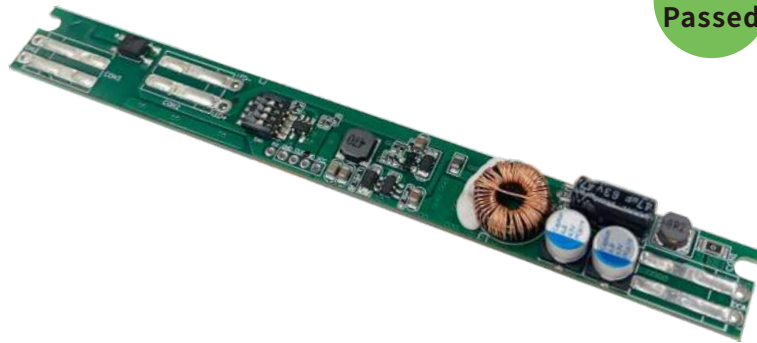




Features

- Support DALI-2 DT6 dimming mode
- No polarity of input
- 16-level current output can be realized by DIP-switch
- Soft dimming and flicker-free at any brightness, meets the new requirements of ErP certification
- Using HPC patented technology, at any dimming level, the brightness of the luminaries is the same
- Intelligent LED hot-plug protection function
- Suitable for STUCCHI standard housing
- SELV and Class III design, suitable for use inside of the luminaire
- 5.5-year guarantee

Interfaces

- DALI-2(DALI-2 DT6)

Functions

- Protective features (short-circuit, overload, no-load, hot plug-in protection)

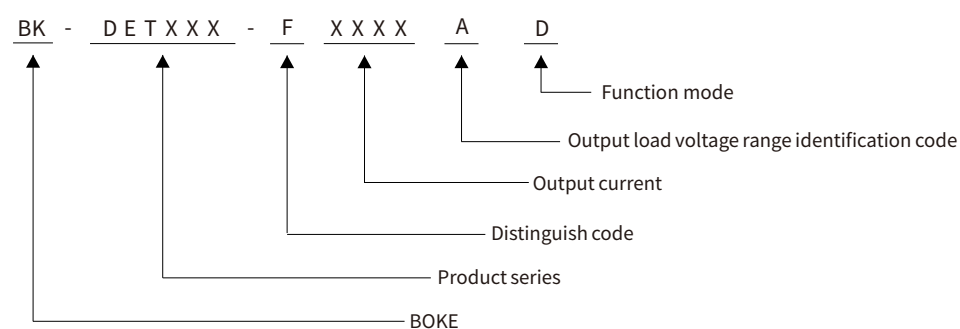
Suitable for lights

- Suitable for DC track light

Typical applications

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

Model coding rules of DET series



Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension
BK-DET030-F0800AD	48VDC	30.4W MAX.	2.5-42VDC	0.1-0.8A	L125*W13.7*H10.5mm



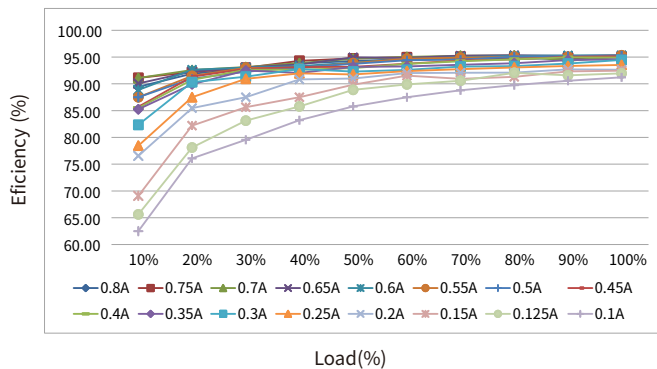
Technical data

Product model	BK-DET030-F0800AD
Output parameters	
Regulation method	Constant Current
Rated output current range	0.1-0.8A,see the DIP-switch for details
Rated output voltage range	2.5-42VDC,see the DIP-switch for details
Rated output power	30.4W Max,see the DIP-switch for details
Output current adjustment	DIP S.W(16 levels)
Output current ripple(typ.)	±2%(160kHz)
Output current accuracy	±3%
Linear regulation	N/A
Load regulation	±3%
No load output voltage	48VDC
Flicker-free(typ.)	Flickering percent(IEEE 1789)=0.027%(4.1kHz), Flicker index(IEEE 1789)=0.014(4.1kHz), Pst LM = 0.000, SVM = 0.003, (The above parameters are obtained from testing the panel lights)
Input parameters	
Rated input voltage range	48VDC±5%
Input voltage range	N/A
Input votage shock	N/A
Input current	<0.67A (Rated input voltage)
Input frequency	N/A
Input PF/Input DF(typ.)	N/A
Input THD(typ.)	N/A
Efficiency(typ.)	94% , see the electrical values below for details
In-rush current(typ.)	N/A
Start/Switchover/Turn off(typ.)	0.7s(AC start),0.5s(Turn off)
Switching cycles	> 100,000 switching cycles
Power consumption(typ.)	Full load(Pin):32.3W, No load(Pno):N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	DALI-LED: 1500V AC, DALI-DCIN: 1500V AC.
Mains surge capability	N/A
Isolation resistance	>10GΩ
Control interface	
DALI dimming port	Voltage range: 9.5-22.5V, typical 16V, interface current consumption: 1.8mA
pushDIM dimming port	N/A
1-10V 3in1 dimming port	N/A
Auxiliary power supply	N/A
Dimming range	0.1-100%(minimum current:0.7mA)
Dimming drive mode	AM+PWM(<13%)
Emergency support	
Central emergency system	N/A
Self-contained emergency	N/A
Environment & Life time	
Operating temperature	Ta=-20-45°C(With package)
Case temperature	N/A
Operating humidity	5-85% RH, non-condensing
Storage temp./humidity	-40-80°C, 5-85% RH, non-condensing
IP grade	N/A
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, DALI-2
Safety	EN61347-1, EN61347-2-11
EMC	EN55015, EN61000-4-2
DALI-2	IEC 62386-101(DALI-2), IEC 62386-102(DALI-2), IEC 62386-207(DALI-2)
EL	N/A
RF	N/A

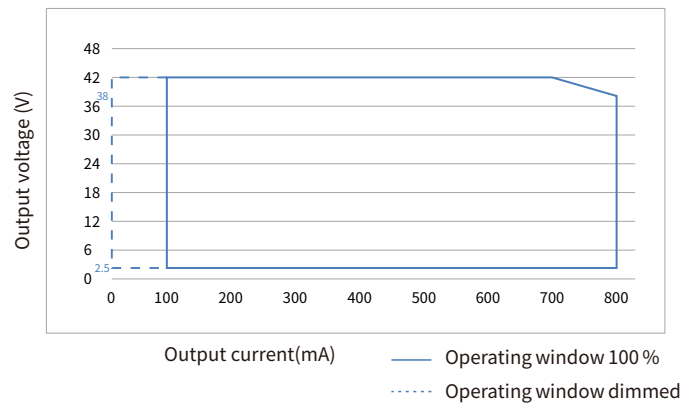
Electrical values

BK-DET030-F0800AD

Efficiency vs load



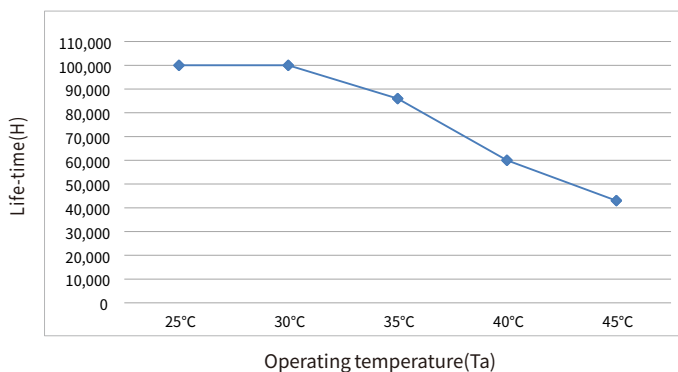
Operating window



Expected life-time

BK-DET030-F0800AD

Life-time vs. Operating temperature



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

Protection

Output hot plug-in protection

- This function is used to prevent LED light that are far below the driver's no-load voltage burnout when hot plugged into a powered driver output.
- This product comes with a default hot plug protection function at the factory and cannot be turned off.

- Note:

Due to the hot plug-in protection function of the driver, the following applications may not achieve the expected effect:

1. When the output of the driver is connected to the color temperature switch:
When the switch is used to change the color temperature, the hot plug-in protection of the driver will be triggered, and the LED will not be lit.
2. When the LED driver is used in conjunction with a self-contained (independent) emergency control device:
Use the self-check test switch of the emergency control device to test the emergency function and when exiting the emergency mode, the driver's hot plug-in protection will be triggered and the LED will not be lit.

The above two applications should use drivers without hot plug-in protection function to achieve the expected working effect. It is recommended to choose our company's drivers without hot plug-in protection function or those that support configurable closing of hot plug-in function.

Output short-circuit behaviour

- Output short-circuit will not damage the driver.
After removing the short circuit fault, the driver will automatically resume output.

Output no-load operation

- Output no-load will not damage the driver.
Please turn off the driver first if you need to connect the LED load.

Output overload protection

- The LED driver turns off the output if the output voltage range is exceeded.
The output will be activated again after restart the LED driver .

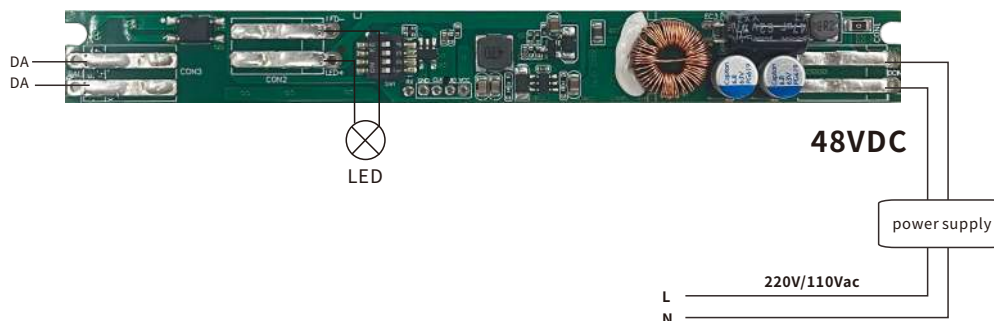
Driver restart method

There are two ways to restart the driver:

- Through the AC input:disconnect the AC of the driver and power it again.
- Through dimming interface.
DALI:send "OFF" command first,then send "MAX" command.

DALI dimming application

Wiring diagram



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

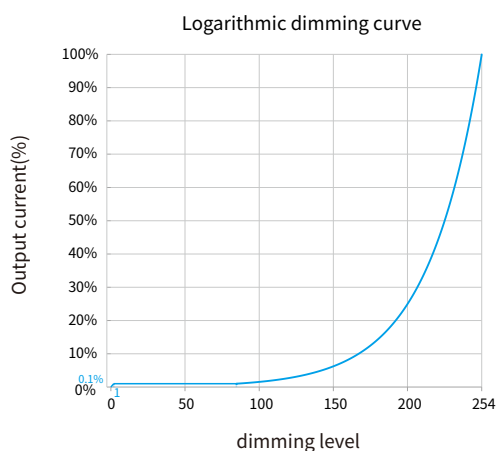
Power-on level :

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.

DIP-switch & output current

BK-DET030-F0800AD

Output			1	2	3	4
Prated(W)	Irated(mA)	Voltage(Vdc)				
4.20	100	2.5-42	ON	ON	ON	ON
5.25	125	2.5-42	--	ON	ON	ON
6.30	150	2.5-42	ON	--	ON	ON
8.40	200	2.5-42	--	--	ON	ON
10.50	250	2.5-42	ON	ON	--	ON
12.60	300	2.5-42	--	ON	--	ON
14.70	350	2.5-42	ON	--	--	ON
16.80	400	2.5-42	--	--	--	ON
18.90	450	2.5-42	ON	ON	ON	--
21.00	500	2.5-42	--	ON	ON	--
23.10	550	2.5-42	ON	--	ON	--
25.20	600	2.5-42	--	--	ON	--
27.30	650	2.5-42	ON	ON	--	--
29.40	700	2.5-42	--	ON	--	--
30.00	750	2.5-40	ON	--	--	--
30.40	800 ★	2.5-38	--	--	--	--

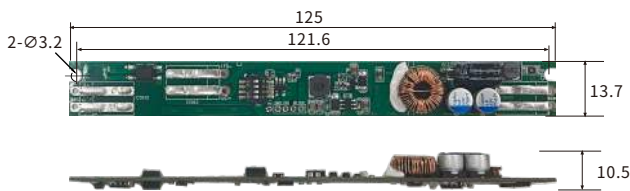
Remarks:

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

Installation

Unit:mm

DET030-F



Label

BK-DET030-F0800AD

PN:B-DET030-FLC1002AD				I/P:48Vdc ~ 0.67A Max.							
Model:BK-DET030-F0800AD				O/P:2.5-42Vdc(0.1-0.8A 30.4 Max. 48VDC Max.							
Io(mA)	Uo(V)	1	2	3	4	Io(mA)	Uo(V)	1	2	3	4
100	2.5-42	ON	ON	ON	ON	350	2.5-42	ON	--	ON	--
125	2.5-42	--	ON	ON	ON	400	2.5-42	--	--	ON	--
150	2.5-42	ON	--	ON	ON	450	2.5-42	ON	ON	ON	--
200	2.5-42	--	--	ON	ON	500	2.5-42	--	ON	--	--
250	2.5-42	ON	ON	--	ON	550	2.5-42	ON	--	--	--
300	2.5-42	--	ON	--	ON	600	2.5-42	--	--	--	--

Installation note

Hot plug-in

- When the function is not enabled, 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.

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 Ta at any time.
- **The temperature of the rod for welding should be 390±10°C.**
- **Please be careful not to damage the electronics during assembly.**
- **All electronic components shall not be squeezed after assembly.**

Wiring guidelines

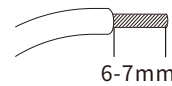
- All connections must be kept as short as possible to ensure good EMI behaviour.
- Max. length of output wires is 0.5m.
- Incorrect wiring can damage LED modules.

Replace LED module

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

Input,output and dimming wire:

0.2-0.75mm²

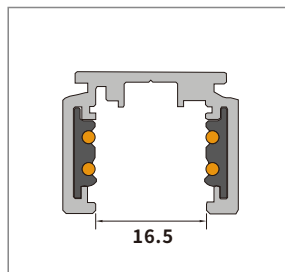


Compatible with the following guide rails

Number	Manufacturer	Housing model	Guide model
1	STUCCHI	9519-166,9519-166-M 9519-166-K,9519-166-M-K	9500-x/B-ST1-E(x=1,2,3) 9500-x/W2-ST1-E(x=1,2,3)
2	JBD	JB-01,JB-06	JB-M-x(x=X1,W1,W2,D2,2,4,5,C-2)



Track



dimensions and layout(Unit:mm)

Packaging



Model	Product size	Weight	Packaging size	EPE size	Carton size	Qty/carton	N.W	G.W
DET030-F	L125*W13.5*H10.5mm	12g	L390*W280*H50mm	L370*W270*H20mm	L410*W300*H230mm	400pcs	4.80KG	6.25KG

Additional information

- When the driver is used as an internal power supply for luminaires, re-evaluation of performance including temperature rise, conducted interference, radiated interference, surge immunity and electrostatic discharge (ESD) are required due to differences in luminaire structure and wiring. Ensure compliance with practical application requirements and stable & reliable operation of the driver.
- Unless otherwise specified, all specifications and parameters are measured under conditions of 48VDC input, full load and ambient temperature of 25°C.
- Product service life and MTBF values are for reference only and do not constitute a warranty statement.
- BOKE reserves the final right to interpret the above parameters. For further information, please send an email to info@bokedriver.com.
- The above information is subject to change without prior notice. Please ensure you use the latest version of the datasheet.