

Constant current independent driver
BCL(S) Series suffix N(NFC programmable)



Features

- Slim shape design, can be installed through a 30mm mounting hole
- Flicker-free output, which meets the requirement of ErP standard
- The output current programming can be realized through the NFC interface
- Withstand 380VAC high voltage short-time shock
- Compact housing design
- High PF, high efficiency, low THD
- Screw-free and pressing type strain relief and easier to install
- Dual-stage circuit design, work stable
- SELV and Class II design, suitable for use outside of the light
- Compliance with Zhaga Book 24/25 standards
- Compliance with CE, ENEC, UKCA, RCM, EL and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5-year guarantee

Functions

- Support central emergency application (100% output in DC input)
- Support self-contained emergency application
- Programming via NFC(EasySet)
- Protective features (short-circuit, no-load, overload, over temperature protection)

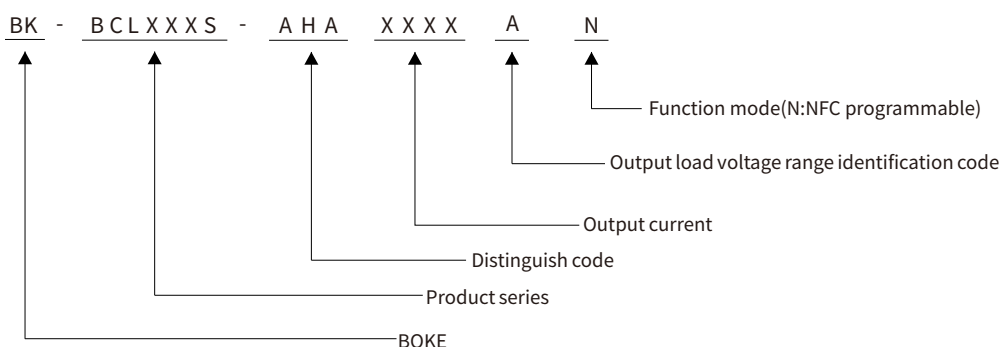
Suitable for lights

- Suitable for downlights or spotlights with **small mounting holes**

Typical applications

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

Model coding rules of BCL(S) series



Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension
BK-BCL010S-AHA0700AN	200-240VAC/DC	10W MAX.	3-42VDC	0.1-0.7A	L123*W23*H20mm

Technical data

Product model	BK-BCL010S-AHA0700AN
Output parameters	
Regulation method	Constant Current
Rated output current range	0.1-0.7A, see the operating window for details
Rated output voltage range	3-42VDC, see the operating window for details
Rated output power	10W Max, see the operating window for details
Output current adjustment	EasySet Programming
Output current ripple(typ.)	±5%(100Hz)
Output current accuracy	±5%
Linear regulation	±5%
Load regulation	±5%
No load output voltage	59VDC
Flicker-free(typ.)	Flickering percent(IEEE 1789)=0.161%(100Hz), Pst LM = 0.025, SVM = 0.004, (The above parameters are obtained from testing the panel lights)
Input parameters	
Rated input voltage range	200-240VAC 200-240VDC
Input voltage range	180-264VAC 180-264VDC
Input voltage shock	<380 V AC
Input current	<0.08A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typ.)	PF: 0.92C, DF: 0.94, see the electrical values below for details
Input THD(typ.)	17%, see the electrical values below for details
Efficiency(typ.)	85%, see the electrical values below for details
In-rush current(typ.)	0.785A peak, 41us duration(50% Ipeak), see the description below for details
Start/Switchover/Turn off	<0.5s(AC start), <0.5s(DC start), <0.3s(AC/DC switchover), <0.5s(Turn off)
Switching cycles	> 100,000 switching cycles
Power consumption(typ.)	Full load(Pin): 11.8W, No load(Pno): N/A, On stand-by(Psb): N/A, Network stand-by(Pnet): N/A
Safety	
Withstand voltage	I/P-O/P(LED): 3750V AC
Mains surge capability	L-N: 1KV(Performance criterion: B)
Leakage current(typ.)	0.47mA
Isolation resistance	I/P-O/P: 100MΩ/500Vdc/25°C/70%RH
Control interface	
DALI dimming port	N/A
pushDIM dimming port	N/A
1-10V 3in1 dimming port	N/A
Auxiliary power supply	N/A
Dimming range	N/A
Dimming drive mode	N/A
Emergency support	
Central emergency system	Supported
Self-contained emergency	Supported
Environment & Life time	
Operating temperature	Ta = -20-50/60°C, see the operating temperature for details
Case temperature	Tc = 85°C
Operating humidity	5-85% RH, non-condensing
Storage temp./humidity	-40-80°C, 5-85% RH, non-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, 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	N/A
EL	Compatible IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 and EN 50172
RF	N/A

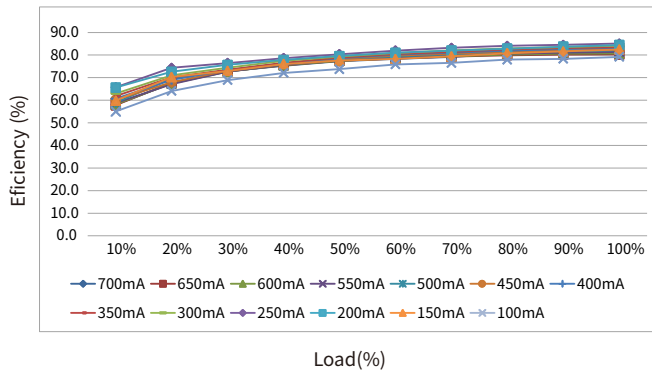
Remarks

1. By default, all parameter are measured at 230VAC input, 50Hz, full load and 25°C of ambient temperature.
2. The 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.

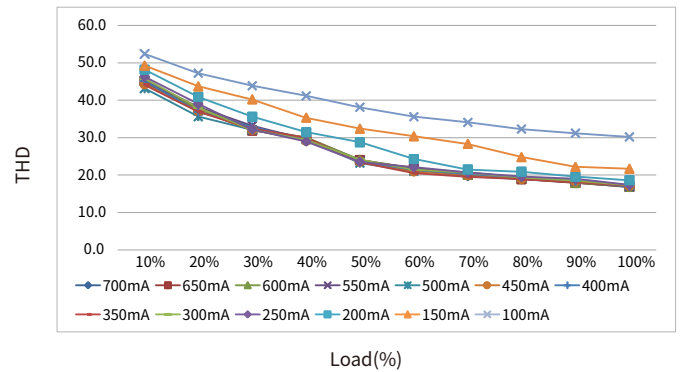
Electrical values

BK-BCL010S-AHA0700AN

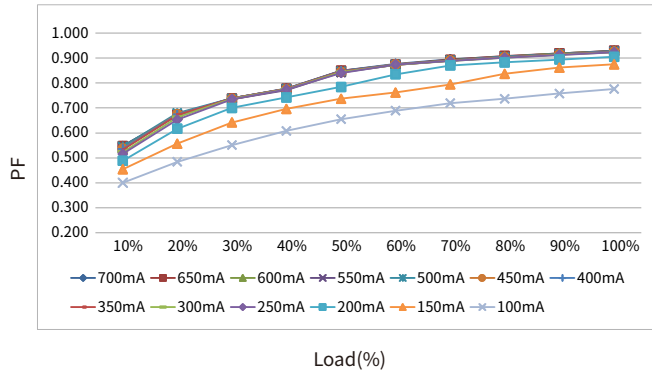
Efficiency vs load



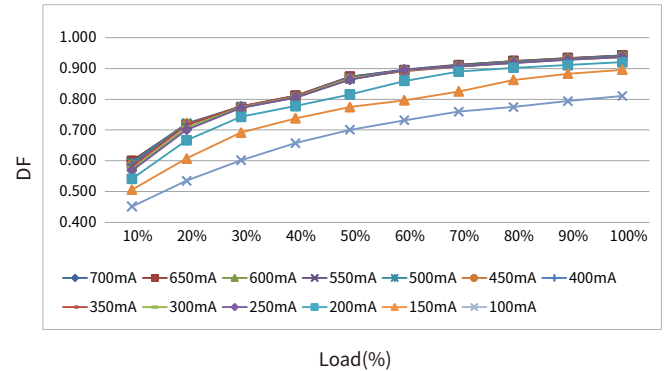
THD vs. Load



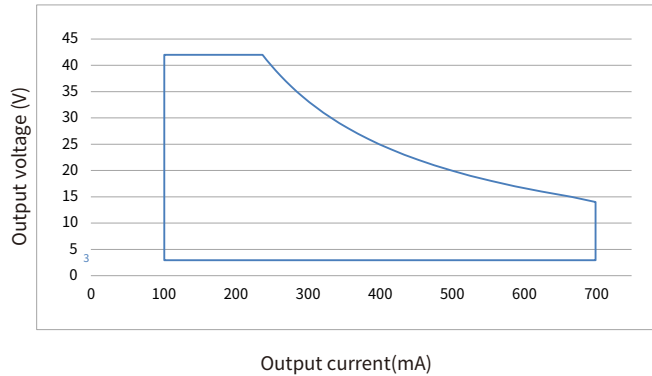
Power factor vs. Load



Displacement factor vs. Load



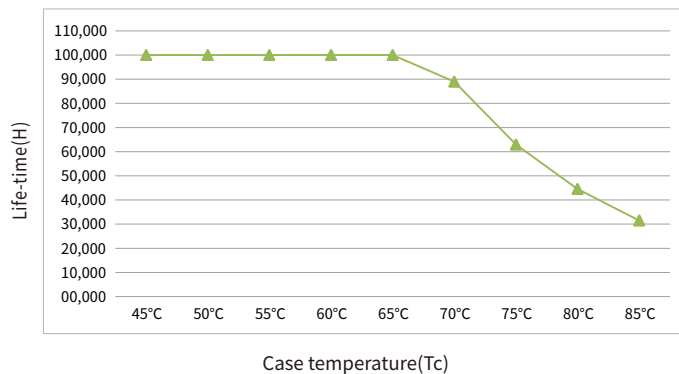
Operating window



- Output voltage x output current = output power
- The minimum current step is 1mA, the minimum voltage step is 1V, the voltage range is 3-42V, the current range is 100-700mA, and the voltage and current can be set arbitrarily under the premise that the output power does not exceed 10W.

Expected life-time

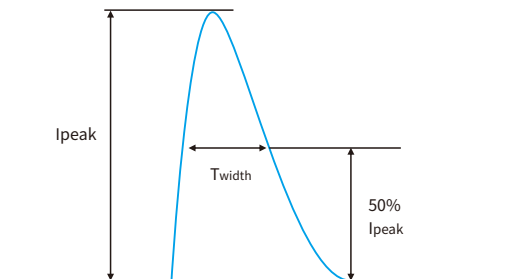
Life-time vs. case temperature



- 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.

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-BCL010S-AHA	0.785A	41us	AC 230V,Full load, Cold start,Ta≤30℃, MCB is not installed side by side	151	197	242	303	378	151	197	242	303	378	151	197	242	303	378



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

- 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.

Output over temperature

- When the operating temperature exceeds the over temperature protection point inside the power supply IC, the power supply enters protection state such as output derating, output hiccup or output shutdown. After the external temperature is normal, restart and resume operation.

Driver restart method

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

Adjustable output current (AOC)

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

Configuration programming(EasySet)

- The programming configuration of the driver is realized using the BOKE EasySet programming suite and through the driver's NFC interface.
- Please see the "Device configuration" section.
- More information about the EasySet programming suite can be found at www.bokedriver.com.

Insulation between circuits

Isolation	Input	Output	Case
Input	-	Double	Double
Output	Double	-	Basic
Case	Double	Basic	-

Label

BK-BCL010S-AHA0700AN

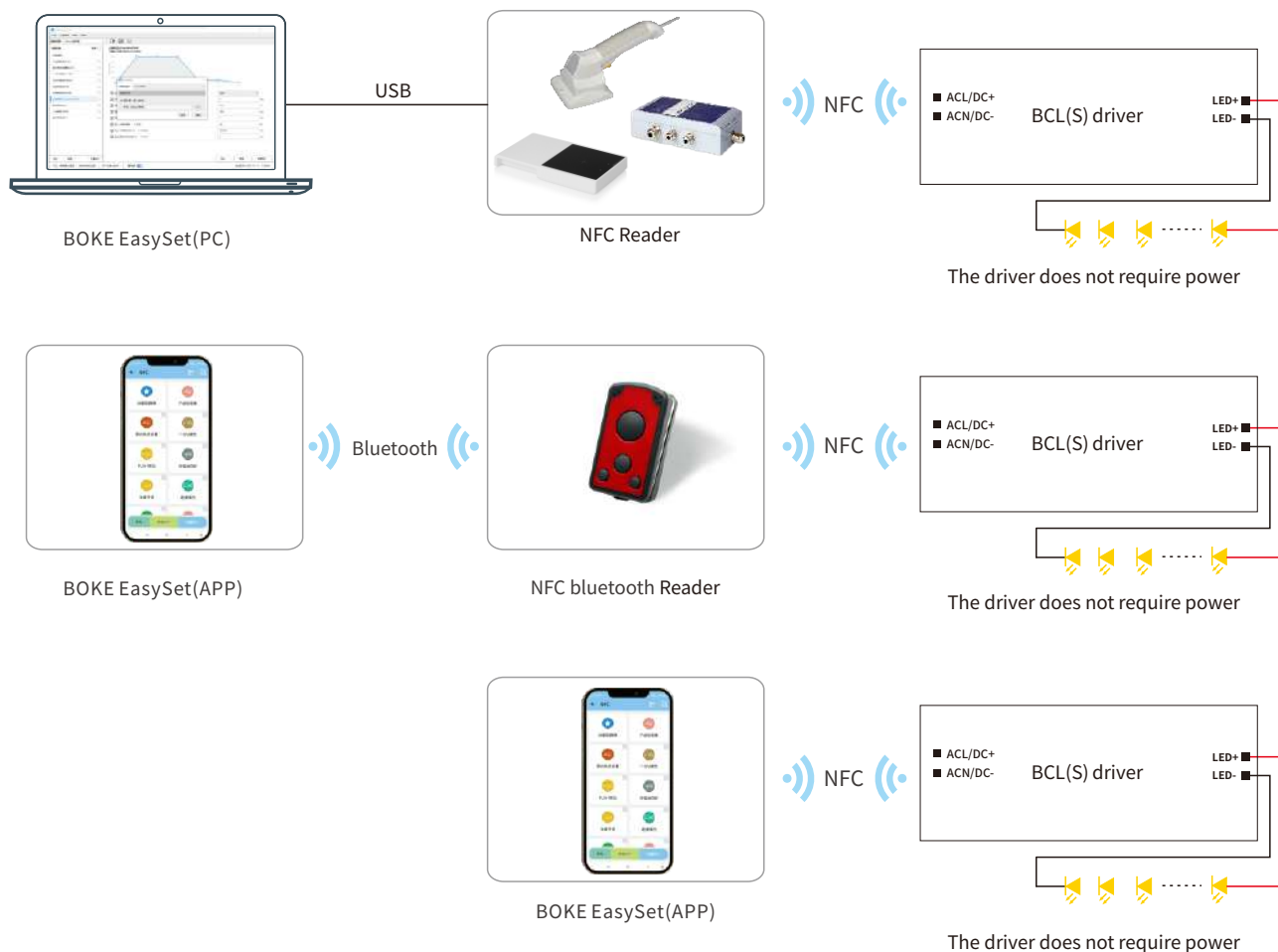


Laser engraving technology

Operating temperature & output current

Tc	Ta	Po(W)	Io(mA)
85°C	50°C	≤10	≤700
	60°C	≤7.2	≤600

Device configuration



Software download(PC&mobile)



PC:Windows7/Windows10/Windows1132bit/64bit;

Mobile:Androidsystem≥6.0, iossystem≥14.0.

Configure tools and software

Type	Name	Brand	Name	BOKE EasySet minimum version(PC)	BOKE EasySet minimum version(APP)
Programmer	NFC desktop Reader	FEIG	CPR30+	V1.0.0	-
	NFC handheld Reader	FEIG	ID ISC-PRH101-USB	V1.2.2	-
	NFC Bluetooth Reader	FEIG	ID ECCO Smart HF-BLE	-	V1.0.0
	NFC batch Reader	FEIG	ID ISC.LR1002-E	V1.3.4	-
Software	PC Software	BOKE	BOKE EasySet	V1.0.0	-
	APP	BOKE	BOKE EasySet	-	V1.0.0

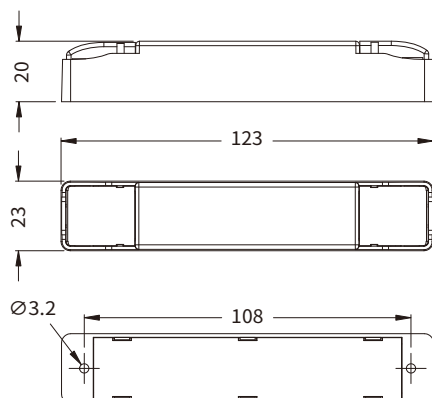
Parameters configure

Configuration items	Factory settings	Parameter configuration	Read/Wirte
Product information	-	NO	Read Only
Adjustable output current(AOC)	Activated	YES	Read/Wirte
Run-time(RT)		NO	Read Only
Other parameters		YES	

Mechanical Specification

Size(Unit:mm)

BCL010S-AHA



INPUT

Numbering	function	colour
1	DA	grey
2	DA	grey
3	ACL/DC+	grey
4	ACN/DC-	grey

Input wire

0.75-1.5mm²

8-9mm

OUTPUT

Numbering	function	colour
1	LED+	red
2	LED-	black

Output wire

0.5-1.0mm²

8-9mm

Installation note

Hot plug-in

- Hot plug-in is not supported due to residual output voltage of > 0 V.

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 mounting surface of the driver should be lower than the temperature of Ta.
- The driver should keep a certain distance from the heating stuff (such as the lamp radiator).
- If the driver is used externally (it needs to be used with the power end cover), the installation of the driver should also meet the following conditions:
 - 1.The driver should be a certain distance between the drives, as shown in Figure 1.
 - 2.The driver keeps a certain distance from surrounding objects, as shown in Figure 2.

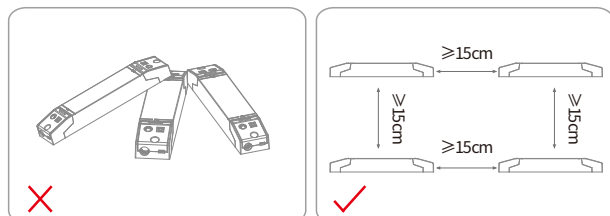


Figure 1

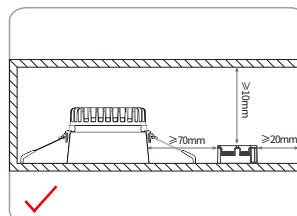


Figure 2

Packaging



Product



20pcs/Box



20pcs×9boxes=180pcs/CTN

Model	Product size	Weight	Box size	Carton size	Qty/carton	N.W	G.W
BCL010S-AHA	L123*W23*H20mm	48g	L220*W127*H53mm	L410*W250*H190mm	180pcs	8.64KG	10.1KG

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.