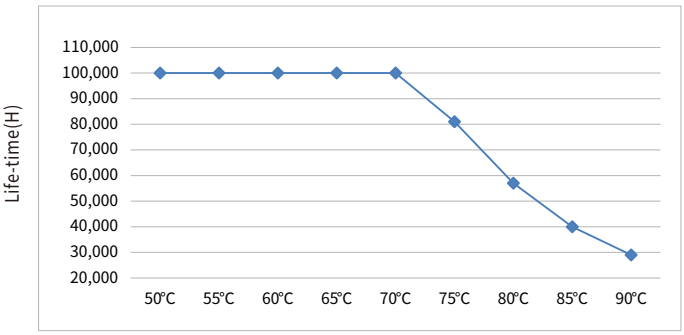


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



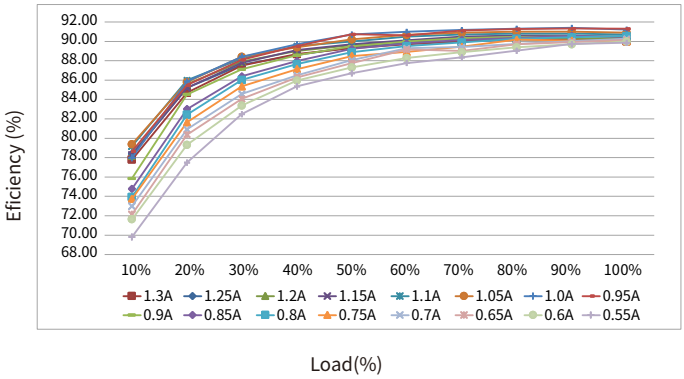
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

- The relation of tc to ta temperature depends also on the luminaire design.

Electrical values

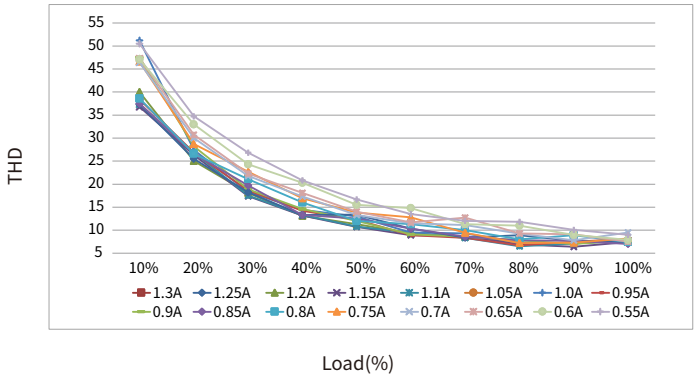
BK-DLL052-1300BDB

Efficiency vs load



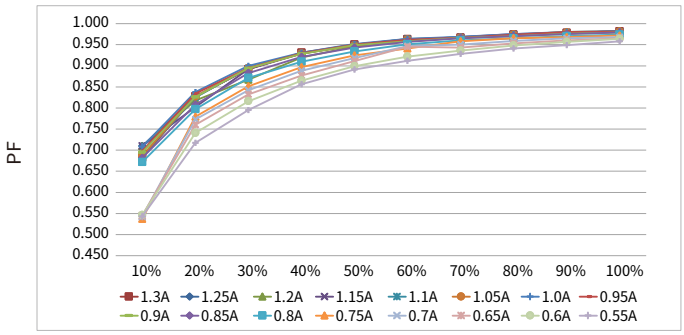
Load(%)

THD vs. Load



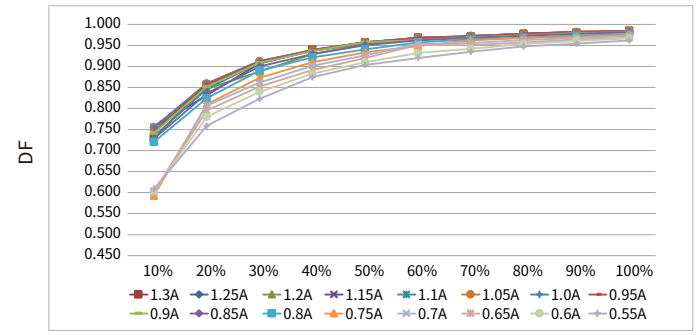
Load(%)

Power factor vs. Load



Load(%)

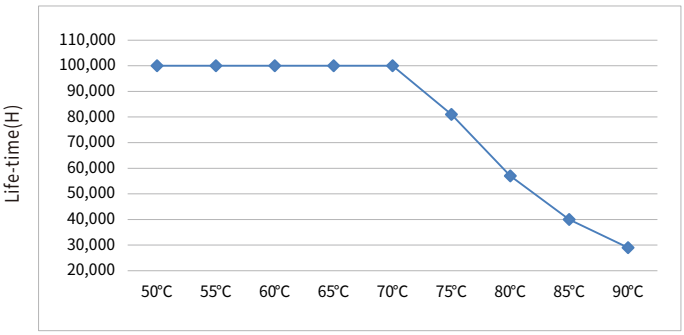
Displacement factor vs. Load



Load(%)

Expected life-time

Life-time vs. case temperature



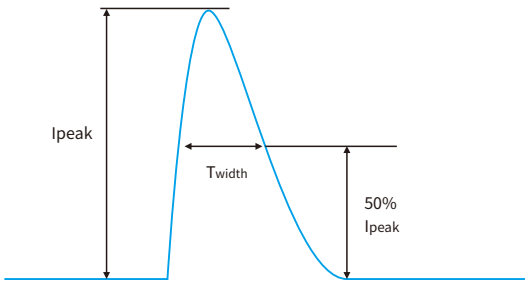
Case temperature(Tc)

-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

- The relation of tc to ta temperature depends also on the luminaire design.

Surge

Model	Ipeak	Twidth	Condition	Relative number of MCB/pcs														
				B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
BK-DLL042-1050BDB	10.7A	179us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	32	41	50	63	79	32	41	50	63	79	32	41	50	63	79
BK-DLL052-1300BDB	11.4A	190us		26	33	41	51	64	26	33	41	51	64	26	33	41	51	64



Remarks

- The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- Calculation uses typical values from ABB series S200 as a reference.
- Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.
- If the ambient temperature of the MCB installation exceeds 30°C or multiple MCBs are installed side by side, the number of drives mounted will be reduced and the calculation needs to be recalculated.
- Electrician's usually consider Type B for household lighting and Type C for commercial lighting application.

Functions

Output short-circuit behaviour

- In case of a short-circuit at the LED output ,the LED output is switched off.
- After restart of the LED driver ,the output will be activated again.

Output no-load operation

- The LED driver will not be damaged in no-load operation.
- The output will be deactivated and is therefore free of voltage.
- If a LED load is connected , the device has to be restarted before the output will be activated again.

Output overload protection

- If the output voltage range is exceeded the LED driver turns off the LED output.
- After restart of the LED driver the output will be activated again.

Output hot plug-in

In the following two cases,the LED driver will automatically turn off the output to protect the LED

- When the driver is powered on first and the LED is connected later.
- When the driver is powered on,disconnected and connecred again.
- After restart of the LED driver the output will be activated again.

Driver restart method

There are two ways to restart the device:

- Through the AC input portr:disconnect the AC of the driver and power it again.
- Through dimming interface.

DALI:send “OFF” command first,then send “MAX” command.

pushDIM:short press PUSH switch two times,then long press PUSH switch.

1-10V:first adjust the output voltage of the dimmer to 0.9v or below, then adjust it to 1V or above.

Adjustable output current (AOC)

- The output current of the driver can be adjusted within a certain range, and 2 options can be selected through the device configuration software.

Setting 1 (default): DIP-switch
The output current is determined by the selection of the DIP-switch.

Setting 2: Programming
The output current is determined by the programming setting.

Corridor dimming (corridorDIM)

- Please see the "corridorDIM dimming" section.

Constant light output (CLO)

- The luminous flux of a LED decreases constantly over the life-time.
- The CLO function ensures that the emitted luminous flux remains stable.For that purpose the LED current will increase continuously over the LED life-time.
- In device configuration it is possible to select a start value(in percent) and an expected life-time.The LED Driver adjusts the current afterwards automatically.

Emergency lighting(EL)

- The driver works normally under DC input.
- When the driver is applied in DC input, the positive pole of the DC cable should be connected to the ACL/DC+ terminal, and the negative pole of the DC cable should be connected to the ACN/DC- terminal. If the connection is reversed, the driver will not be damaged, but it will affect the EL function normal work.
- The output response action after DC input can be set through device configuration software.

Setting 1 (default): When DC input, the output of the driver remains unchanged, and the dimming function responds normally.

Setting 2: When DC input, the output of the driver jumps to the set brightness, and the dimming function is invalid.

Programming(PROG)

-Connect the "DALI Programmer" programmer to the DALI port of the driver and use the “device configuration" software to configure the functions of the driver.

Device configuration(EasySet)

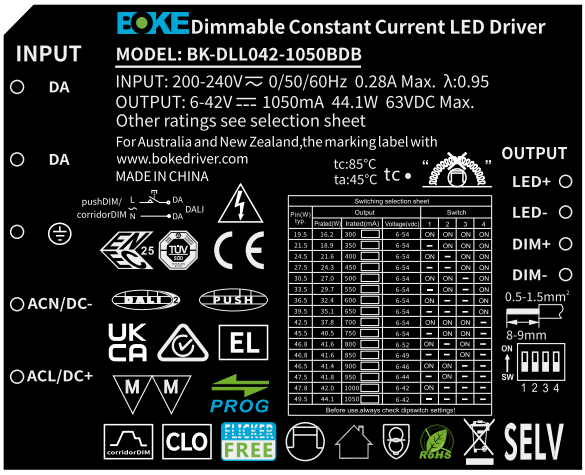
- Please see the “Device configuration" section.
- For further information see device configuration instruction manual.

Insulation between circuits

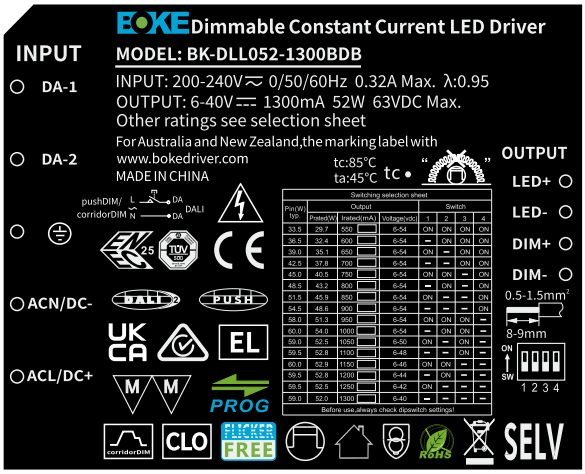
Isolation	Input	Output	Case	DALI	PUSH	DIM	PWM
Input	-	Double	Double	Basic	-	Double	Double
Output	Double	-	Basic	Double	Double	-	-
Case	Double	Basic	-	Double	Double	Basic	Basic

Label

BK-DLL042-1050BDB



BK-DLL052-1300BDB



DIP-switch & output current

Pin(w) typ.	Output			1	2	3	4
	Prated(w)	Irated(mA)	Voltage(Vdc)				
19.5	16.2	300	6-54	ON	ON	ON	ON
21.5	18.9	350	6-54	--	ON	ON	ON
24.5	21.6	400	6-54	ON	--	ON	ON
27.5	24.3	450	6-54	--	--	ON	ON
30.5	27.0	500	6-54	ON	ON	--	ON
33.5	29.7	550	6-54	--	ON	--	ON
36.5	32.4	600	6-54	ON	--	--	ON
39.5	35.1	650	6-54	--	--	--	ON
42.5	37.8	700	6-54	ON	ON	ON	--
45.5	40.5	750	6-54	--	ON	ON	--
46.8	41.6	800	6-52	ON	--	ON	--
46.8	41.6	850	6-49	--	--	ON	--
46.5	41.4	900	6-46	ON	ON	--	--
47.5	41.8	950	6-44	--	ON	--	--
47.8	42.0	1000	6-42	ON	--	--	--
49.5	44.1	1050 ★	6-42	--	--	--	--

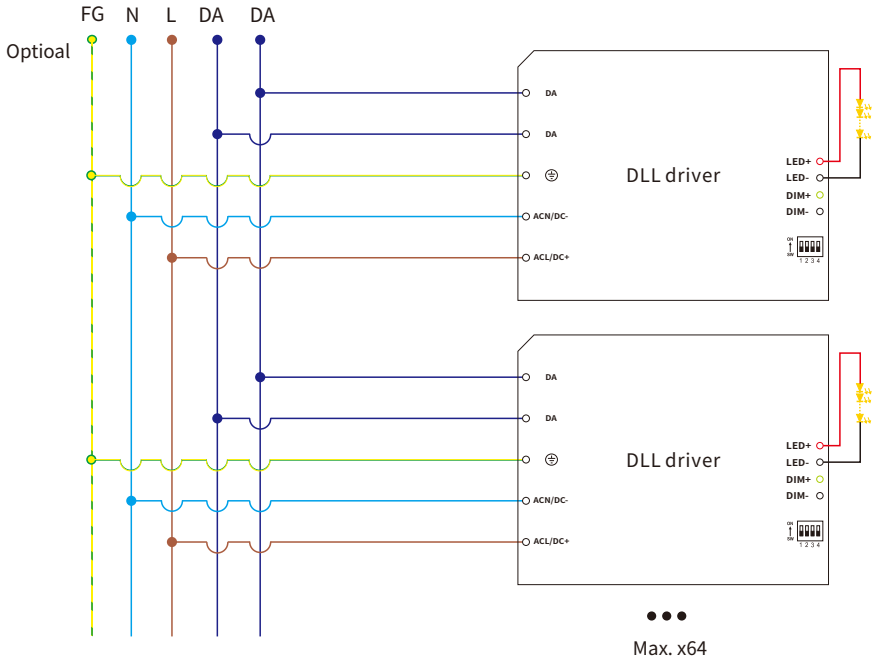
Pin(w) typ.	Output			1	2	3	4
	Prated(w)	Irated(mA)	Voltage(Vdc)				
33.5	29.7	550	6-54	ON	ON	ON	ON
36.5	32.4	600	6-54	--	ON	ON	ON
39.0	35.1	650	6-54	ON	--	ON	ON
42.5	37.8	700	6-54	--	--	ON	ON
45.0	40.5	750	6-54	ON	ON	--	ON
48.5	43.2	800	6-54	--	ON	--	ON
51.5	45.9	850	6-54	ON	--	--	ON
54.5	48.6	900	6-54	--	--	--	ON
58.0	51.3	950	6-54	ON	ON	ON	--
60.0	54.0	1000	6-54	--	ON	ON	--
59.0	52.5	1050	6-50	ON	--	ON	--
59.5	52.8	1100	6-48	--	--	ON	--
60.0	52.9	1150	6-46	ON	ON	--	--
59.5	52.8	1200	6-44	--	ON	--	--
59.5	52.5	1250	6-42	ON	--	--	--
59.0	52.0	1300 ★	6-40	--	--	--	--

Remarks:

1. ★ It means that this item is the factory default current.
2. -- It means that this channel is OFF.

DALI dimming application

Wiring diagram



Switch to the DALI dimming mode

- After installation according to the wiring diagram of DALI dimming application, the driver will automatically switch to the DALI control mode after receiving any DALI command.

Remarks:

- Standard DALI control line voltage range:9.5V to 22.5V ,type 16V.
- The two DALI control lines polarity-reversible.
- Max. 64 DALI drivers per DALI control line.
- The maximum distance length of the DALI control line is 300m at 2×1.5mm^2.
- DALI bus can be wired together with any mains voltage cables, but separate wiring is recommended.
- The configuration parameters of the driver can be set through the DALI configuration tool or DALI application controller during installation, such as setting device address, group address, power-on level, bus-failure level, scene level, fade time, dimming curve, etc.

Power-on level :

When the driver is in DALI-2 dimming mode, the factory default level after each power-on is the brightest.

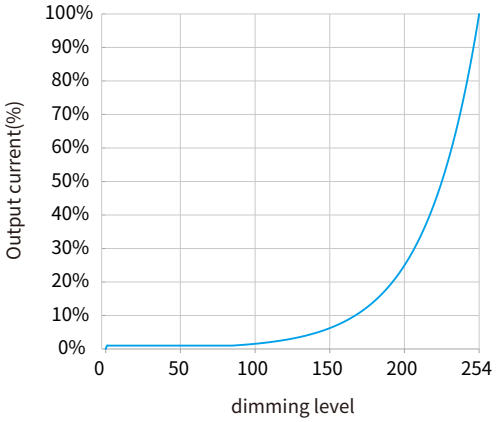
The power-on level can be set through the DALI configuration tool or DALI application controller during installation, and can be set to memory or fixed any brightness (such as off, darkest, 50%, etc.).

Note: The recommended setting for the default factory power-on level of the DALI-2 driver is the brightest in the DALI-2 standard.

Please refer to the table below

Cable size	Distance
2×0.50mm^2	max.100m
2×0.75mm^2	max.150m
2×1.00mm^2	max.200m
⩾2×1.50mm^2	max.300m

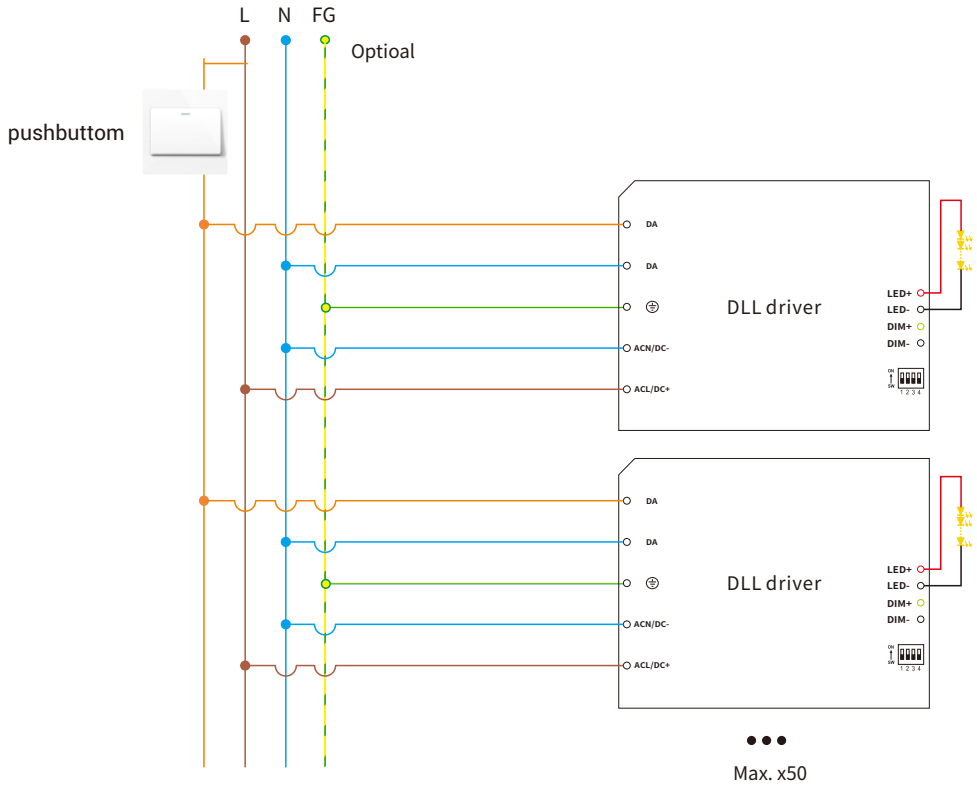
Logarithmic dimmer curve



Remarks: The dimming curve can be selected by DALI configuration. The default is logarithmic dimming curve.

pushDIM dimming application

Wiring diagram



Switch to the pushDIM dimming mode

- After installation according to the wiring diagram of pushDIM dimming application, short press the pushbuttom 5 times within 3 seconds, the driver will automatically switch to pushDIM dimming mode.
- After switch to the pushDIM control mode, CorridorDIM mode will be automatically closed.

Remarks:

Max. 50 drivers per pushDIM control line.

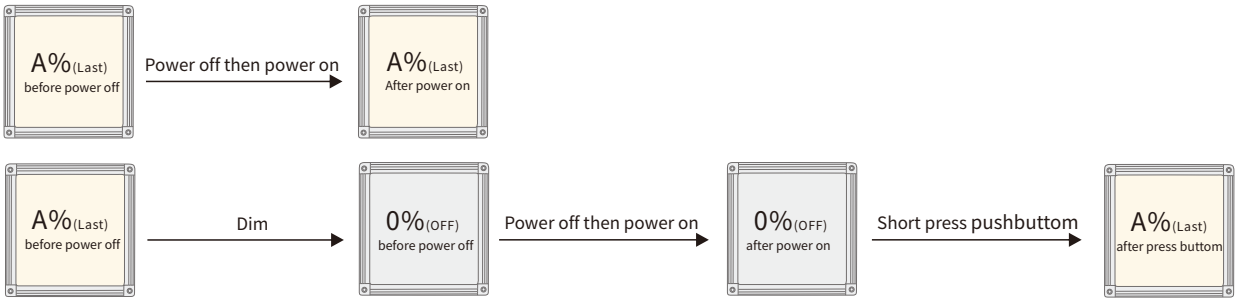
Turn on or turn off:short press pushbuttom for 0.2-1s.

Dimming: long press push buttom for 1-5s.

Power on status: after power on,the light state will be the same as the lighting on state.

If the light is on before power on,the light will be on after power on again,brightness will be the same as the last lighting on brightness.

If the light is off before power off,the light will be off after power on again,short press the pushbuttom,then the light will be on,the brightness will be the same as the last brightness.



Multiple lights synchronize control operation

method 1:

Step 1:long press the pushbuttom,confirm each light is on.

Step 2:short press the pushbuttom,confirm each light is off.

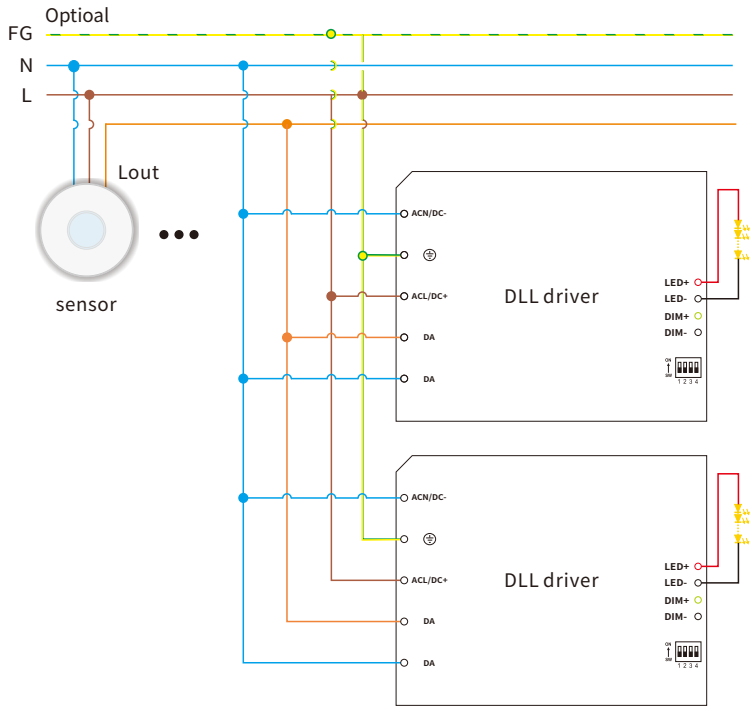
Step 3:long press the pushbuttom,confirm each light is from darkest to brightest and all the lights are synchronous.

method 2:

- Long press the pushbuttom 15s,all lights output to the brightest state.

corridorDIM dimming

Wiring diagram



Switch to the corridorDIM dimming mode

- Method 1: Switch by sensor.

  After installation according to the wiring diagram of corridorDIM dimming application, you can use the following two methods to switched.

  Method 1: Keep the movement in the effective sensing area for 5 minutes, the corridorDIM dimming function of the drive will be switched and light up 100% (under the default setting).

  Method 2: Switch by Hold-time

  Set the hold-time of the sensor to more than 5 minutes. When the motion sensor detects a person and turns on the output for 5 minutes, the corridorDIM dimming function will be switched and the light will be on 100% (Default), finally restore the hold-time that the sensor actually needs.

-Method 2: Switch by normal switch

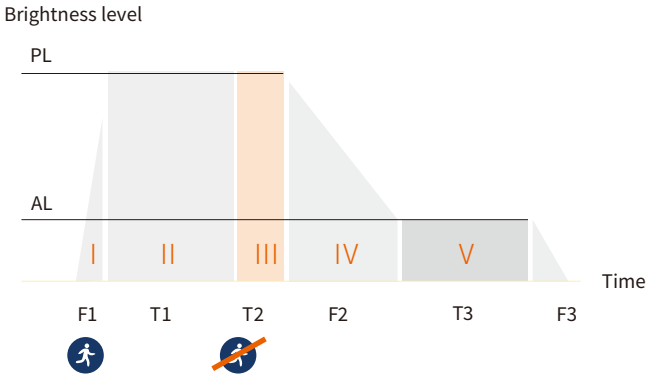
  After installation according to the wiring diagram of the corridorDIM dimming application, first replace the sensor with a normal switch, and then turn on the normal switch for 5 minutes, and the driver will automatically switch to corridorDIM dimming mode, then remove the normal switch and replace it with the sensor.

- After switch to the corridorDIM dimming mode, the pushDIM dimming mode will be automatically deactivate .

Remarks

- During normal working,It is recommended to set the hold-time of the motion sensor to the minimum.
- Need to use a motion sensor with AC switch.

corridorDIM working process

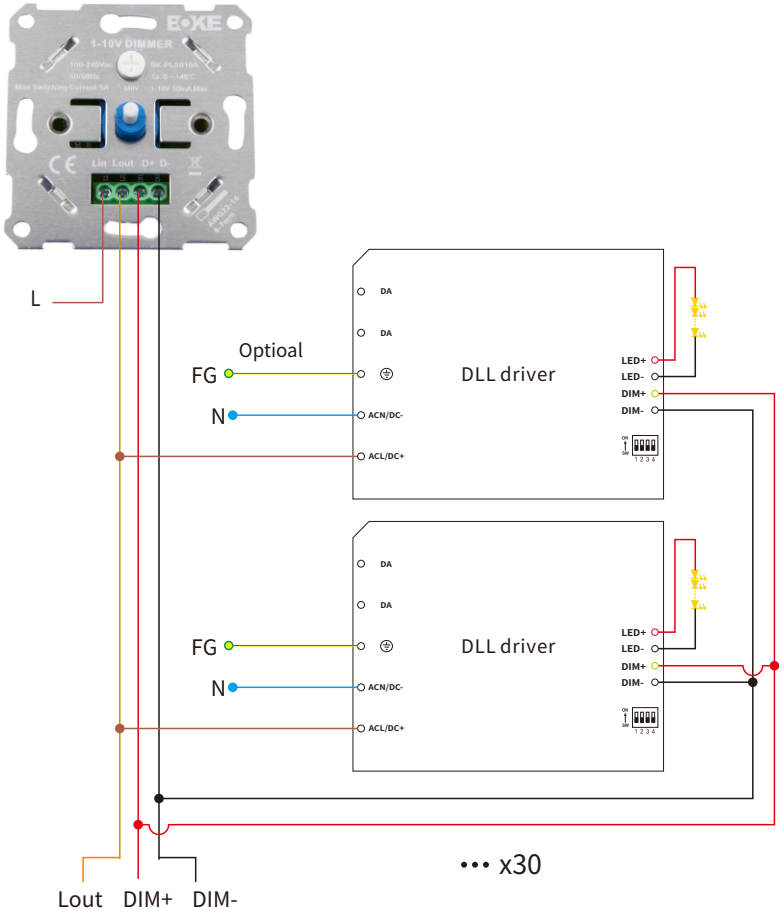


- The parameters of corridorDIM can be set through the configuration tool.
- corridorDIM is not activated by default.

Name	Symbol	Factory setting	Settable range
Fade-in time	F1	1s	0-100s
Presence level	PL	100%	0-100%
Hold-on time	T1	By sensor setting	
Run-on time	T2	180s	0-60000s
Fade-out time	F2	5s	0-100s
Absence level	AL	10%	0-100%
Stand-by Time	T3	unlimited	0-59999s,60000s(unlimited)
Fade-off time	F3	0s	0-100s

1-10V/10V PWM dimming application

Wiring diagram



Switch to the 1-10V / 10V PWM dimming mode

-Method 1: After installation according to the wiring diagram of the 1-10V / 10V PWM dimming application, adjust the dimmer to the minimum and then to the maximum, the driver will automatically activate the 1-10V control mode.

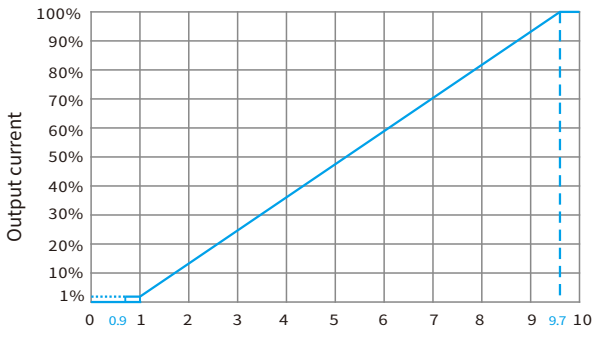
-Method 2: Short-circuit the DIM+ and DIM- ports for 2s, the driver will automatically activate the 1-10V control mode.

Remarks:

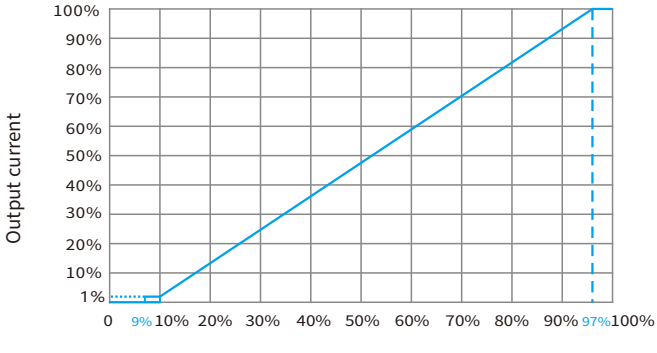
- Dimming interface characteristics: 0.9V and below are closed, 1V is the darkest, 10V is the brightest,1-10V is the dimming range.
- The dimming interface distinguishes between positive and negative, DIM is positive, GND is negative, please do not reverse.
- Dimming interface does not support voltage access higher than 20V, otherwise it will cause damage to the internal components.
- When the dimming interface is open, the driver outputs the maximum current. When the interface is short-circuited, the current output is closed.
- When multiple synchronous dimming is required, the positive poles of the dimming interface of each driver are connected together, and the negative poles are connected together.
- Support passive dimmer or isolated active dimmer dimming, does not support non-isolated active dimmer dimming.
- In general, it is recommended that the number of mounted drives does not exceed 30pcs, and the wiring length does not exceed 100m.
- It is recommended that the dimming wires should not be lower than the 22AWG wire.
- Do not put the dimming wires with high voltage or interference sources. If it is unavoidable, please use the shielded wires.
- It is recommended to conduct sample test first and confirm the dimming effect before bulk purchase.
- If you need a drive with 0-10V dimming characteristics, please contact BOKE.

Dimming curve

Output current vs.Dimming Voltage(Typical)



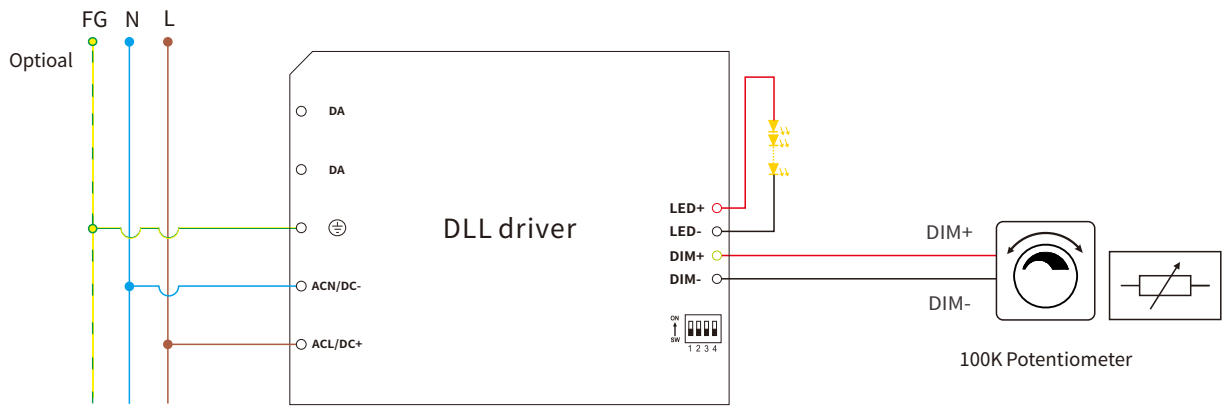
Output current 10V PWM Duty Cycle(Typical)



*Frequency range:100Hz-3KHz

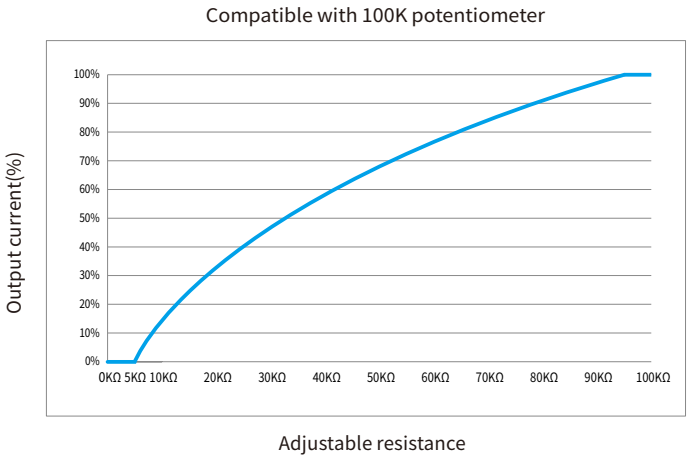
100K potentiometer dimming application

Wiring diagram

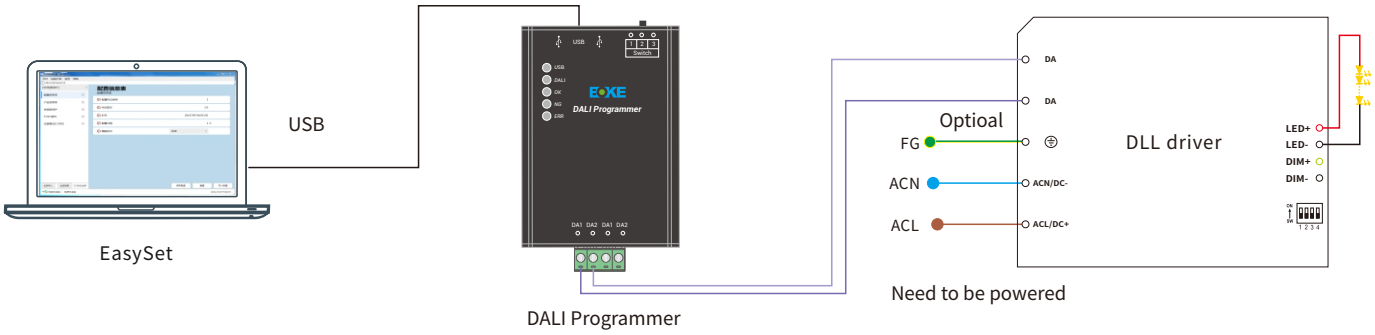


- Only one driver can be mounted in the potentiometer dimming mode.
- Dimming interface does not support voltage access higher than 20V, otherwise it will cause damage to the internal components.
- When the dimming interface is open, the driver outputs the maximum current. When the interface is short-circuited, the currentoutput is closed.
- It is recommended that the dimming wires should not be lower than the 22AWG wire.
- Do not put the dimming wires with high voltage or interference sources. If it is unavoidable, please use the shielded wires.
- It is recommended to conduct sample test first and confirm the dimming effect before bulk purchase.
- If you need a drive with 0-10V dimming characteristics, please contact BOKE.

Dimming curve



Device configuration



Configure tools and software

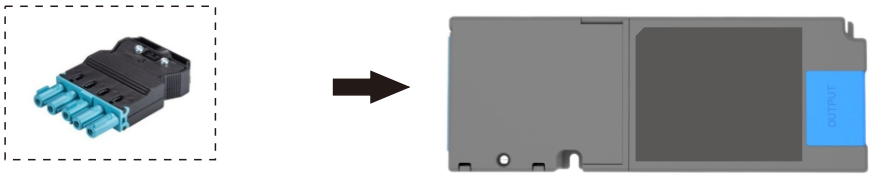
Name	Brand	Name	Minimum version
DALI Configurator	BOKE	DALI Programmer	V1.0.0
PC Software	BOKE	EasySet	V1.0.0

Parameters configure

Configuration items	Factory settings	Parameter configuration	Read/Wirte
Product information	-	NO	Read Only
Adjustable output current(AOC)	Activated	YES	Read/Wirte
PUSH dimming function(pushDIM)	Activated	YES	Read/Wirte
1-10V dimming (1-10V)	Activated	YES	Read/Wirte
Corridor dimming (corridorDIM)	Activated	YES	Read/Wirte
Emergency lighting(EL)	Activated(setting 1)	YES	Read/Wirte
Constant light output function(CLO)	Deactivated	YES	Read/Wirte
Hot plug-in protection(HPP)	Activated	YES	Read/Wirte
Run time		NO	Read Only
Other parameters		YES	

Optional accessories

Pluggable strain relief, 5Pole (Wieland)



Model: BK-BAS005B2(Optional accessories)

Pluggable connector:

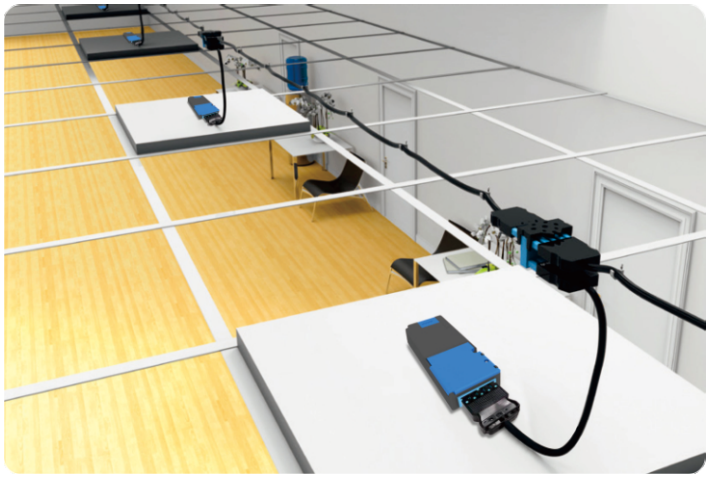
Wieland(92.953.5453.0)

Model: BK-BAS005B1(Factory default)

Pluggable connector:

Wieland(92.052.8658.0)

Application diagram

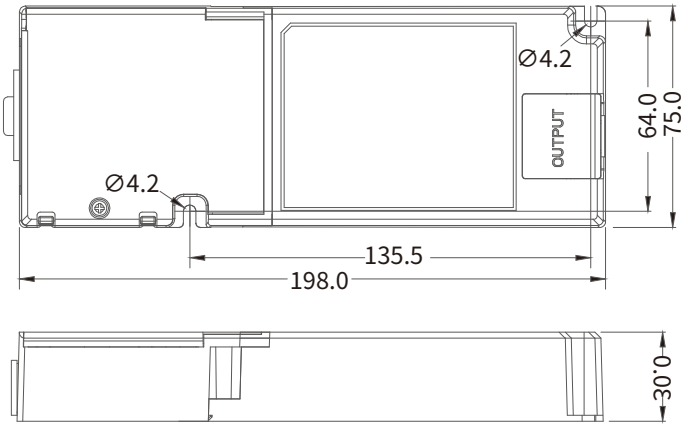


Installation

Mechanical dimensions

Unit:mm

BK-DLL042-1050BDB/BK-DLL052-1300BDB



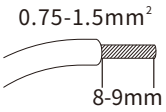
INPUT

Numbering	function
1	DA
2	DA
3	FG
4	ACN/DC-
5	ACL/DC+

OUTPUT

Numbering	function	colour
1	LED+	red
2	LED-	black
3	DIM+	green
4	DIM-	black

Output wire



Installation note

Hot plug-in

- Hot plug-in is not supported due to residual output voltage of > 0 V.
- If a LED load is connected the device has to be restarted.
- Restart can be achieved by re-powering the driver or executing a on/off command (action) through the control interface (DALI, pushDIM,1-10V)

Wiring guidelines

- 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)
- Max. lenght of output wires is 2 m.
- Incorrect wiring can damage LED modules.

Mounting screw specifications and torque

- Max. torque at the clamping screw: 0.5 Nm / M4

Replace LED module

1. Mains off
2. Remove LED module
3. Wait for 5 seconds
4. Connect LED module again

Installation requirements

- The driver should be installed in a dry, acid-free, oil-free, fat-free environment.
- The installation ambient temperature of the drive shall not exceed the value of Ta at any time.
- The temperature of the mounting surface of the driver should be lower than 40°C
- The driver should keep a certain distance from the heating stuff (such as the luminaire radiator).
- If the driver is used externally (it needs to be used with the accessories), the installation of the driver should also meet the following conditions:
  1.The driver should be a certain distance between the drivers, as shown in Figure 1.
  2.The driver keeps a certain distance from surrounding objects, as shown in Figure 2.

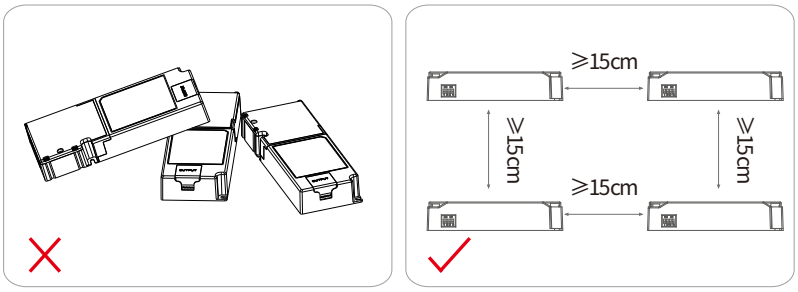


Figure 1

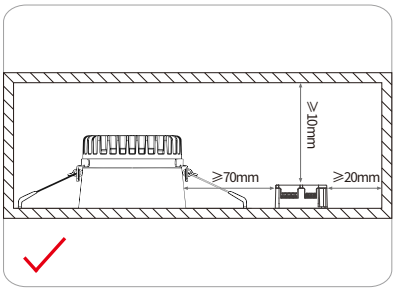
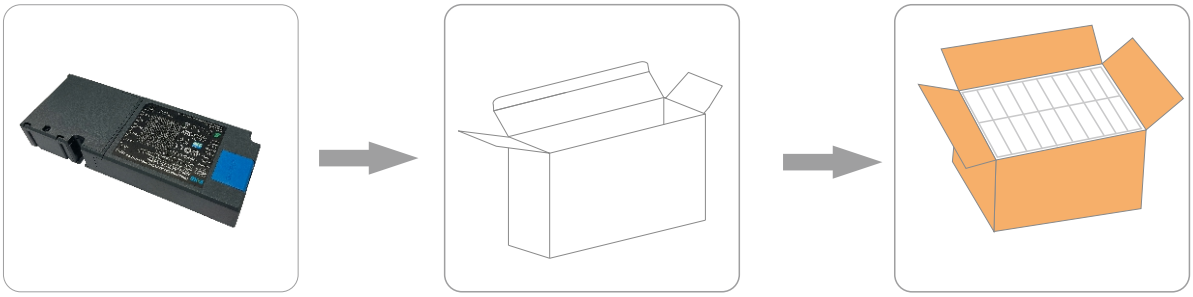


Figure 2

Packaging



Product　　Packaging　　16pcs×2layer=32pcs/CIN

Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
BK-DLL042-1050BDB	L198*W75*H30mm	283g	L225*W38*H82mm	L465*W325*H185mm	32pcs	9.06kg	10.2kg
BK-DLL052-1300BDB	L198*W75*H30mm	287g	L225*W38*H82mm	L465*W325*H185mm	32pcs	9.18kg	10.3kg

Additional information

1. The life and MTBF of the product are for reference only, and do not represent a warranty statement.
2. For more information, please send an email to info@bokedriver.com.