

Constant voltage linear driver
HGV Series



Features

- Flicker-free output, which meets the requirement of ErP standard
- 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
- Compliance with CE, ENEC, RCM, UKCA, CCC, EL and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5.5-year guarantee

Functions

- Support central emergency application (100% output in DC input)
- Support self-contained emergency application
- Protective features (short-circuit, overload protection)

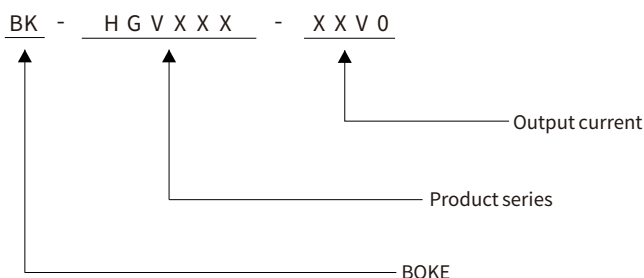
Suitable for lights

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

Typical applications

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

Model coding rules of HGV series



Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension
BK-HGV036-24V0	200-240VAC/DC	36W MAX.	24VDC	1.5A	L265*W30*H21mm
BK-HGV036-48V0	200-240VAC/DC	36W MAX.	48VDC	0.75A	L265*W30*H21mm



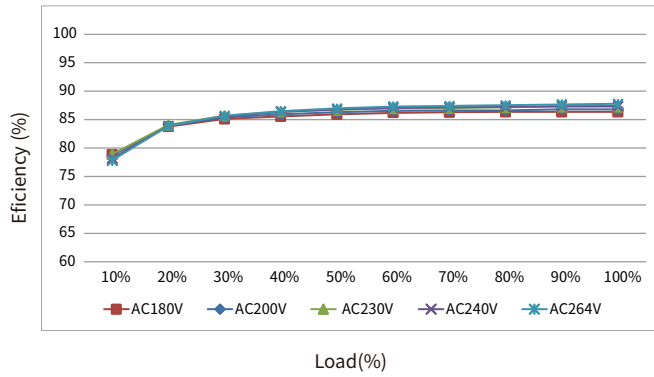
Technical data

Product model	BK-HGV036-24V0	BK-HGV036-48V0
Output parameters		
Regulation method	Constant voltage	
Rated output current	1.5A	0.75A
Rated output voltage	24VDC	48VDC
Rated output power	36 W Max	36W Max
Output voltage adjustment	Fixed output	
Output voltage ripple(typ.)	≤350mV(250Hz)	≤500mV(250Hz)
Voltage accuracy	±5%	
Linear regulation	±5%	
Load regulation	±5%	
Flicker-free(typ.)	Pst LM=0.001, SVM=0.004,(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 180-264VDC	
Input votage shock	<380 V AC	
Input current	<0.21A (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.)	6% , see the electrical values below for details	
Efficiency(typ.)	89% , see the electrical values below for details	
In-rush current(typ.)	14A peak ,280us 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):40.4W, 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):3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:A)	
Leakage current(typ.)	0.6mA	
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=-25-55°C	
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	

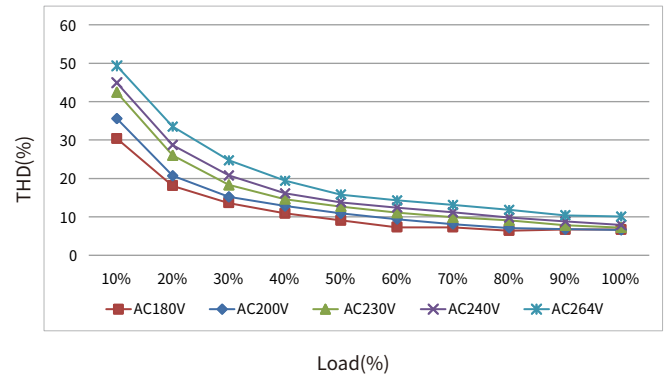
Electrical values

BK-HGV036-24V0

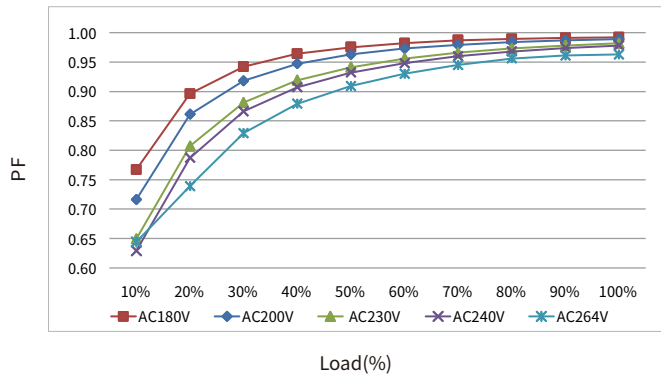
Efficiency vs load



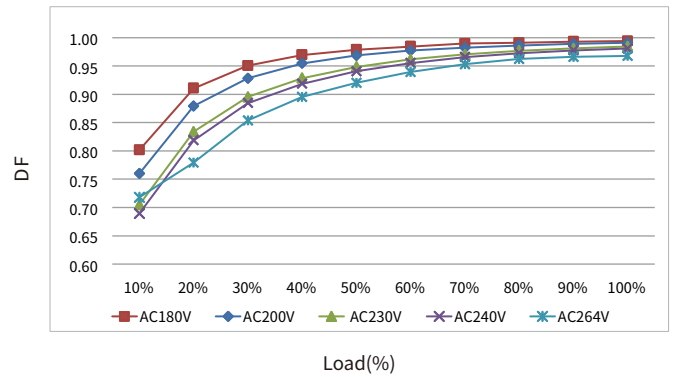
THD vs. Load



Power factor vs. Load

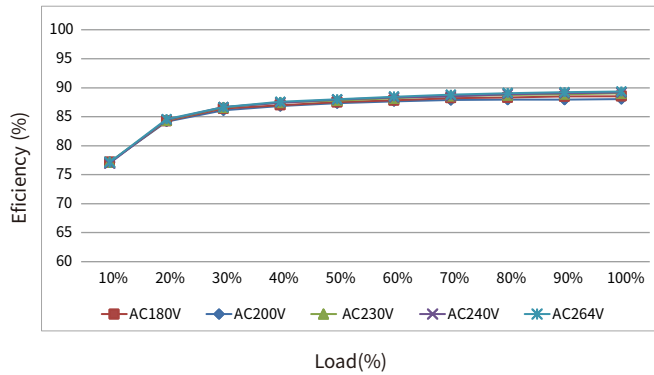


Displacement factor vs. Load

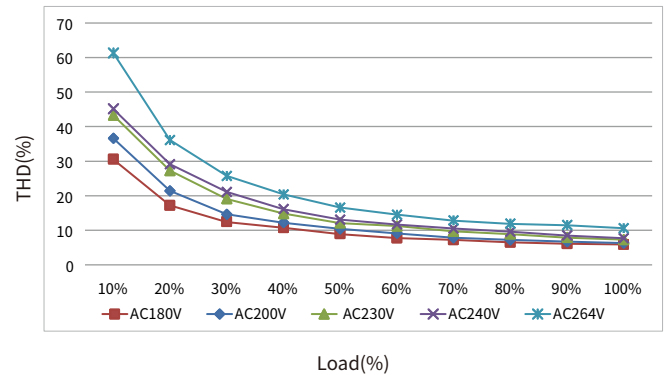


BK-HGV036-48V0

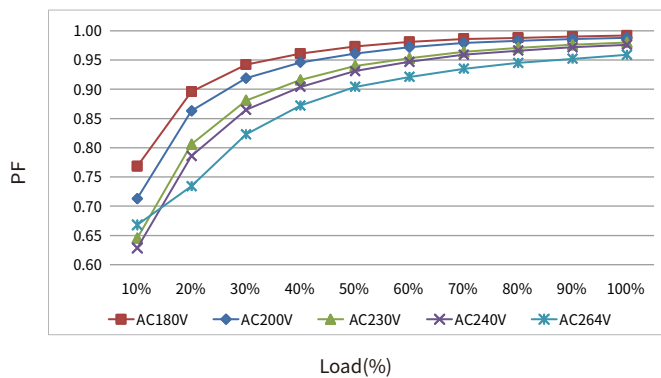
Efficiency vs load



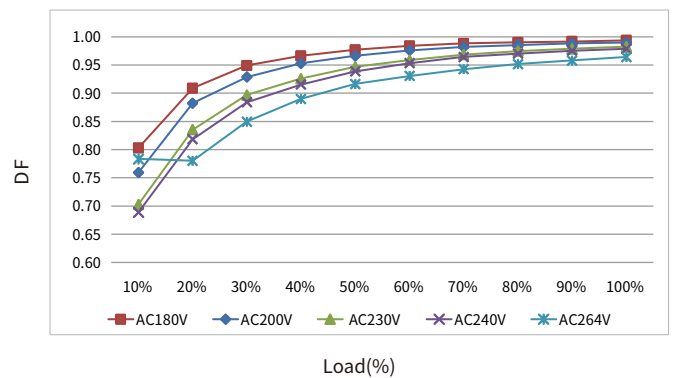
THD vs. Load



Power factor vs. Load



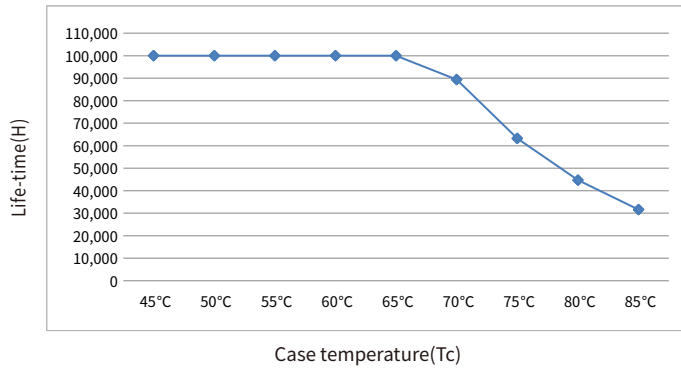
Displacement factor vs. Load



Expected life-time

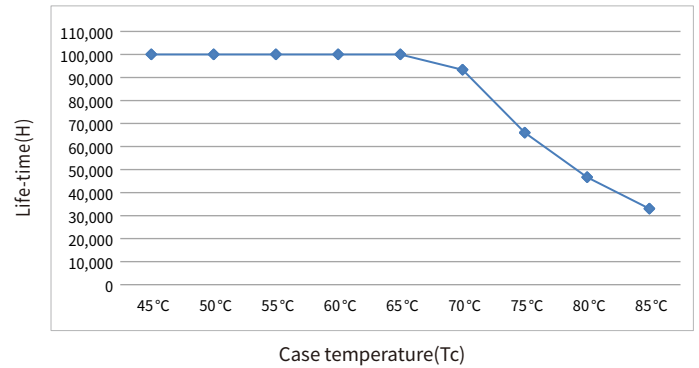
BK-HGV036-24V0

Life-time vs. case temperature



BK-HGV036-48V0

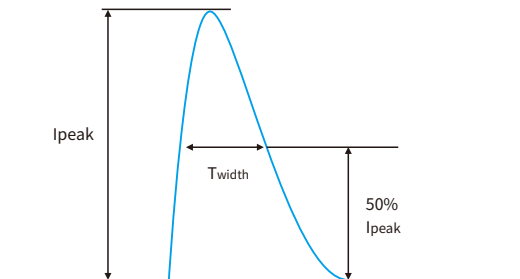
Life-time vs. case temperature



- 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-HGV036	14A	280us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	17	22	27	34	42	28	36	45	56	70	43	56	69	86	108



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, disconnect the AC for more than 1 minute, and the output will return to normal.

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

Label

BK-HGV036

INPUT

ACL/DC+

ACN/DC-

NC

⊕

PRI wire prep:
0.75-1.5mm²

BOKE

www.bokedriver.com

BOKE Drivers Co., Ltd.

Address: 2nd and 3rd Floor,
No.51, Xihuan 5th Road,
South District, 528455
Zhongshan City,
Guangdong, CHINA
MADE IN CHINA

Constant Voltage LED Driver

For LED modules use only

MODEL: BK-HGV036-24V0

INPUT: 200-240V $\approx$ 0.21A Max. 0/50/60Hz λ : 0.95

OUTPUT: 24V $\approx$ 1.5A 36W Max.

OUTPUT

V-

V+

SEC wire prep:
0.75-2.5mm²

INPUT

ACL/DC+

ACN/DC-

NC

⊕

PRI wire prep:
0.75-1.5mm²

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Constant Voltage LED Driver

For LED modules use only

MODEL: BK-HGV036-48V0

INPUT: 200-240V $\approx$ 0.21A Max. 0/50/60Hz λ : 0.95

OUTPUT: 48V $\approx$ 0.75A 36W Max.

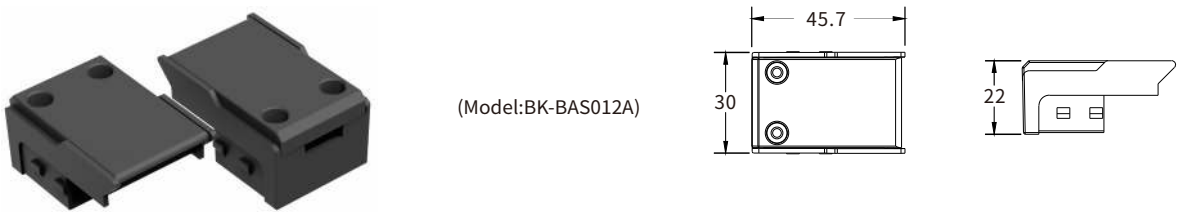
OUTPUT

V-

V+

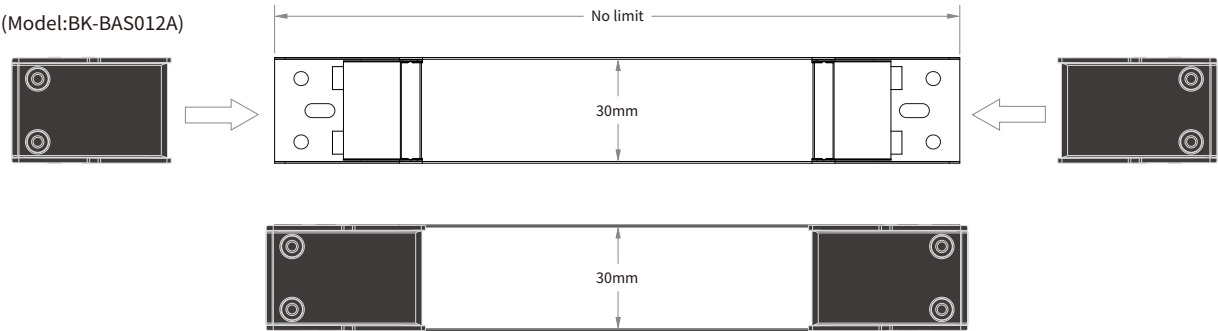
SEC wire prep:
0.75-2.5mm²

Optional accessories



Unit:mm

Installation diagram of accessories

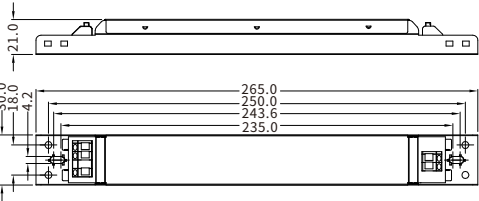


Mechanical Specification

Size(Excluding accessories)

Unit:mm

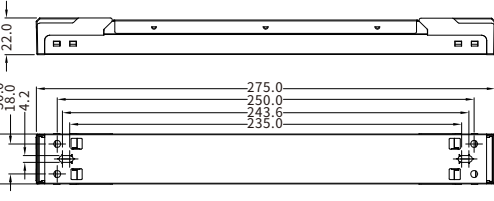
HGV036



Size(Include accessories)

Unit:mm

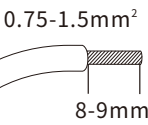
HGV036



INPUT

Numbering	function	colour
1	ACL/DC+	orange
2	ACN/DC-	orange
3	NG	grey
4	FG	grey

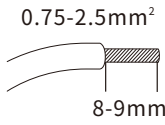
Input wire



OUTPUT

Numbering	function	colour
1	V-	black
2	V+	red

Output wire



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 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.

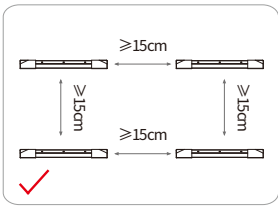
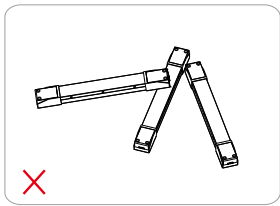


Figure 1

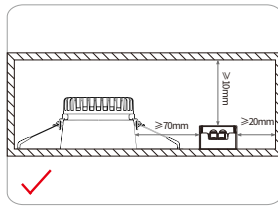


Figure 2

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.

Replace LED module

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

Packaging



Product



Pearl wool



7pcs*6layer=42pcs/CTN

Packaging(Excluding accessories)

Model	Product size	Weight	Pearl wool size	Carton size	Qty/carton	N.W	G.W
HGV036	L265*W30*H21mm	176g	L340*W75*H29mm	L355*W305*H205mm	42pcs	7.39KG	8.77KG

Packaging(Include accessories)

Model	Product size	Weight	Pearl wool size	Carton size	Qty/carton	N.W	G.W
HGV036	L275*W30*H22mm	194g	L340*W75*H29mm	L355*W315*H205mm	42pcs	8.15KG	9.62KG

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 230VAC input, 50Hz, 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.