

Constant voltage linear dimmable driver

DEV Series suffix D(DALI-2+pushDIM+1-10V/10V PWM/Rx+12V)



Features

- Support DALI-2/pushDIM+1-10V/10V PWM/Rx dimming +12V auxiliary power
- Provide 12V 100mA auxiliary power supply to power control module or sensor
- Soft dimming and flicker-free at any brightness
- Dimming range 1~100%,support multiple lights dimming
- Standby power input<0.5W, meets the requirements of ErP certification
- High PF, high efficiency, low THD
- SELV and Class I design, suitable for use inside of the luminaires
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5.5-year guarantee

Interfaces

- DALI-2(DALI-2 DT6)
- PUSH(pushDIM)
- 1-10V 3in1(1-10V / 10V PWM/Rx)
- VCC Auxiliary power(12V,100mA)

Functions

- Support central emergency application(dimming normal in DC input)
- Support self-contained emergency application
- Protective features (short-circuit, overload protection)

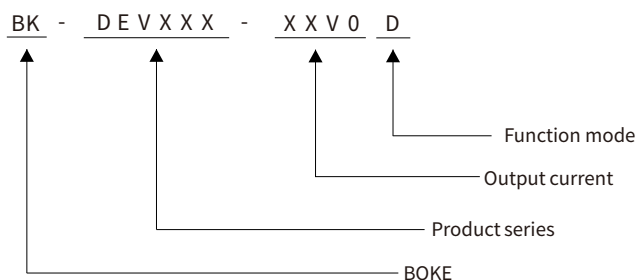
Suitable for lights

- Suitable for CV strip lights, CV linear lights, floor lights, three-proof lights, bracket light, etc

Typical applications

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

Model coding rules of DEV series



Function list

Model	Suffix	Wired dimming			Aux power
		DALI-2	pushDIM	1-10V 3in1	12V/0.1A
BK-DEV080 BK-DEV150 BK-DEV200	D	√	√	√	√

Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension
BK-DEV080-24V0D	200-240VAC/DC	81.6W MAX.	24VDC	3.4A	L241.5*W48*H30mm
BK-DEV150-24V0D	200-240VAC/DC	150W MAX.	24VDC	6.25A	L281.5*W48*H30mm
BK-DEV200-24V0D	200-240VAC/DC	199.2W MAX.	24VDC	8.3A	L321.5*W48*H30mm
BK-DEV200-48V0D	200-240VAC/DC	199.2W MAX.	48VDC	4.15A	L321.5*W48*H30mm

Technical data

Product model	BK-DEV080-24V0D
Output parameters	
Regulation method	Constant voltage
Rated output current	3.4A
Rated output voltage	24V
Rated output power	81.6W Max
Output voltage adjustment	Fixed output
Output current ripple LF	±2%
Voltage accuracy	±5%
Linear regulation	±5%
Load regulation	±5%
Flicker-free(typ.)	Pst LM=0.012, SVM=0.02,(The above parameters are obtained by testing with constant voltage light strip)
Input parameters	
Rated input voltage range	200-240VAC 200-240VDC
Input voltage range	180-264VAC 200-264VDC
Input voltage shock	<300 V AC
Input current	<0.48A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typ.)	PF: 0.98,DF: 0.98,see the electrical values below for details
Input THD(typ.)	5% ,see the electrical values below for details
Efficiency(typ.)	91% ,see the electrical values below for details
In-rush current(typ.)	23.7A peak ,350us 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	> 100,000 switching cycles
Power consumption(typ.)	Full load(Pin):89.7W, 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):3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC,I/P-DALI: 1500VAC,O/P-DALI: 1500VAC
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(90°/270° , 5 times each with an interval of 60s)(Performance criterion:B)
Leakage current(typ.)	0.31mA
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH
Control interface	
DALI dimming port	Voltage range: DC9.5-22.5V, typical 16V, interface current consumption: 1.8mA
pushDIM dimming port	Voltage range: AC180-264V 50/60Hz
1-10V 3in1 dimming port	Voltage range: DC0-15V, maximum output current ≤0.75mA
Auxiliary power supply	DC12V ±5% 100mA
Dimming range	1-100%
Dimming drive mode	H-PWM
Emergency support	
Central emergency system	Supported
Self-contained emergency	Supported
Environment & Life time	
Operating temperature	Ta=-20-55°C
Case temperature	Tc=90°C
Operating humidity	5-85% RH, not condensing
Storage temp./humidity	-40-80°C, 5-85% RH, not condensing
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, Normal operation)
Environmental protection	RoHS
Certifications and standards	
Compliance certification	CE, ENEC, UKCA, RCM, DALI-2, CCC, EL
Safety	GB/T 19510.1,GB/T 19510.213, EN61347-1, EN61347-2-13, EN62384
EMC	GB/T 17743, GB17625.1, 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, 50Hz, full load and 25°C of ambient temperature.
- 2.The LED lamp load is a constant-voltage load.

Technical data

Product model	BK-DEV150-24V0D
Output parameters	
Regulation method	Constant voltage
Rated output current	6.25A
Rated output voltage	24V
Rated output power	150W Max
Output voltage adjustment	Fixed output
Output current ripple LF	±2%
Voltage accuracy	±5%
Linear regulation	±5%
Load regulation	±5%
Flicker-free(typ.)	Pst LM=0.011, SVM=0.009,(The above parameters are obtained by testing with constant voltage light strip)
Input parameters	
Rated input voltage range	200-240VAC 200-240VDC
Input voltage range	180-264VAC 200-264VDC
Input voltage shock	<300 V AC
Input current	<0.9A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typ.)	PF: 0.98,DF: 0.99,see the electrical values below for details
Input THD(typ.)	5%, see the electrical values below for details
Efficiency(typ.)	92.5%,see the electrical values below for details
In-rush current(typ.)	45A peak,390us 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	> 100,000 switching cycles
Power consumption(typ.)	Full load(Pin):162.2W, 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):3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC,I/P-DALI: 1500VAC,O/P-DALI: 1500VAC
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:B)
Leakage current(typ.)	0.27mA
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH
Control interface	
DALI dimming port	Voltage range: DC9.5-22.5V, typical 16V, interface current consumption: 1.8mA
pushDIM dimming port	Voltage range: AC180-264V 50/60Hz
1-10V 3in1 dimming port	Voltage range: DC0-15V, maximum output current ≤0.75mA
Auxiliary power supply	DC12V ±5% 100mA
Dimming range	1-100%
Dimming drive mode	H-PWM
Emergency support	
Central emergency system	Supported
Self-contained emergency	Supported
Environment & Life time	
Operating temperature	Ta=-20-55°C
Case temperature	Tc=90°C
Operating humidity	5-85% RH, not condensing
Storage temp./humidity	-40-80°C, 5-85% RH, not condensing
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, Normal operation)
Environmental protection	RoHS
Certifications and standards	
Compliance certification	CE, ENEC, UKCA, RCM, DALI-2, CCC, EL
Safety	GB/T 19510.1,GB/T 19510.213, EN61347-1, EN61347-2-13, EN62384
EMC	GB/T 17743, GB17625.1, 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, 50Hz, full load and 25°C of ambient temperature.
- 2.The LED lamp load is a constant-voltage load.

Technical data

Product model	BK-DEV200-24V0D	BK-DEV200-48V0D	
Output parameters			
Regulation method	Constant voltage	Constant voltage	
Rated output current	8.3A	4.15A	
Rated output voltage	24VDC	24VDC	
Rated output power	199.2W Max	199.2W Max	
Output voltage adjustment	Fixed output	Fixed output	
Output current ripple LF	± 2%	± 2%	
Voltage accuracy	± 4%	± 4%	
Linear regulation	± 4%	± 4%	
Load regulation	± 4%	± 4%	
Flicker-free(typ.)	Pst LM=0.051, SVM=0.005,(The above parameters are obtained by testing with constant voltage light strip)		
Input parameters			
Rated input voltage range	200-240VAC 200-240VDC		
Input voltage range	180-264VAC 200-264VDC		
Input votage shock	<300 V AC		
Input current	<1.1A (Rated input voltage)		
Input frequency	0/50/60Hz		
Input PF/Input DF(typ.)	PF: 0.98,DF: 0.99,see the electrical values below for details		
Input THD(typ.)	3% ,see the electrical values below for details		
Efficiency(typ.)	93% ,see the electrical values below for details		
In-rush current(typ.)	47A peak ,590us 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	> 100,000 switching cycles		
Power consumption(typ.)	Full load(Pin):214.2W, 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):3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC,I/P-DALI: 1500VAC,O/P-DALI: 1500VAC		
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:B)		
Leakage current(typ.)	0.51mA		
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH		
Control interface			
DALI dimming port	Voltage range: DC9.5-22.5V, typical 16V, interface current consumption: 1.8mA		
pushDIM dimming port	Voltage range: AC180-264V 50/60Hz		
1-10V 3in1 dimming port	Voltage range: DC0-15V, maximum output current ≤0.75mA		
Auxiliary power supply	DC12V ±5% 100mA		
Dimming range	1-100%		
Dimming drive mode	H-PWM		
Emergency support			
Central emergency system	Supported		
Self-contained emergency	Supported		
Environment & Life time			
Operating temperature	Ta=-20-60°C		
Case temperature	Tc=90°C		
Operating humidity	5-85% RH, not condensing		
Storage temp./humidity	-40-80°C, 5-85% RH, not condensing		
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, Normal operation)		
Environmental protection	RoHS		
Certifications and standards			
Compliance certification	CE, ENEC, UKCA, RCM, DALI-2, CCC, EL		
Safety	GB/T 19510.1,GB/T 19510.213, EN61347-1, EN61347-2-13, EN62384		
EMC	GB/T 17743 , GB17625.1, 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		

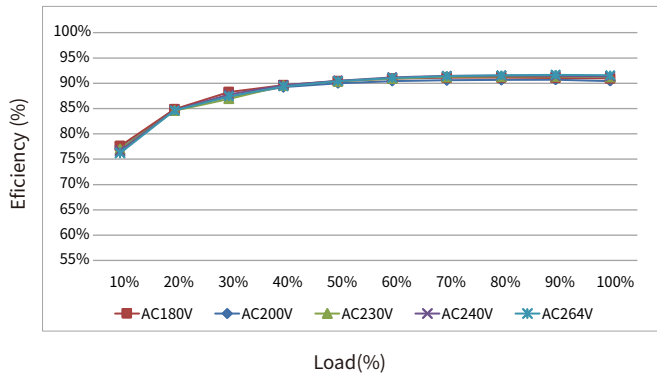
Remarks

- 1.By default, all parameter are measured at 230VAC input, 50Hz, full load and 25°C of ambient temperature.
- 2.The LED lamp load is a constant-voltage load.

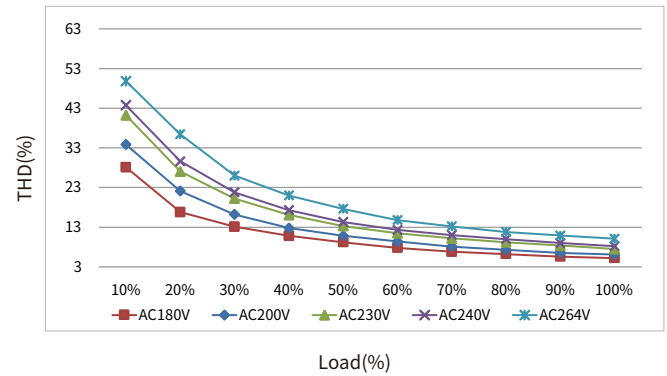
Electrical values

BK-DEV080-24V0D

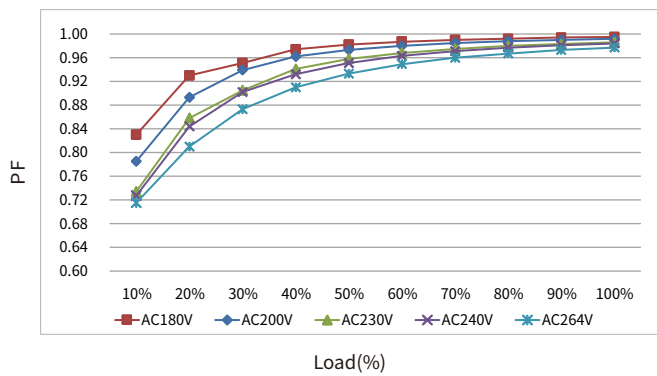
Efficiency vs load



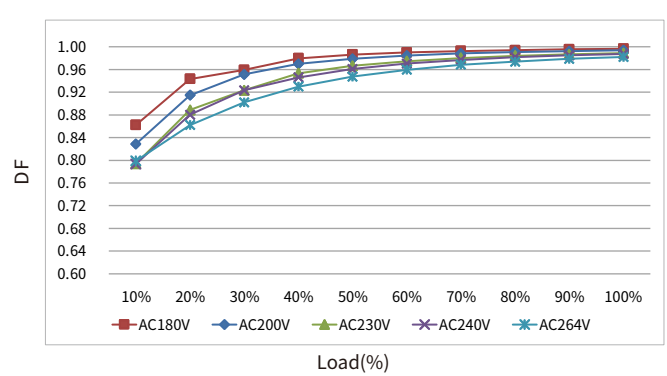
THD vs. Load



Power factor vs. Load

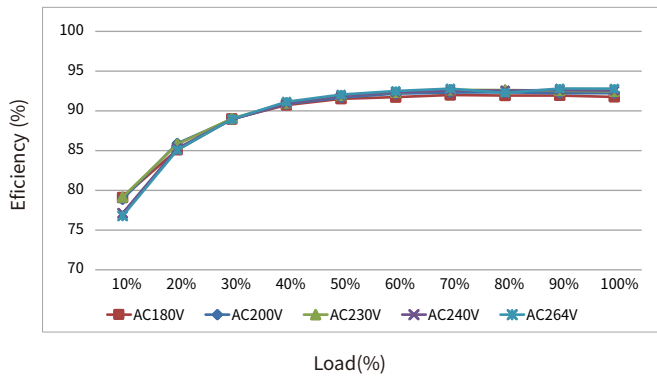


displacement power vs. Load

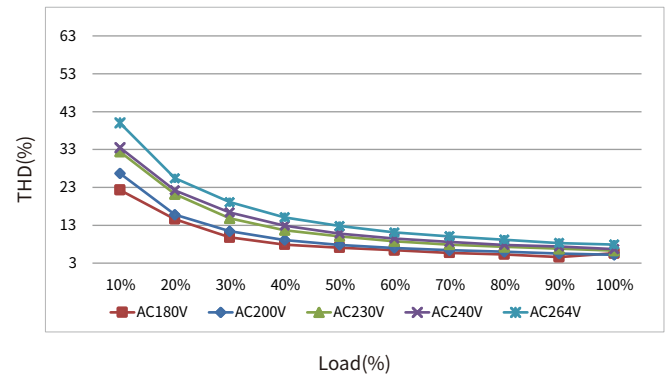


BK-DEV150-24V0D

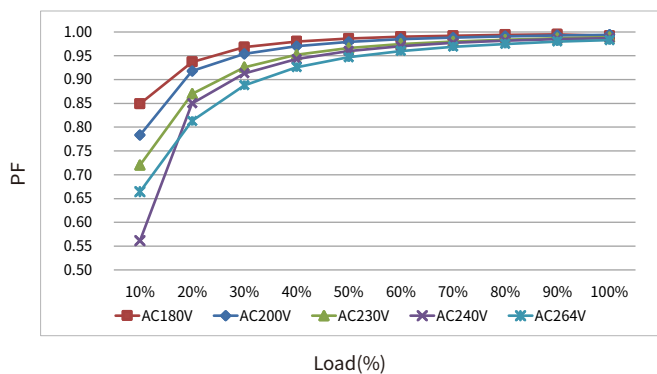
Efficiency vs load



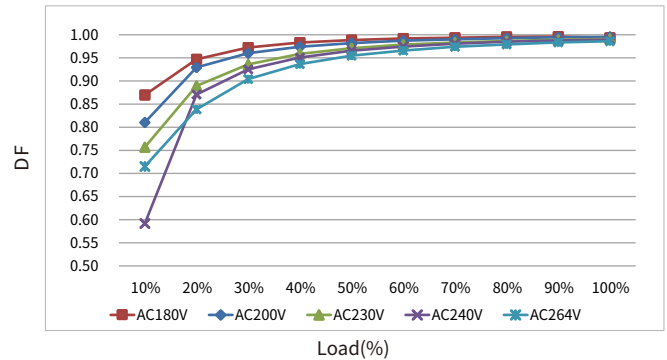
THD vs. Load



Power factor vs. Load



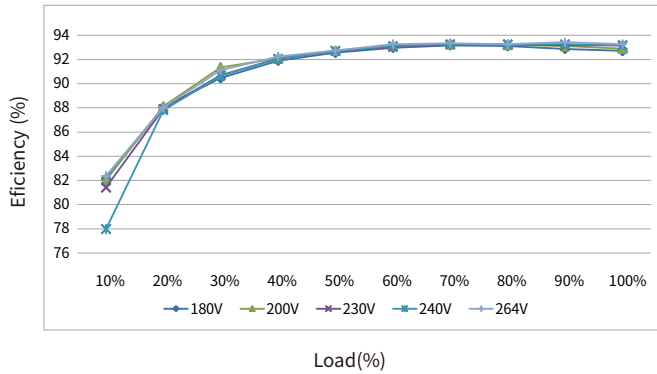
displacement power vs. Load



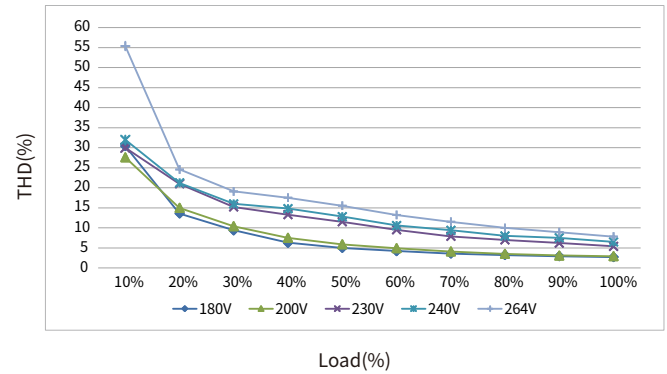
Electrical values

BK-DEV200-24V0D

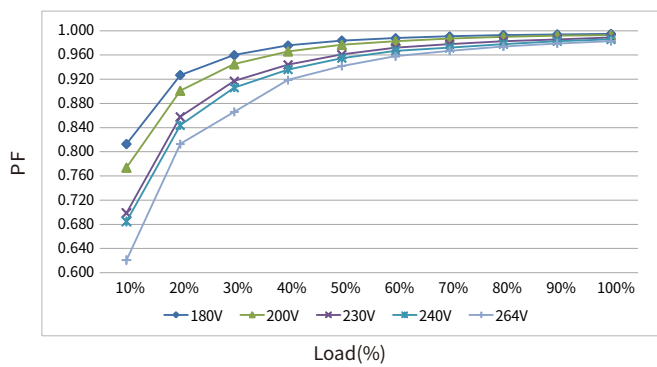
Efficiency vs load



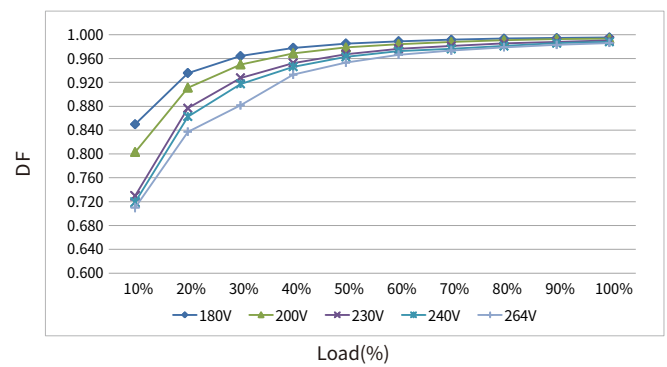
THD vs. Load



Power factor vs. Load

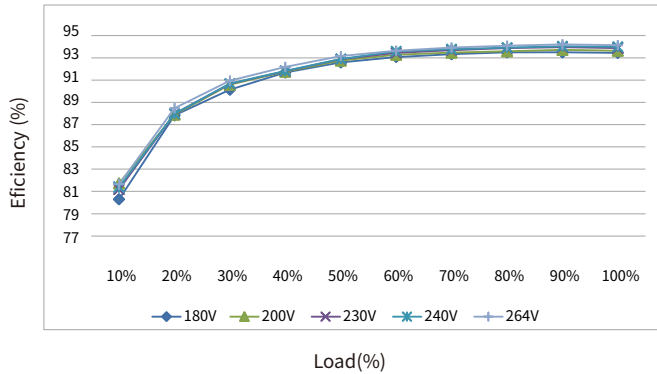


displacement power vs. Load

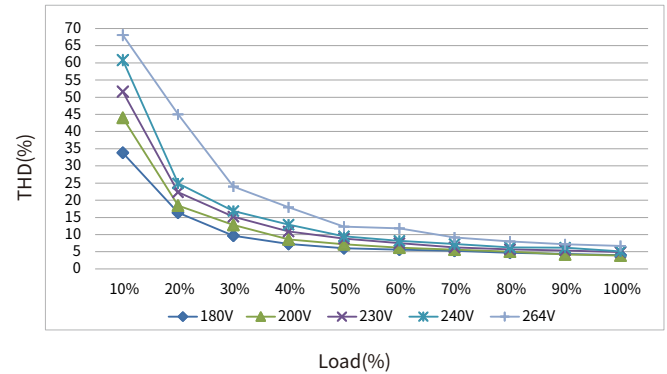


BK-DEV200-48V0D

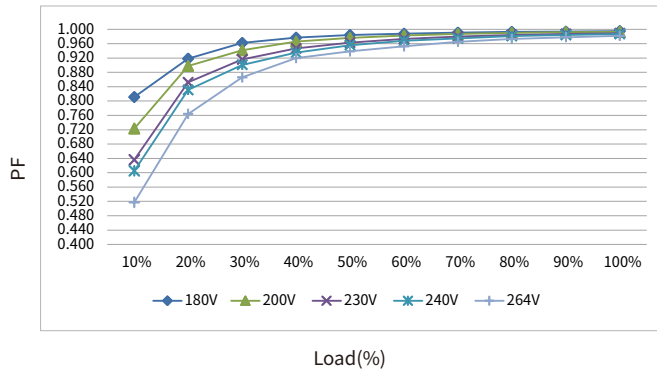
Efficiency vs load



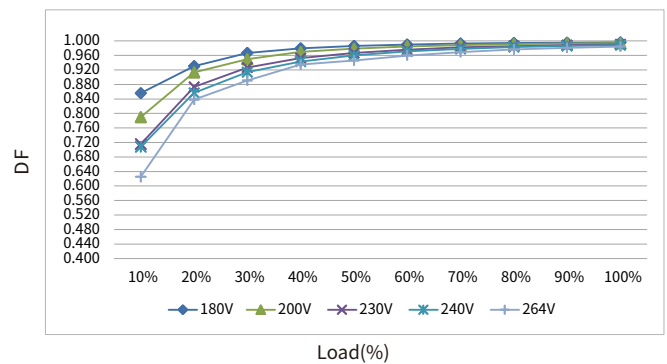
THD vs. Load



Power factor vs. Load



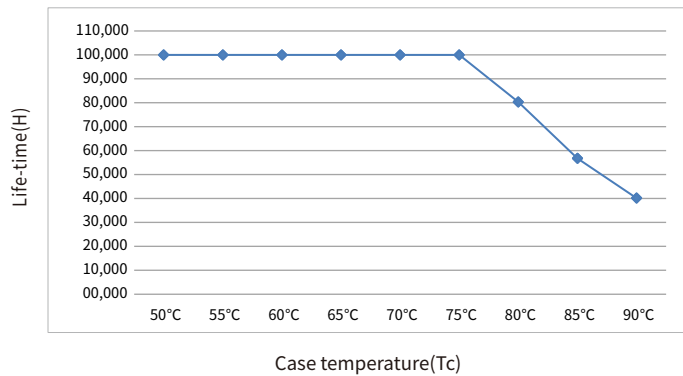
displacement power vs. Load



Expected life-time

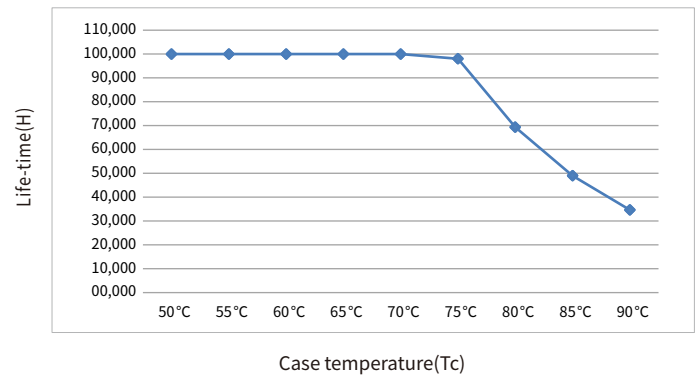
BK-DEV080

Life-time vs. case temperature



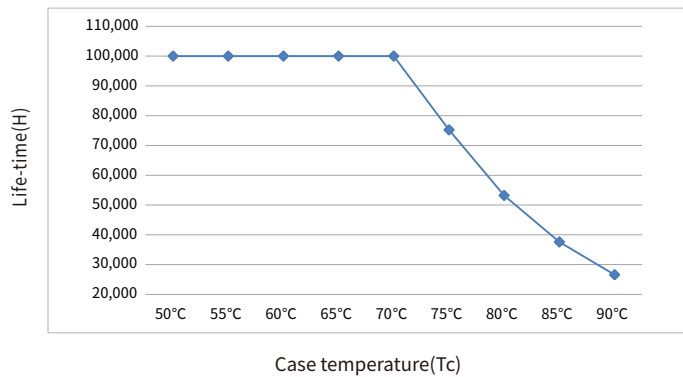
BK-DEV150

Life-time vs. case temperature



BK-DEV200

Life-time vs. case temperature



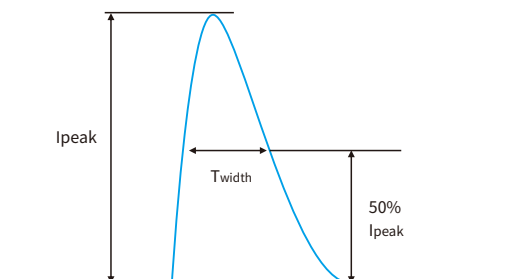
- The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).
- The relation of tc to ta temperature depends also on the luminaire design.

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-DEV080	23.7A	350us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	8	10	12	16	19	13	17	21	26	32	20	26	32	40	49
BK-DEV150	45A	390us		4	5	6	7	9	6	8	10	12	15	11	14	17	22	27
BK-DEV200	47A	590us		2	3	3	4	5	3	4	5	7	8	7	9	11	13	17

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 protection

- When the output of the driver is short-circuited, the driver will enter the protection state.

Output overload protection

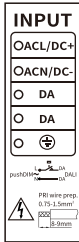
- When the load connected to the driver exceeds the rated power, the driver will enter a hiccup state. After reducing the load power, the driver will resume normal output.

Insulation between circuits

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

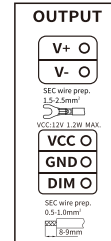
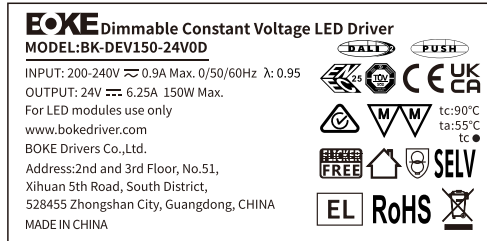
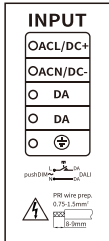
Label

BK-DEV080



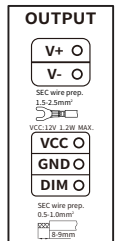
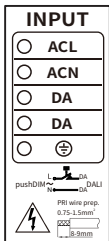
Laser engraving technology

BK-DEV150

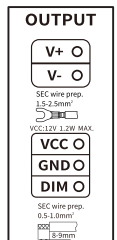
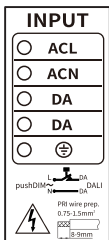


Laser engraving technology

BK-DEV200



Laser engraving technology

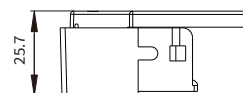
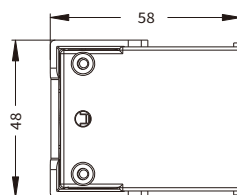


Laser engraving technology

Accessories



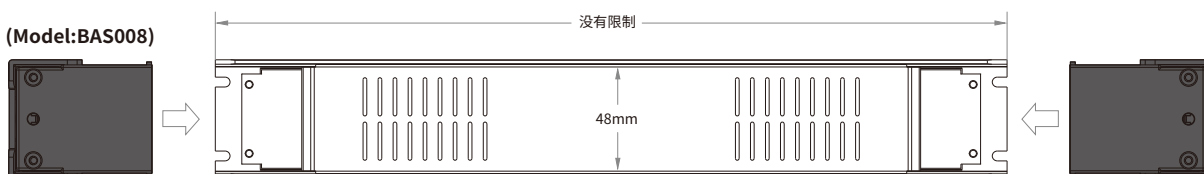
(Model: BAS008)



Unit:mm

Installation diagram of accessories

(Model: BAS008)



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 $2 \times 1.5\text{mm}^2$.
- 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.

Please refer to the table below

Cable size	Distance
$2 \times 0.50\text{mm}^2$	max.100m
$2 \times 0.75\text{mm}^2$	max.150m
$2 \times 1.00\text{mm}^2$	max.200m
$\geq 2 \times 1.50\text{mm}^2$	max.300m

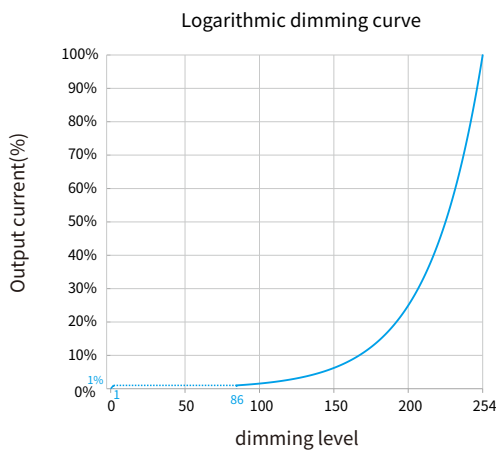
Power-on level :

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.

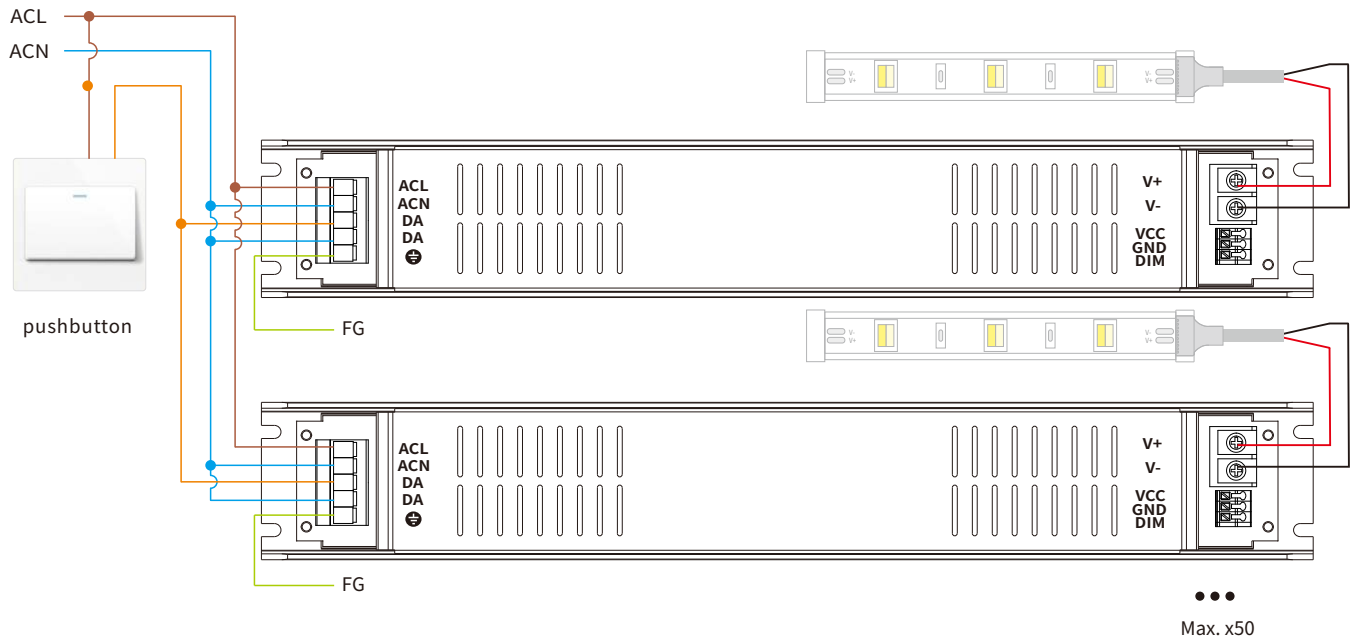
Dimming curve



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 pushbutton 5 times quickly within 3s, then the driver will automatically switch to the pushDIM dimming mode.

Remarks:

Max. 50 drivers per pushDIM control line.

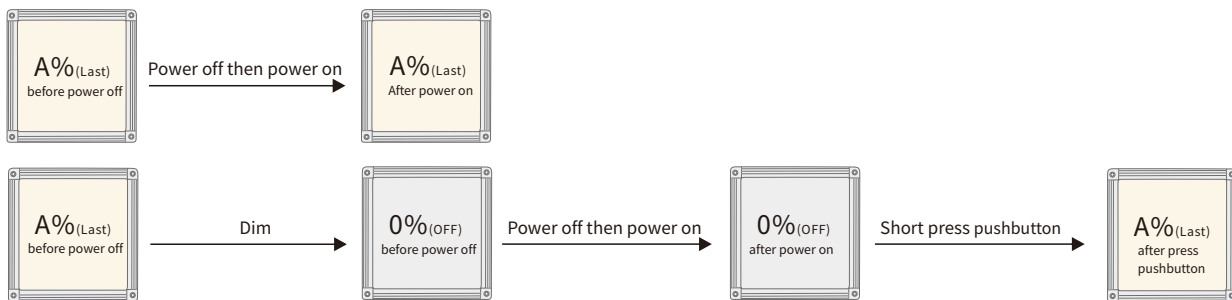
Turn on or turn off: short press pushbutton for 0.2-1s.

Dimming: long press pushbutton 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 pushbutton, 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 pushbutton, confirm each light is on.

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

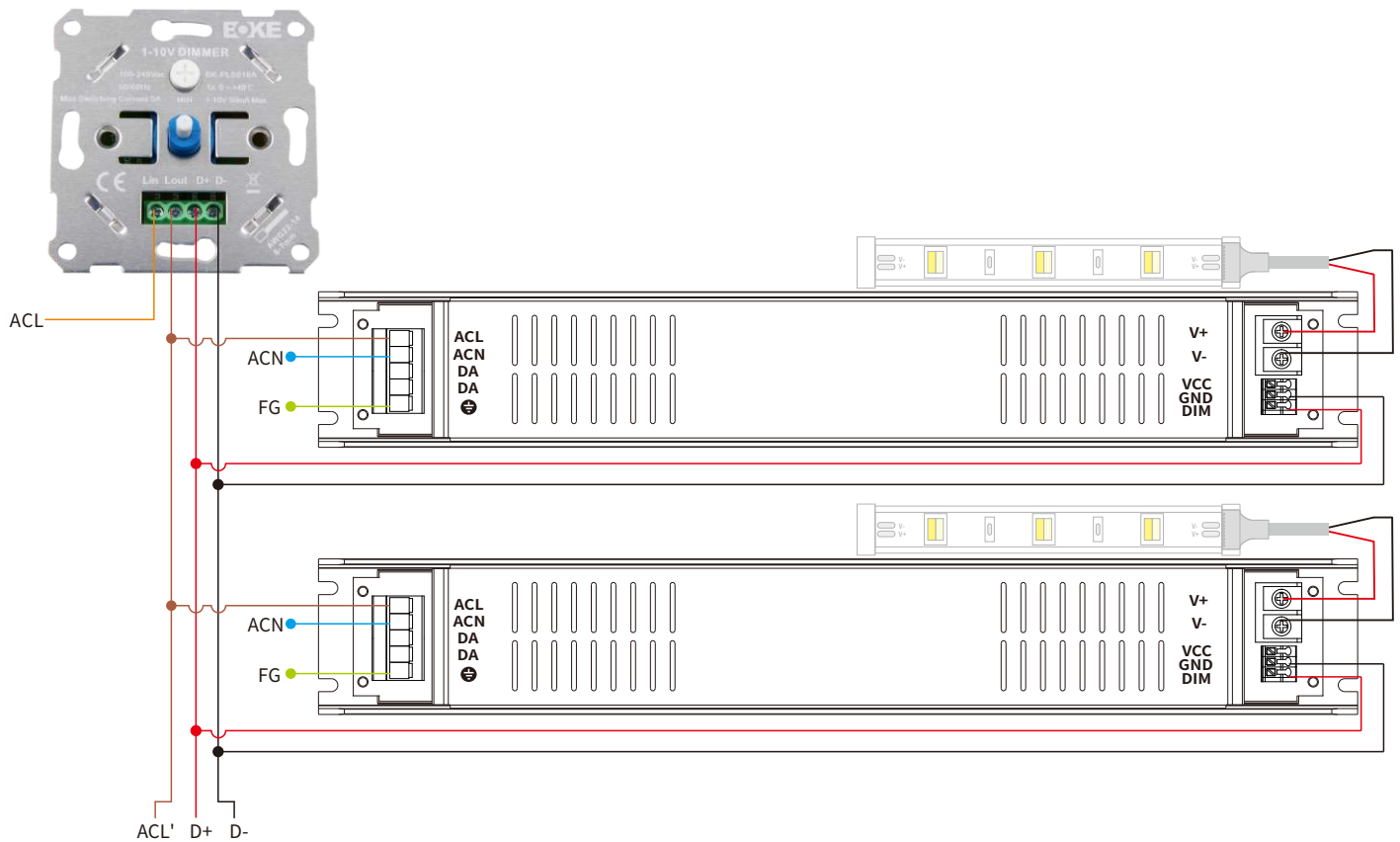
Step 3: long press the pushbutton, confirm each light is from darkest to brightest and all the lights are synchronous.

method 2:

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

1-10V/10V PWM dimming application

Wiring diagram



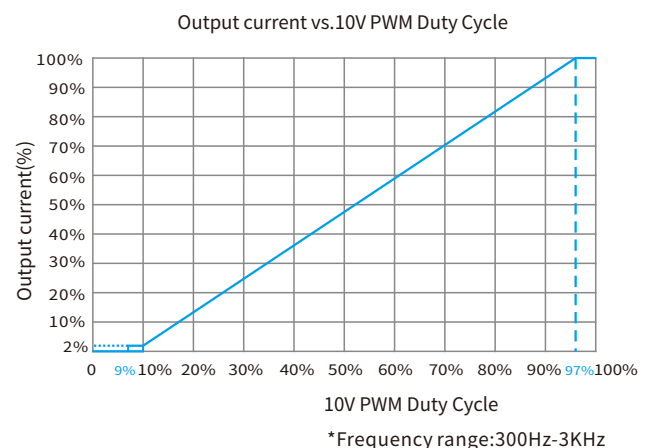
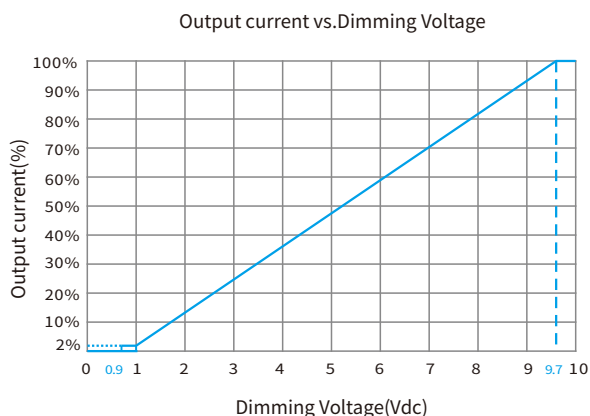
Switch to the 1-10V / 10V PWM dimming mode

- 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

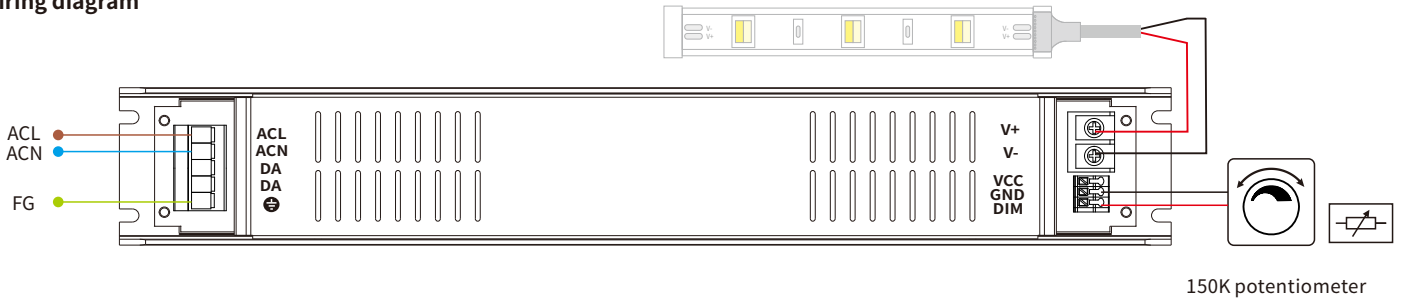
- Dimming interface characteristics: 0.9V and below are closed, 1V is the darkest, 10V is the brightest, 1-10V is the dimming range.
- The dimming interface distinguishes between positive and negative, DIM+ is positive, DIM- is negative, please do not reverse.
- Dimming interface does not support voltage access higher than 15V, 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.
- If you need a drive with 0-10V dimming characteristics, please contact BOKE.

Dimming curve



150K potentiometer dimming application

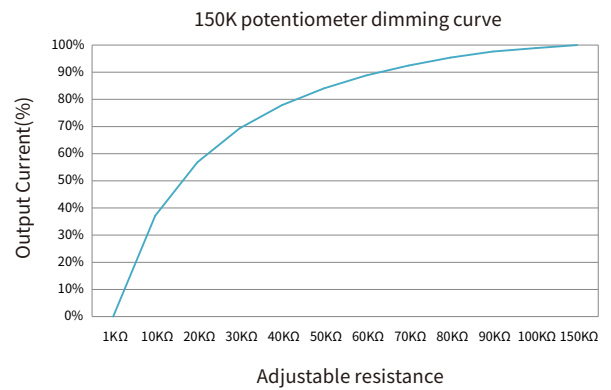
Wiring diagram



Remarks

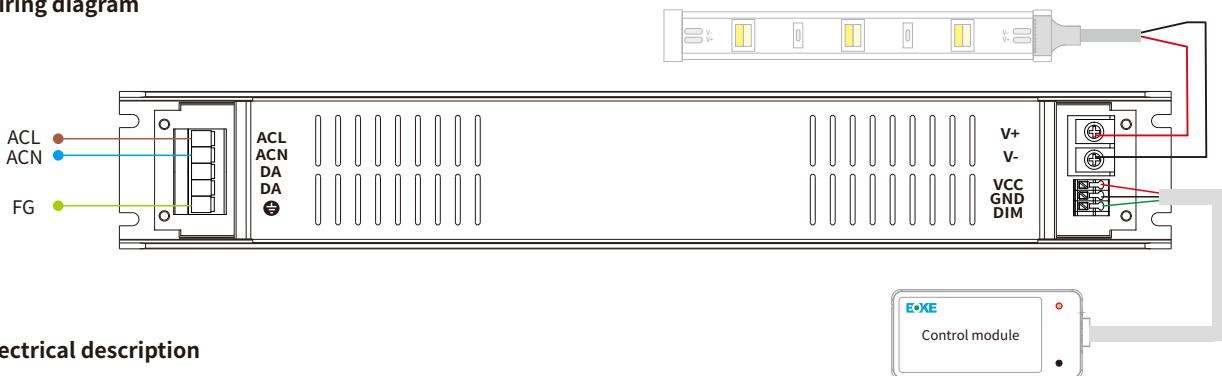
- In the 150K potentiometer dimming mode, the potentiometer can only be connected to one driver.

Dimming curve



1-10V/10V PWM+12V dimming application

Wiring diagram



Electrical description

VCC: +12VDC $\pm 5\%$, 100mA MAX

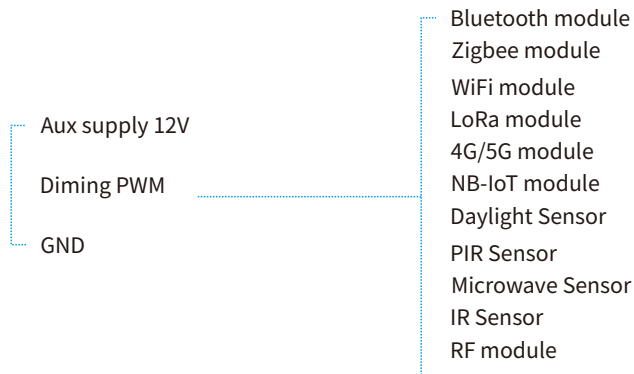
PDIM: Voltage: 3.3-10V

Frequency range: 300Hz-3kHz

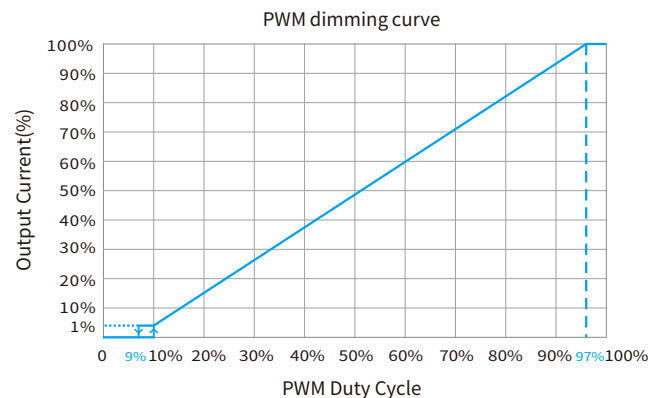
Phase position: positive logic

Duty cycle: 0%(OFF), 10%(darkest)~100%(brightest)

Typical applications



Dimming curve

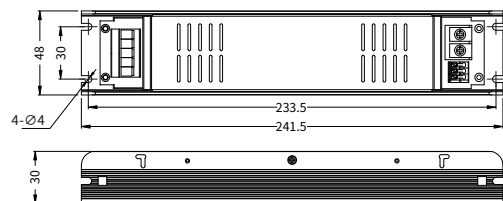


Mechanical Specification

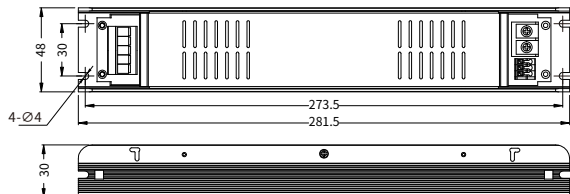
Size(Excluding accessories)

Unit:mm

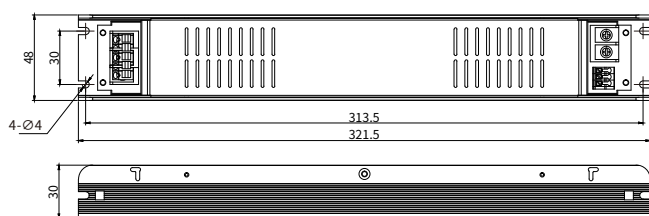
DEV080



DEV150



DEV200



INPUT

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

Input wire

0.75-1.5mm²

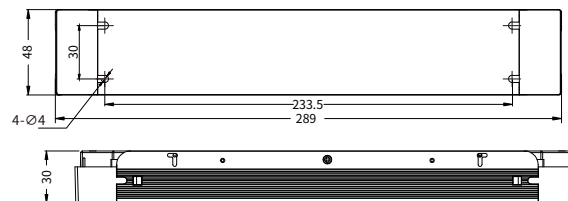


Mechanical Specification

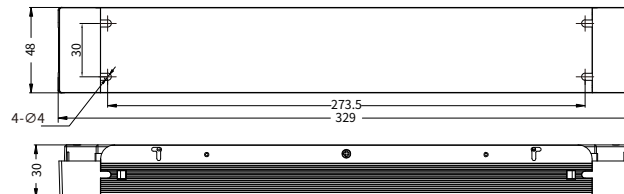
Size(Include accessories)

Unit:mm

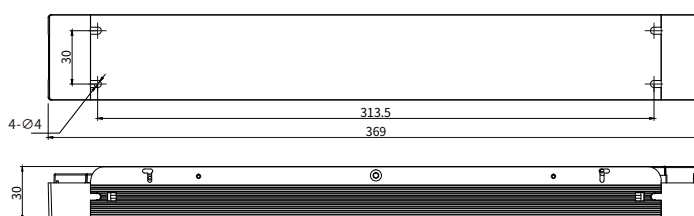
DEV080



DEV150



DEV200



OUTPUT

Numbering	function
1	V+
2	V-

Output wire

1.5-2.5mm²

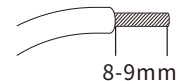


DIMMING

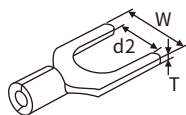
Numbering	function	colour
1	VCC	red
2	GND	black
3	DIM	red

Dimming wire

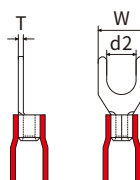
0.5-1.0mm²



Cold-pressed terminal reference



Cold-pressed terminal (bare part)



Cold-pressed terminal(Insulating part)

Product model	Position	Cable cord diameter	Cold-pressed Terminal			
			Model reference	Diameter		Thickness(T)
				Inside diameter(d2)	Outside diameter(W)	
DEV080/DEV150/DEV200	Output	0.5-1.5mm ²	SNB1.25-4S/SV1.25-4S	4.3mm	6.4mm	0.7mm
			SNV1.25-4M/SV1.25-4M		7.2mm	
		1.5-2.5mm ²	SNB2-4S/SV2-4S		6.4mm	0.8mm
			SNV2-4M/SV2-4M		7.2mm	

Installation note

Hot plug-in

- Hot plug-in is not supported due to residual output voltage of $> 0\text{ V}$.

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. length of output wires is 2 m.
- Incorrect wiring can damage LED modules.

Installation requirements

- The driver should be installed in a dry, acid-free, oil-free, fat-free environment.
- The installation ambient temperature of the driver shall not exceed the value of T_a at any time.
- The temperature of the mounting surface of the driver should be lower than the temperature of T_a .
- 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.
 3. Two power outputs cannot be connected in parallel.

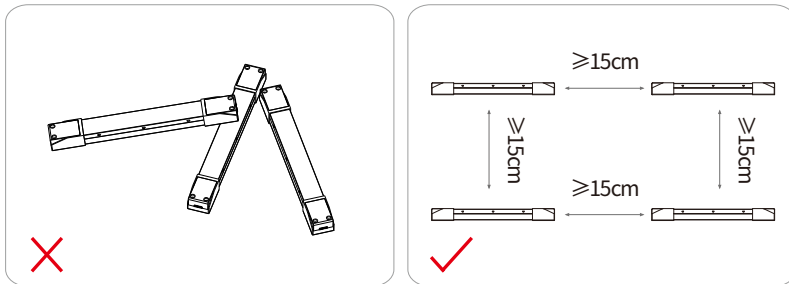


Figure 1

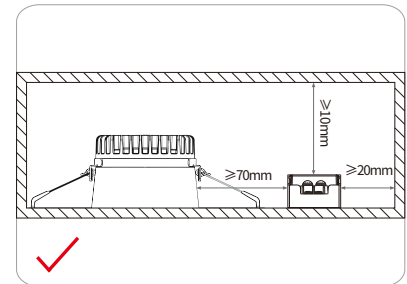
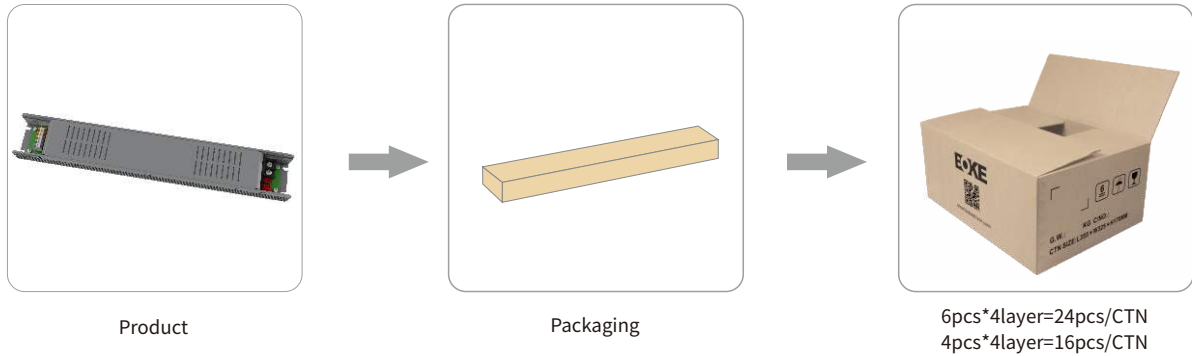


Figure 2

Replace LED module

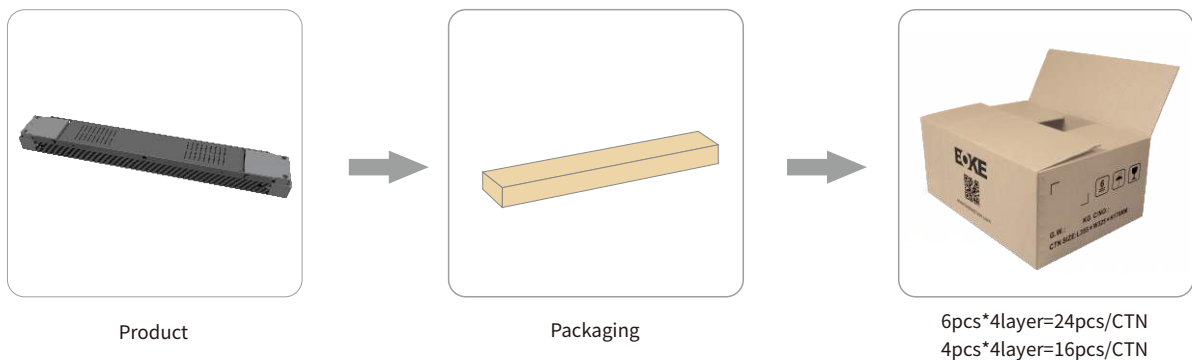
1. Mains off
2. Wait more than 5 seconds
3. Remove LED module
4. Connect LED module again

Packaging(Excluding accessories)



Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
DEV080	L241.5*W48*H30mm	345g	L300*W54*H37mm	L310*W345*H170mm	24pcs	8.28kg	9.78kg
DEV150	L281.5*W48*H30mm	417g	L300*W54*H37mm	L310*W345*H170mm	24pcs	10.0kg	11.6kg
DEV200	L321.5*W48*H30mm	489g	L380*W54*H37mm	L400*W240*H165mm	16pcs	7.82kg	9.12kg

Packaging(Include accessories)



Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
DEV080	L289*W48*H30mm	388g	L300*W54*H37mm	L310*W345*H170mm	24pcs	9.31kg	10.8kg
DEV150	L329*W48*H30mm	460g	L380*W54*H37mm	L400*W240*H170mm	16pcs	7.36kg	8.90kg
DEV200	L369*W48*H30mm	532g	L380*W54*H37mm	L400*W240*H170mm	16pcs	8.51kg	9.85kg

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.