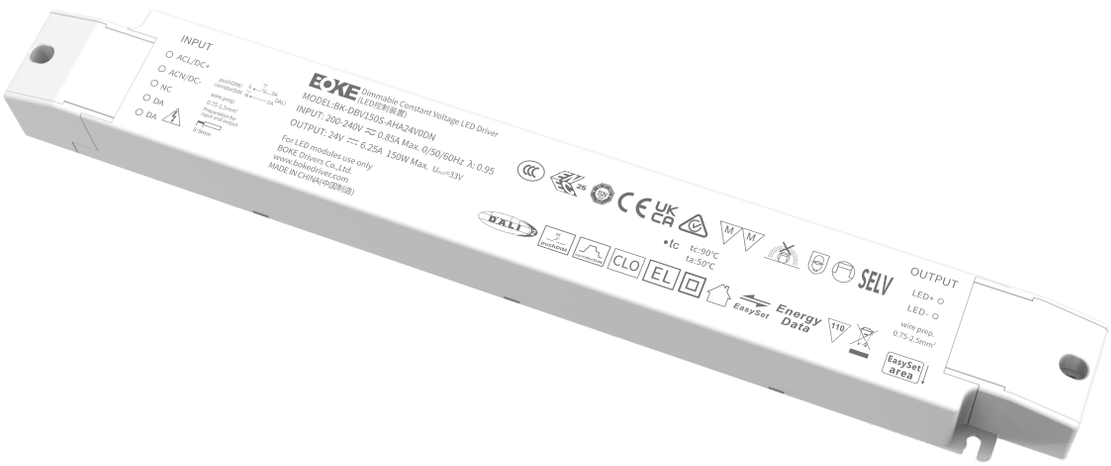
**Constant voltage linear dimmable driver**

**DBV(S) Series suffix DN(DALI-2+pushDIM+EnergyData+EL+CLO+corridorDIM +DALI programmable+NFC programmable)**




## Features

- Support DALI-2 +pushDIM dimming interface
- Support EnergyData function and energy-reporting reading (DALI Part 252)
- Support luminaire data reading (DALI Part251), support diagnostics-maintenance reading (DALI Part253)
- Support advanced functions such as corridorDIM, EL, CLO
- The programming configuration can be realized through the DALI interface or NFC interface
- Soft dimming and flicker-free at any brightness, meets the new requirements of ErP certification
- High PF, high efficiency, low THD
- SELV and Class II design, suitable for use outside or inside of the luminaires
- 5-year guarantee

## Typical applications

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

## Interfaces

- DALI-2 (DT6+Part 251,252,253)
- PUSH (pushDIM,corridorDIM)

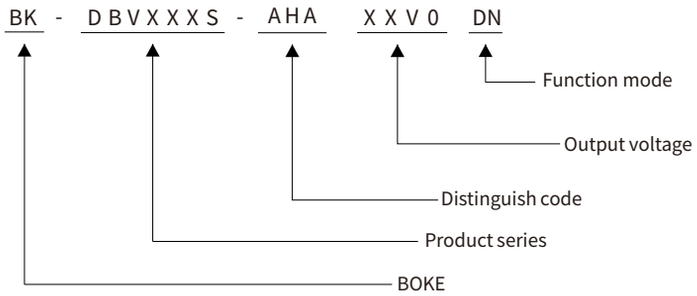
## Functions

- Support DALI part 251,252,253
- Support central emergency application
- Support self-contained emergency application
- Emergency lighting(EL)
- Constant light output function(CLO)
- Corridor dimming (corridorDIM)
- Programming via DALI(EasySet)
- Programming via NFC(EasySet)
- Protective features (short-circuit, overload,over temperature, hot plug-in protection)

## Suitable for lights

- Only for constant voltage type light strips or lamps

## Model coding rules of DBV(S) series




## Function list

| Model | Suffix | Wired dimming | | Advanced functions | | | | Device Configuration | |
|---|---|---|---|---|---|---|---|---|---|
| | | DALI-2 | pushDIM | EL | CLO | EnergyData | corridorDIM | DALI interfaces | NFC interfaces |
| BK-DBV080S-AHA<br>BK-DBV100S-AHA<br>BK-DBV150S-AHA<br>BK-DBV200S-AHA<br>BK-DBV240S-AHA | DN | √ | √ | √ | √ | √ | √ | √ | √ |

## Model list

| Model | Input voltage | Output power | Output voltage | Output current | Dimension |
|---|---|---|---|---|---|
| BK-DBV080S-AHA24V0DN | 200-240VAC/DC | 80.16W MAX. | 24VDC | 3.34A | L283*W43*H30mm |
| BK-DBV080S-AHA48V0DN | 200-240VAC/DC | 80.16W MAX. | 48VDC | 1.67A | L283*W43*H30mm |
| BK-DBV100S-AHA24V0DN | 200-240VAC/DC | 100.8W MAX. | 24VDC | 4.2A | L283*W43*H30mm |
| BK-DBV100S-AHA48V0DN | 200-240VAC/DC | 100.8W MAX. | 48VDC | 2.1A | L283*W43*H30mm |
| BK-DBV150S-AHA24V0DN | 200-240VAC/DC | 150W MAX. | 24VDC | 6.25A | L334.5*W43*H30mm |
| BK-DBV150S-AHA48V0DN | 200-240VAC/DC | 150W MAX. | 48VDC | 3.12A | L334.5*W43*H30mm |
| BK-DBV200S-AHA24V0DN | 200-240VAC/DC | 200W MAX. | 24VDC | 8.3A | L334.5*W43*H30mm |
| BK-DBV200S-AHA48V0DN | 200-240VAC/DC | 200W MAX. | 48VDC | 4.17A | L334.5*W43*H30mm |
| BK-DBV240S-AHA24V0DN | 200-240VAC/DC | 240W MAX. | 24VDC | 10A | L370*W49*H30mm |
| BK-DBV240S-AHA48V0DN | 200-240VAC/DC | 240W MAX. | 48VDC | 5A | L370*W49*H30mm |

## Technical data

| Product model | BK-DBV080S-AHA24V0DN | BK-DBV080S-AHA48V0DN |
|---|---|---|
| Output parameters | | |
| Regulation method | Constant voltage | |
| Rated output current | 3.34A | 1.67A |
| Rated output voltage | 24VDC | 48VDC |
| Rated output power | 80.16W Max | 80.16W Max |
| Output voltage adjustment | Fixed output | |
| Output voltage ripple(typ.) | ≤350mV(100Hz,100%DIM) | ≤500mV(100Hz,100%DIM) |
| Output voltage accuracy | ±3% | |
| Linear regulation | ±3% | |
| Load regulation | ±5% | |
| Flicker-free(typ.) | Pst LM = 0.001, SVM = 0.020 ,(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 | <0.52A (Rated input voltage) | |
| Input frequency | 0/50/60Hz | |
| Input PF/Input DF(typ.) | PF: 0.99,DF:0.99 , 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.) | 25A peak ,300us duration(50 % Ipeak), see the description below for details | |
| Start/Switchover/Turn off(typ.) | 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):88.1W, 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: 1500V AC. | |
| Mains surge capability | L-N:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:A) | |
| Leakage current(typ.) | 0.7mA | |
| 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: AC180-264V 50/60Hz | |
| 1-10V 3in1 dimming port | N/A | |
| Auxiliary power supply | N/A | |
| Dimming range | 0.1-100% | |
| 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, 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, CCC, DALI-2, 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), DALI part 251,252,253 | |
| EL | Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172 | |
| RF | N/A | |

## Technical data

| Product model | BK-DBV100S-AHA24V0DN | BK-DBV100S-AHA48V0DN |
|---|---|---|
| Output parameters | | |
| Regulation method | Constant voltage | |
| Rated output current | 4.2A | 2.1A |
| Rated output voltage | 24VDC | 48VDC |
| Rated output power | 100.8W Max | 100.8W Max |
| Output voltage adjustment | Fixed output | |
| Output voltage ripple(typ.) | ≤350mV(100Hz,100%DIM) | ≤500mV(100Hz,100%DIM) |
| Output voltage accuracy | ±3% | |
| Linear regulation | ±3% | |
| Load regulation | ±5% | |
| Flicker-free(typ.) | Pst LM = 0.007, SVM = 0.030 ,(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 | <0.6A (Rated input voltage) | |
| Input frequency | 0/50/60Hz | |
| Input PF/Input DF(typ.) | PF: 0.99,DF:0.99 , see the electrical values below for details | |
| Input THD(typ.) | 5% , see the electrical values below for details | |
| Efficiency(typ.) | 93% , see the electrical values below for details | |
| In-rush current(typ.) | 23A peak ,300us duration(50 % Ipeak), see the description below for details | |
| Start/Switchover/Turn off(typ.) | 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):108.4W, 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: 1500V AC. | |
| Mains surge capability | L-N:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:A) | |
| Leakage current(typ.) | 0.7mA | |
| 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: AC180-264V 50/60Hz | |
| 1-10V 3in1 dimming port | N/A | |
| Auxiliary power supply | N/A | |
| Dimming range | 0.1-100% | |
| 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, 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, CCC, DALI-2, 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), DALI part 251,252,253 | |
| EL | Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172 | |
| RF | N/A | |

## Technical data

| Product model | BK-DBV150S-AHA24V0DN | BK-DBV150S-AHA48V0DN |
|---|---|---|
| Output parameters | | |
| Regulation method | Constant voltage | |
| Rated output current | 6.25A | 3.12A |
| Rated output voltage | 24VDC | 48VDC |
| Rated output power | 150W Max | 150W Max |
| Output voltage adjustment | Fixed output | |
| Output voltage ripple(typ.) | ≤350mV(100Hz,100%DIM) | ≤500mV(100Hz,100%DIM) |
| Output voltage accuracy | ±3% | |
| Linear regulation | ±3% | |
| Load regulation | ±5% | |
| Flicker-free(typ.) | Pst LM = 0.007, SVM = 0.031 ,(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 | <0.85A (Rated input voltage) | |
| Input frequency | 0/50/60Hz | |
| Input PF/Input DF(typ.) | PF: 0.99,DF:0.99 , see the electrical values below for details | |
| Input THD(typ.) | 4% , see the electrical values below for details | |
| Efficiency(typ.) | 93% , see the electrical values below for details | |
| In-rush current(typ.) | 35A peak ,320us duration(50 % Ipeak), see the description below for details | |
| Start/Switchover/Turn off(typ.) | 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):161.3W, 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: 1500V AC. | |
| Mains surge capability | L-N:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:A) | |
| Leakage current(typ.) | 0.7mA | |
| 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: AC180-264V 50/60Hz | |
| 1-10V 3in1 dimming port | N/A | |
| Auxiliary power supply | N/A | |
| Dimming range | 0.1-100% | |
| Dimming drive mode | H-PWM | |
| Emergency support | | |
| Central emergency system | Supported | |
| Self-contained emergency | Supported | |
| Environment & Life time | | |
| Operating temperature | Ta=-20-50°C | |
| Case temperature | Tc=90°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, CCC, DALI-2, 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), DALI part 251,252,253 | |
| EL | Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172 | |
| RF | N/A | |

## Technical data

| Product model | BK-DBV200S-AHA24V0DN | BK-DBV200S-AHA48V0DN |
|---|---|---|
| Output parameters | | |
| Regulation method | Constant voltage | |
| Rated output current | 8.3A | 4.2A |
| Rated output voltage | 24VDC | 48VDC |
| Rated output power | 200W Max | 200W Max |
| Output voltage adjustment | Fixed output | |
| Output voltage ripple(typ.) | ≤350mV(100Hz,100%DIM) | ≤500mV(100Hz,100%DIM) |
| Output voltage accuracy | ±3% | |
| Linear regulation | ±3% | |
| Load regulation | ±5% | |
| Flicker-free(typ.) | Pst LM = 0.007, SVM = 0.027 ,(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 | <1.1A (Rated input voltage) | |
| Input frequency | 0/50/60Hz | |
| Input PF/Input DF(typ.) | PF: 0.99,DF:0.99 , see the electrical values below for details | |
| Input THD(typ.) | 4% , see the electrical values below for details | |
| Efficiency(typ.) | 93% , see the electrical values below for details | |
| In-rush current(typ.) | 48A peak ,350us duration(50 % Ipeak), see the description below for details | |
| Start/Switchover/Turn off(typ.) | 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):215.1W, 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: 1500V AC. | |
| Mains surge capability | L-N:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:A) | |
| Leakage current(typ.) | 0.7mA | |
| 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: AC180-264V 50/60Hz | |
| 1-10V 3in1 dimming port | N/A | |
| Auxiliary power supply | N/A | |
| Dimming range | 0.1-100% | |
| Dimming drive mode | H-PWM | |
| Emergency support | | |
| Central emergency system | Supported | |
| Self-contained emergency | Supported | |
| Environment & Life time | | |
| Operating temperature | Ta=-20-45°C | |
| Case temperature | Tc=90°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, CCC, DALI-2, 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), DALI part 251,252,253 | |
| EL | Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172 | |
| RF | N/A | |

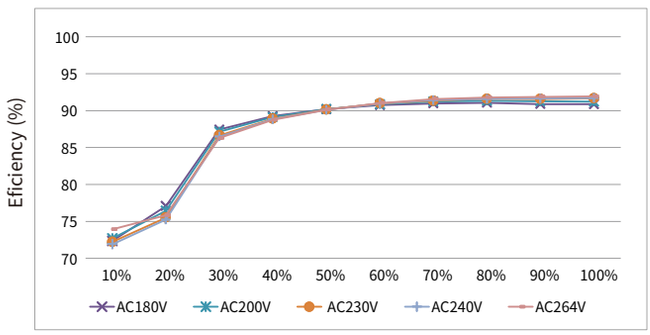
## Technical data

| Product model | BK-DBV240S-AHA24V0DN | BK-DBV240S-AHA48V0DN |
|---|---|---|
| Output parameters | | |
| Regulation method | Constant voltage | |
| Rated output current | 10A | 5A |
| Rated output voltage | 24VDC | 48VDC |
| Rated output power | 240W Max | 240W Max |
| Output voltage adjustment | Fixed output | |
| Output voltage ripple(typ.) | ≤350mV(100Hz,100%DIM) | ≤500mV(100Hz,100%DIM) |
| Output voltage accuracy | ±3% | |
| Linear regulation | ±3% | |
| Load regulation | ±5% | |
| Flicker-free(typ.) | Pst LM = 0.008, SVM = 0.027 ,(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 | <1.35A (Rated input voltage) | |
| Input frequency | 0/50/60Hz | |
| Input PF/Input DF(typ.) | PF: 0.99,DF:0.99 , see the electrical values below for details | |
| Input THD(typ.) | 4% , see the electrical values below for details | |
| Efficiency(typ.) | 93.5% , see the electrical values below for details | |
| In-rush current(typ.) | 54A peak ,420us duration(50 % Ipeak), see the description below for details | |
| Start/Switchover/Turn off(typ.) | 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):256.7W, 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):3750V AC, I/P-DALI: 1500V AC, O/P-DALI: 1500V AC. | |
| Mains surge capability | L-N:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:A) | |
| Leakage current(typ.) | 0.7mA | |
| 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: AC180-264V 50/60Hz | |
| 1-10V 3in1 dimming port | N/A | |
| Auxiliary power supply | N/A | |
| Dimming range | 0.1-100% | |
| Dimming drive mode | H-PWM | |
| Emergency support | | |
| Central emergency system | Supported | |
| Self-contained emergency | Supported | |
| Environment & Life time | | |
| Operating temperature | Ta=-20-45°C | |
| Case temperature | Tc=90°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, CCC, DALI-2, 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), DALI part 251,252,253 | |
| EL | Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172 | |
| RF | N/A | |

## Electrical values

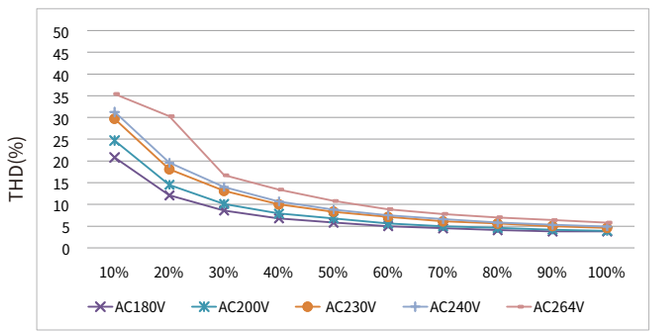
BK-DBV080S-AHA

Efficiency vs load



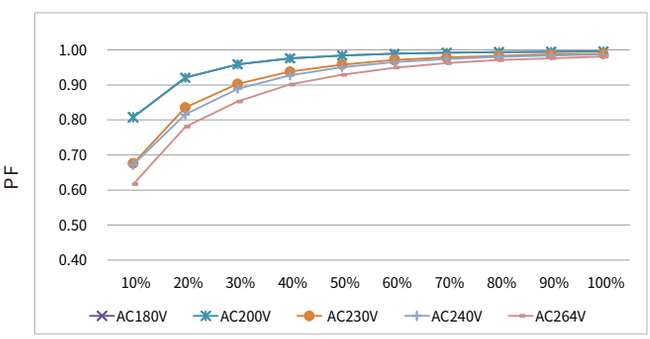

Load(%)

THD vs. Load



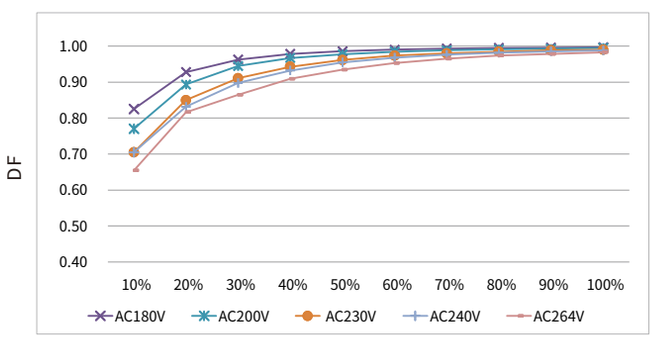

Load(%)

Power factor vs. Load




Load(%)

Displacement factor vs. Load

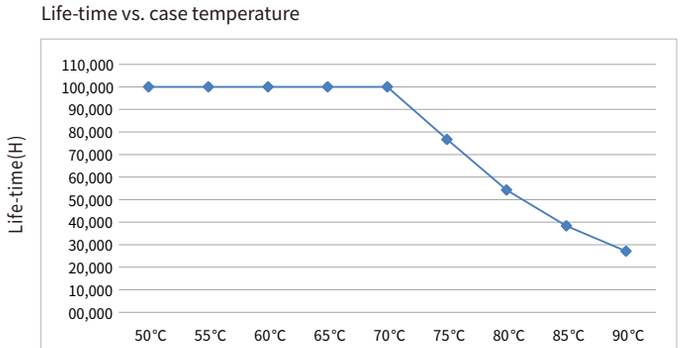



Load(%)

## Expected life-time

BK-DBV080S-AHA24V0DN

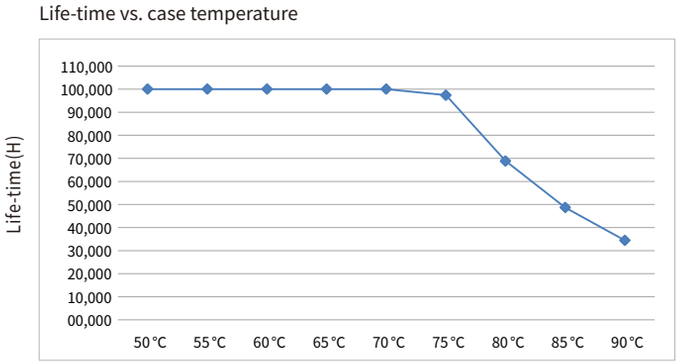
Life-time vs. case temperature




Case temperature(Tc)

BK-DBV080S-AHA48V0DN

Life-time vs. case temperature



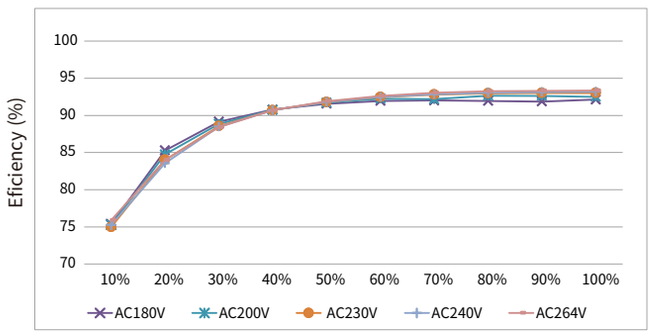

Case temperature(Tc)

-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.

## Electrical values

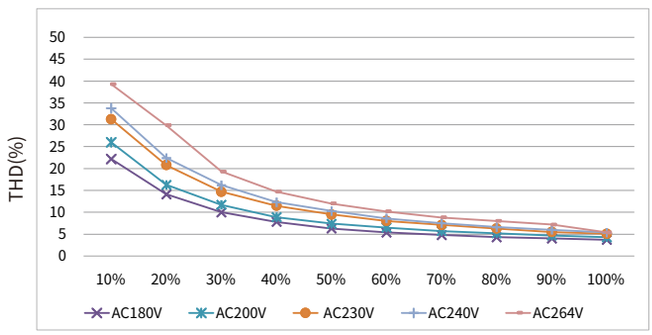
BK-DBV100S-AHA

Efficiency vs load



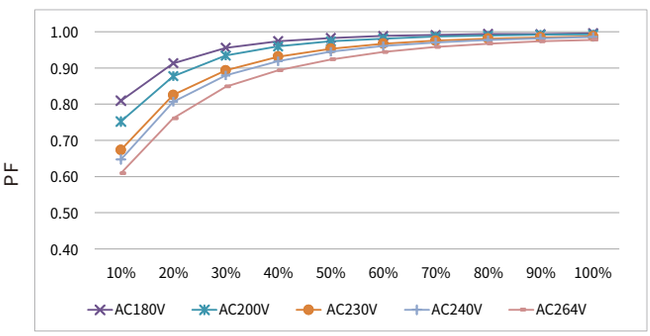

Load(%)

THD vs. Load



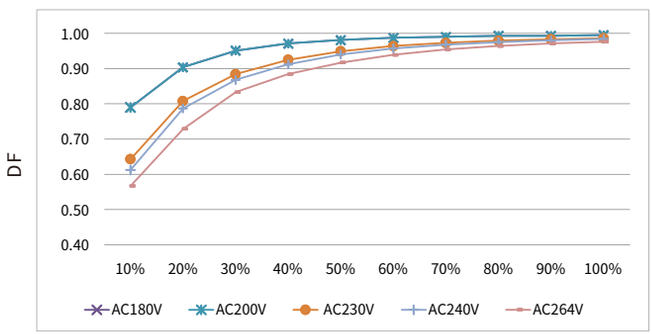

Load(%)

Power factor vs. Load




Load(%)

Displacement factor vs. Load

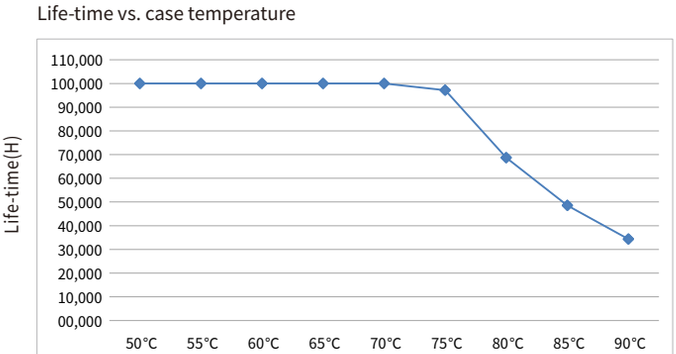



Load(%)

## Expected life-time

BK-DBV100S-AHA24V0DN

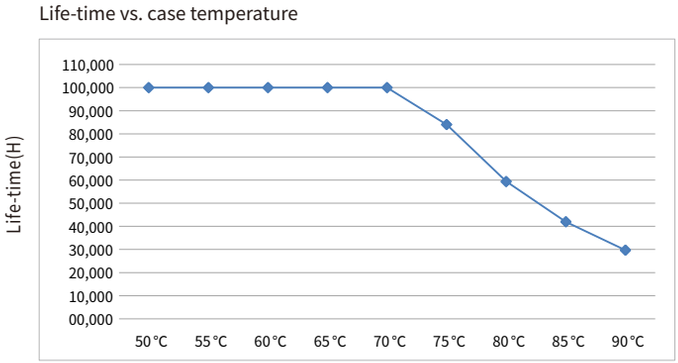
Life-time vs. case temperature




Case temperature(Tc)

BK-DBV100S-AHA48V0DN

Life-time vs. case temperature



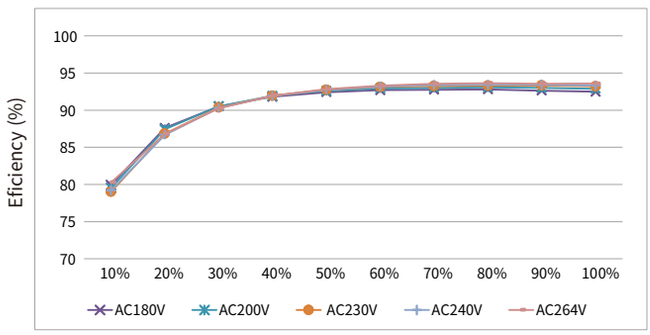

Case temperature(Tc)

-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.

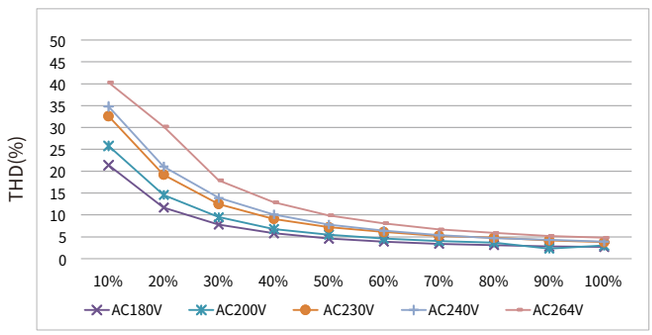
## Electrical values

BK-DBV150S-AHA

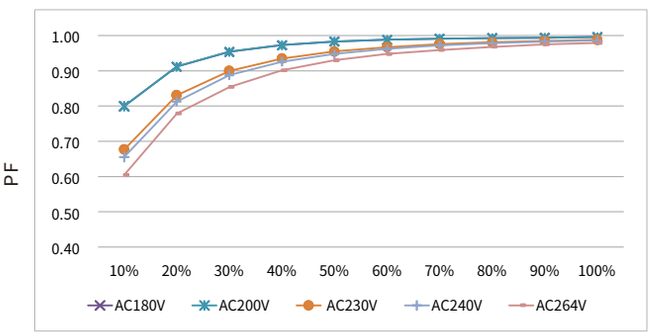
Efficiency vs load



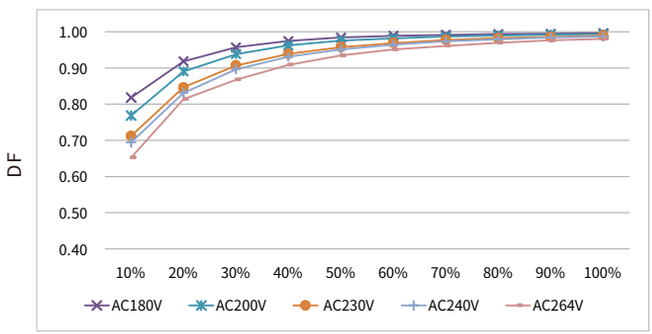

THD vs. Load




Power factor vs. Load



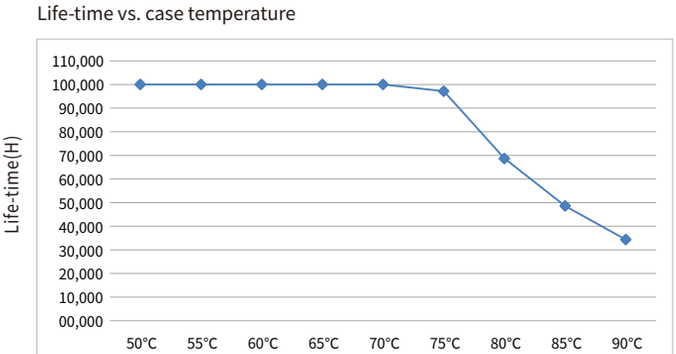

Displacement factor vs. Load




## Expected life-time

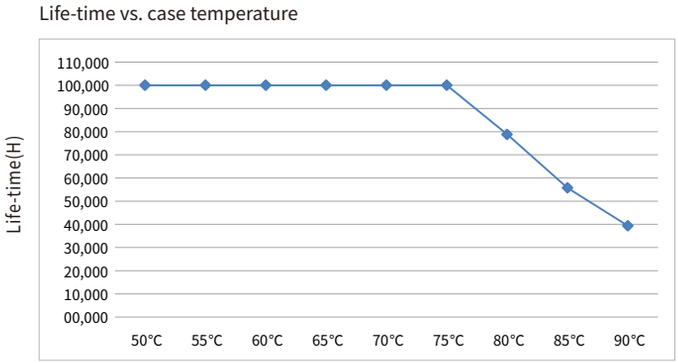
BK-DBV150S-AHA24V0DN

Life-time vs. case temperature




BK-DBV150S-AHA48V0DN

Life-time vs. case temperature

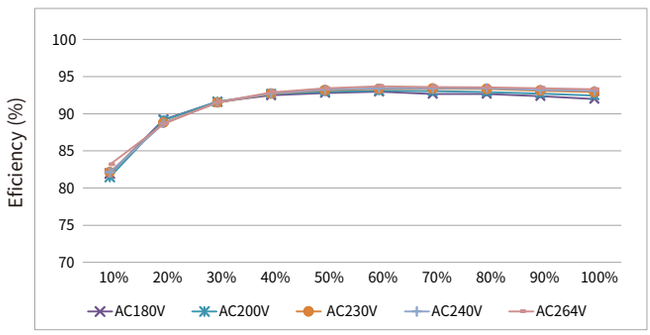



-The life-time of the LED driver is shown in the figure above
(calculated based on the 90% survival rate).
- The relation of tc to ta temperature depends also on the luminaire design.

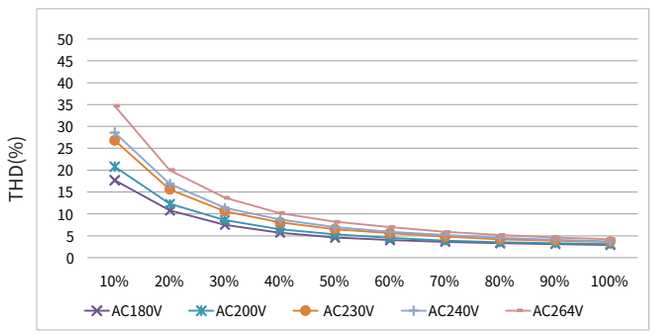
## Electrical values

BK-DBV200S-AHA

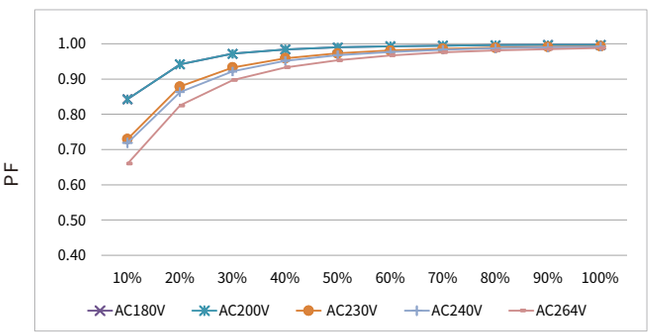
Efficiency vs load



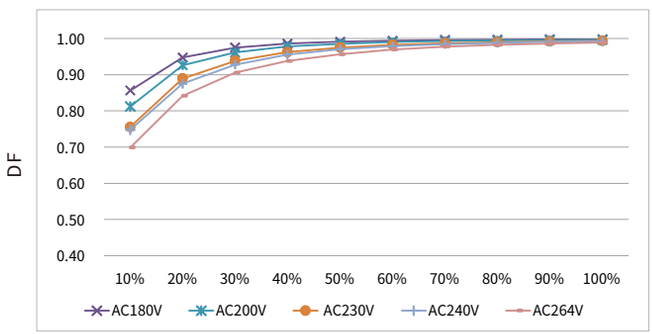

THD vs. Load




Power factor vs. Load



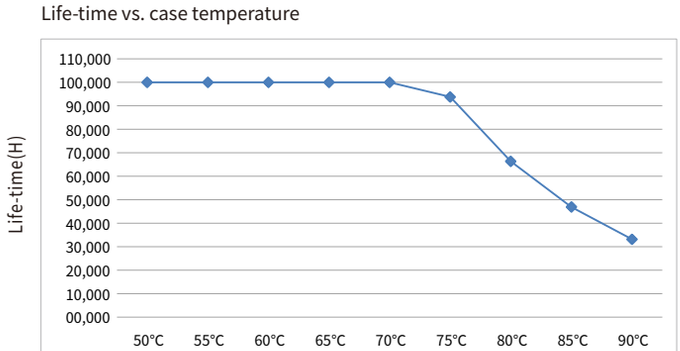

Displacement factor vs. Load




## Expected life-time

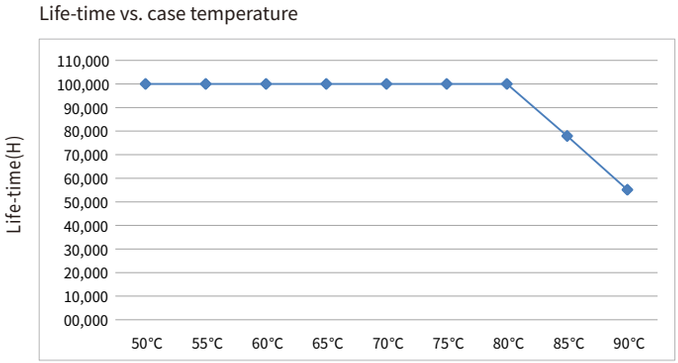
BK-DBV200S-AHA24V0DN

Life-time vs. case temperature




BK-DBV200S-AHA48V0DN

Life-time vs. case temperature

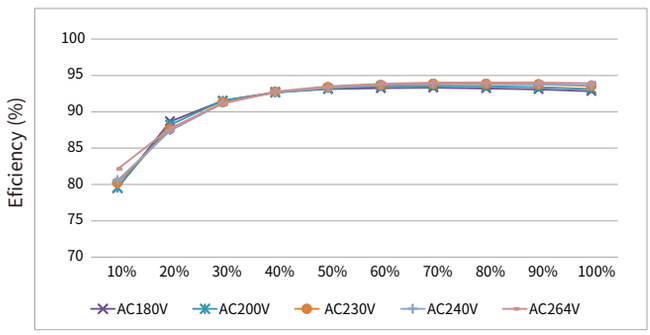



-The life-time of the LED driver is shown in the figure above
(calculated based on the 90% survival rate).
- The relation of tc to ta temperature depends also on the luminaire design.

## Electrical values

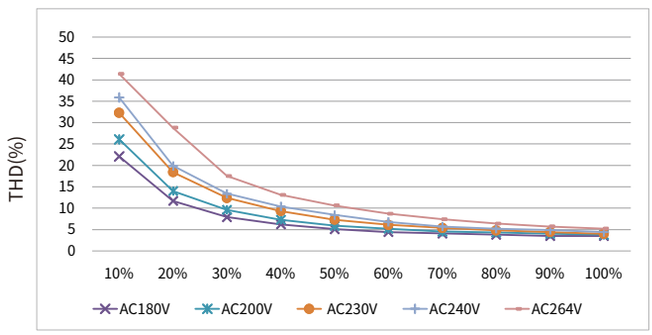
BK-DBV240S-AHA

Efficiency vs load



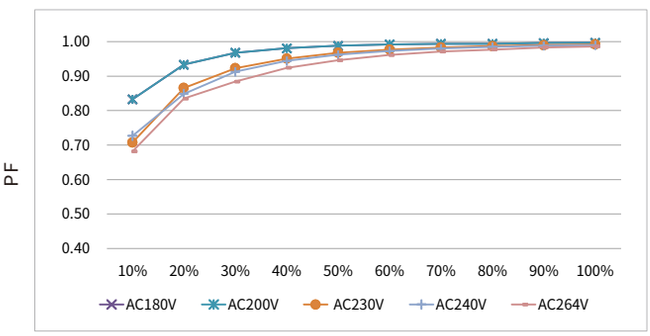

Load(%)

THD vs. Load



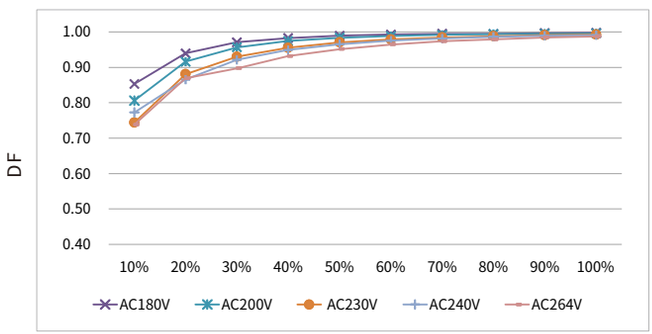

Load(%)

Power factor vs. Load




Load(%)

Displacement factor vs. Load

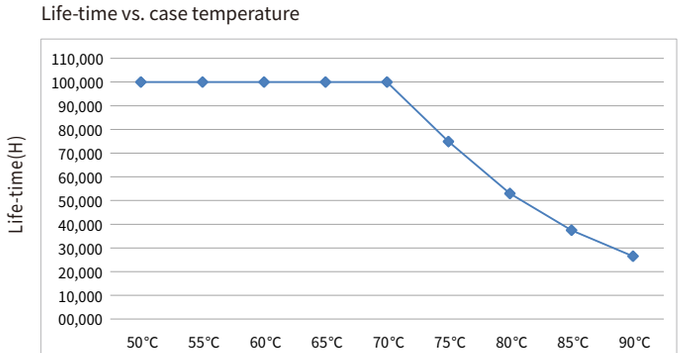



Load(%)

## Expected life-time

BK-DBV240S-AHA24V0DN

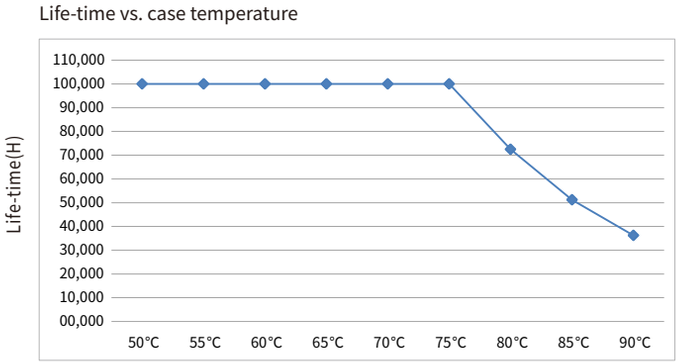
Life-time vs. case temperature




Case temperature(Tc)

BK-DBV240S-AHA48V0DN

Life-time vs. case temperature

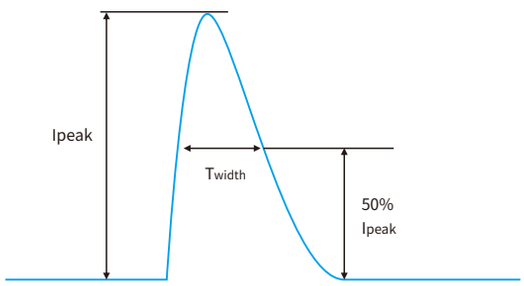



Case temperature(Tc)

-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 | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | B10 | B13 | B16 | B20 | B25 | C10 | C13 | C16 | C20 | C25 | D10 | D13 | D16 | D20 | D25 |
| BK-DBV080S-AHA | 25A | 300us | AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side | 10 | 14 | 16 | 19 | 24 | 16 | 21 | 26 | 32 | 41 | 23 | 30 | 37 | 47 | 58 |
| BK-DBV100S-AHA | 23A | 300us | | 9 | 12 | 15 | 19 | 23 | 16 | 20 | 25 | 31 | 39 | 16 | 21 | 26 | 33 | 41 |
| BK-DBV150S-AHA | 35A | 320us | | 6 | 8 | 9 | 12 | 15 | 10 | 13 | 16 | 19 | 24 | 11 | 14 | 18 | 22 | 28 |
| BK-DBV200S-AHA | 48A | 350us | | 4 | 5 | 6 | 8 | 10 | 6 | 8 | 10 | 13 | 16 | 8 | 11 | 13 | 17 | 21 |
| BK-DBV240S-AHA | 54A | 420us | | 3 | 4 | 4 | 6 | 7 | 5 | 6 | 7 | 9 | 12 | 7 | 9 | 11 | 14 | 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,disconnect the AC for more than 1 minute, and the output will return to normal.

**Output overload protection**

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

**Ouput 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.

**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 function can be enabled or disabled through the programming interface. If enabled, when the LED light is connected to the powered driver, the LED light will not light up, you can restart the drive to restore normal. If disabled, when the LED light is connected to the powered driver, the LED light will turn on or off according to the current brightness level.
- Please refer to the parameters configure in the "Device configuration" section for information on whether the default factory settings are enabled.
- Factory default Enabled or not please check the"Device configuration"section.

- Note:
  When the hot plug-in protection is enable, 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 application drivers should turn off the hot plug-in protection function in order to achieve good working results.

**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.
  pushDIM:short press pushbutton two times,then long press pushbutton.

**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 EasySet 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 the EasySet configuration software.
  Setting 1: When DC input, the output of the driver remains unchanged, and the dimming function responds normally.
  Setting 2 (default): When DC input, the output of the driver jumps to the set brightness of 15%, and the dimming function is invalid.

**Configuration programming(EasySet)**

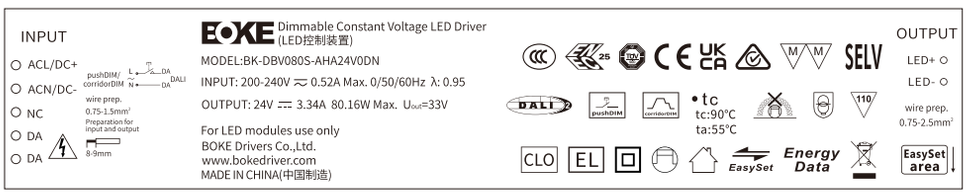
- The programming configuration of the driver is realized using the BOKE EasySet programming suite and through the driver's DALI interface or NFC interface.
- Please see the "Device configuration" section.
- More information about the EasySet programming suite can be found at www.bokedriver.com.

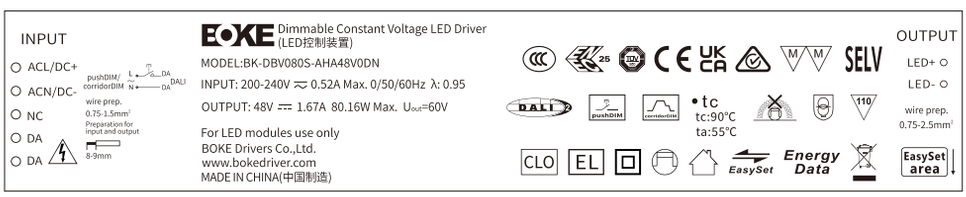
## Insulation between circuits

| Isolation | Input | Output | Case | DALI | PUSH |
|---|---|---|---|---|---|
| Input | - | Double | Double | Basic | - |
| Output | Double | - | Basic | Double | Double |
| Case | Double | Basic | - | Double | Double |

## Label

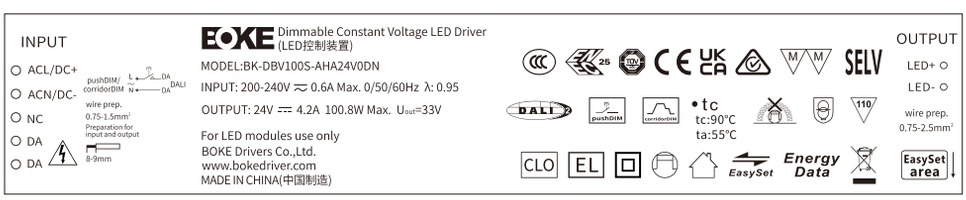
BK-DBV080S-AHA

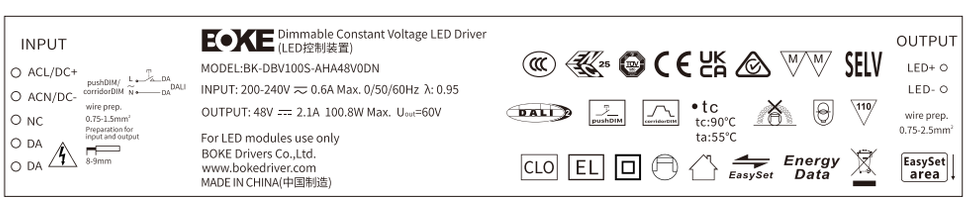



Laser engraving technique

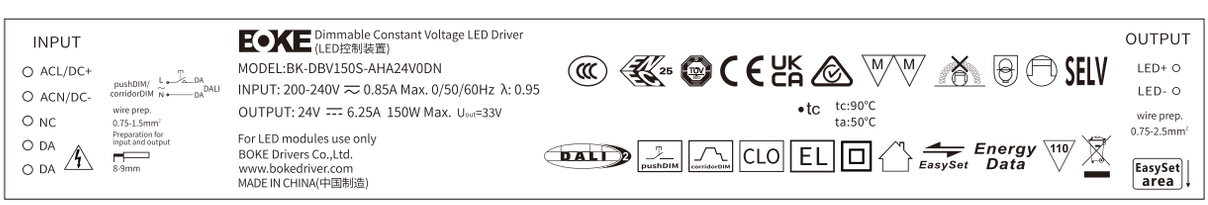
BK-DBV100S-AHA

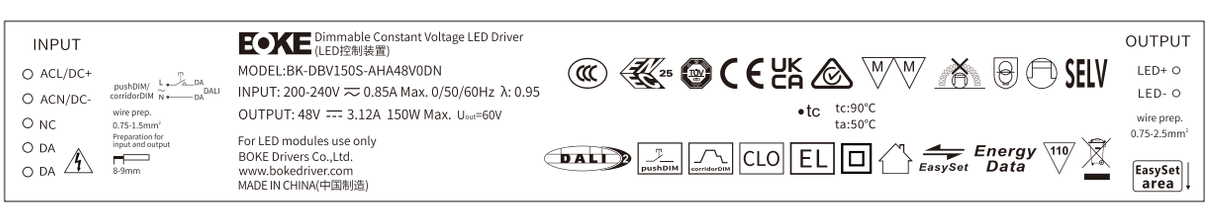



Laser engraving technique

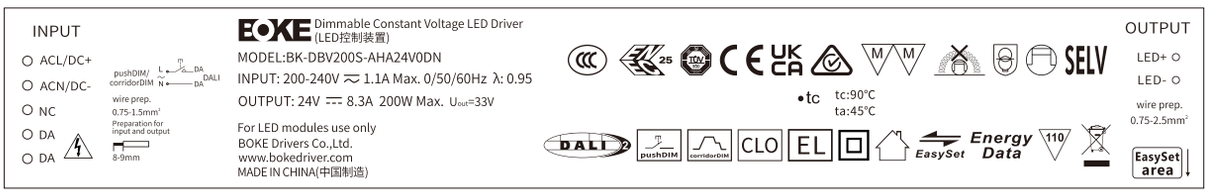
BK-DBV150S-AHA

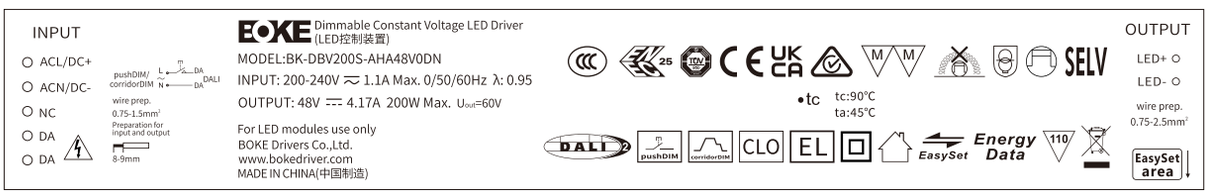



Laser engraving technique

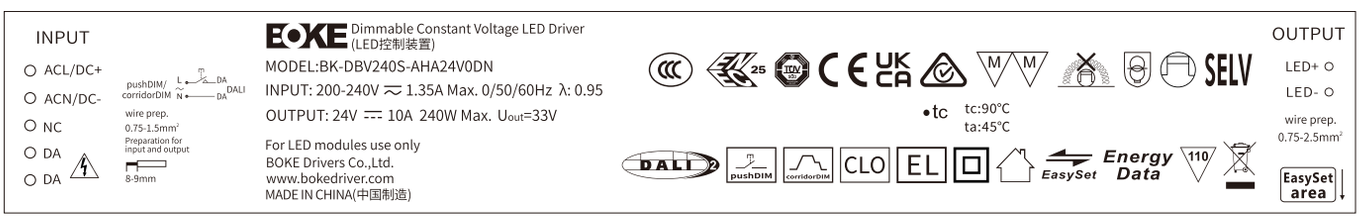
BK-DBV200S-AHA

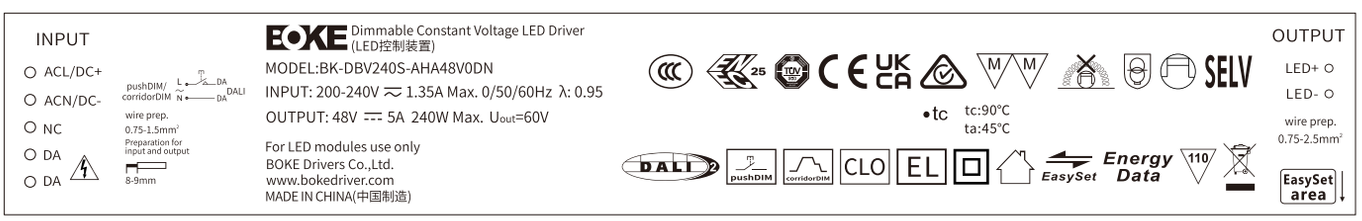



Laser engraving technique

BK-DBV240S-AHA

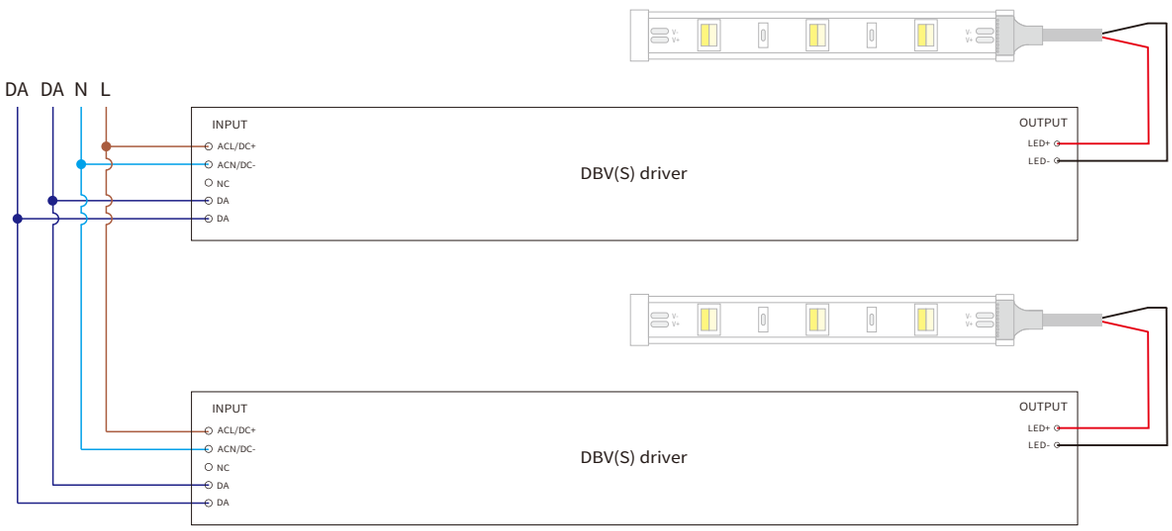



Laser engraving technique

## 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.

Please refer to the table below:

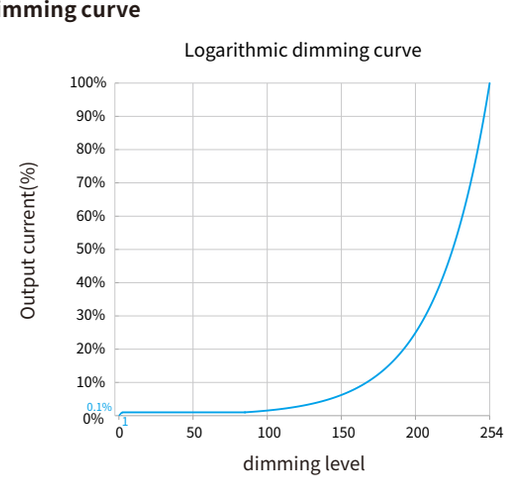
| Cable size | Distance |
|---|---|
| 2×0.50mm$^2$ | max.100m |
| 2×0.75mm$^2$ | max.150m |
| 2×1.00mm$^2$ | max.200m |
| ⩾2×1.50mm$^2$ | max.300m |

### 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.

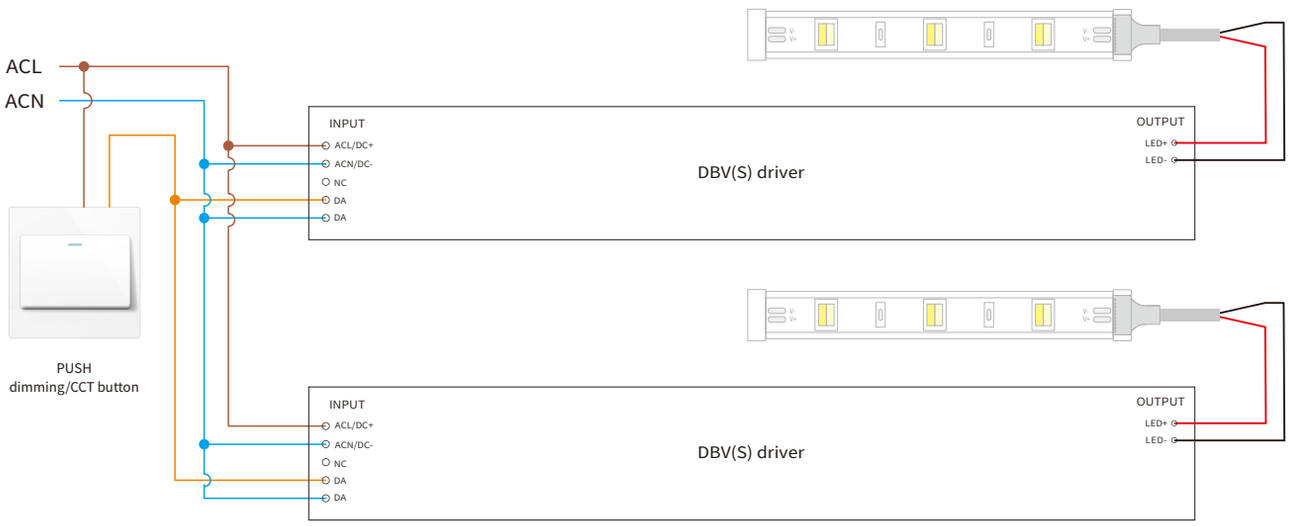
### Dimming curve




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

- According to the wiring diagram of the pushDIM dimming application, short press(<1s) the pushbutton 5 times quickly within 3s, the driver will automatically switch to the pushDIM dimming mode.
- After switch to the pushDIM control mode, CorridorDIM mode will be automatically closed.

**Remarks:**

Max. 50 drivers per pushDIM control line.

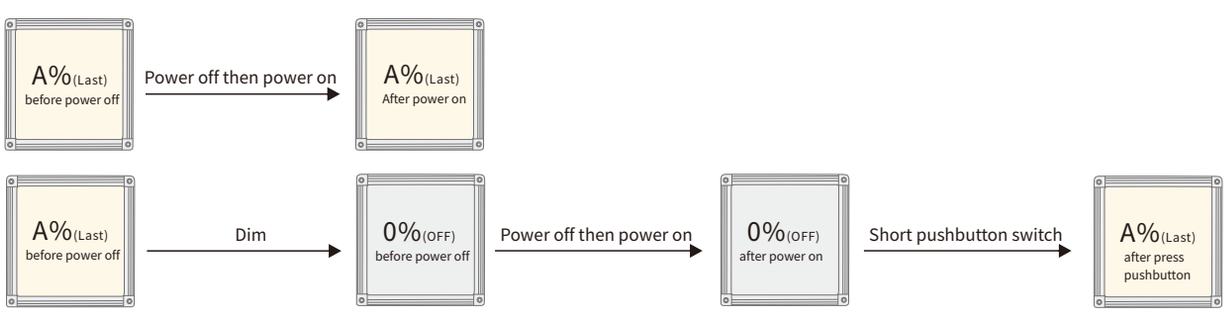
Turn on or turn off:short press pushbutton for 0.2-1s.

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.

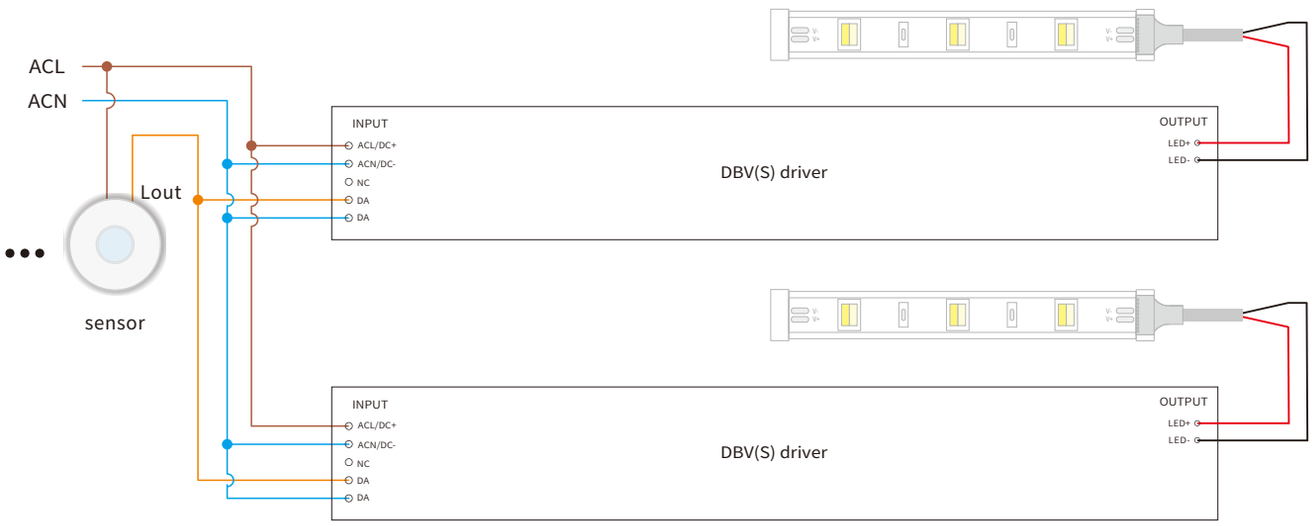
Step 3:long press the pushbutton,confirm each light is from darkest to brightest and all the lights are synchronous.

method 2:

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

## corridorDIM dimming application

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 driver 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

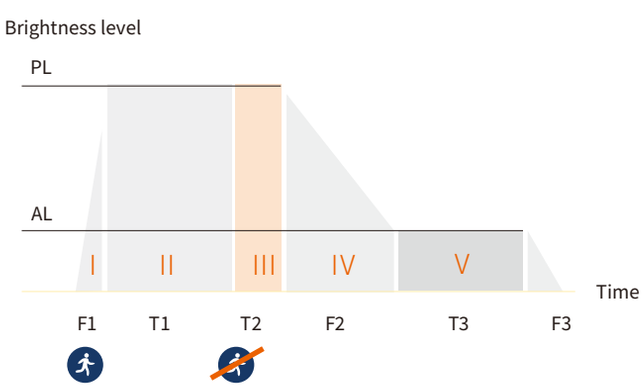
After installation according to the wiring diagram of the corridorDIM dimming application, first replace the sensor with a normal switch, and then turn on the normal switch for 5 minutes, and the driver will automatically switch to corridorDIM dimming mode, then remove the normal switch and replace it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

## Device configuration

### Optional 1:




BOKE EasySet(PC)

NFC Reader

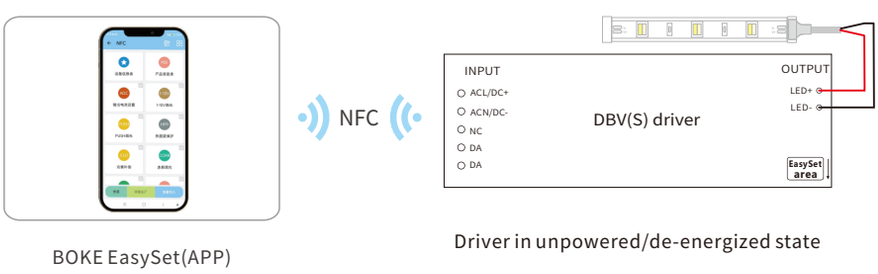
Driver in unpowered/de-energized state




BOKE EasySet(APP)

NFC Buletooth Reader

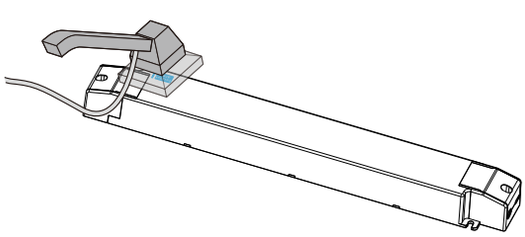
Driver in unpowered/de-energized state



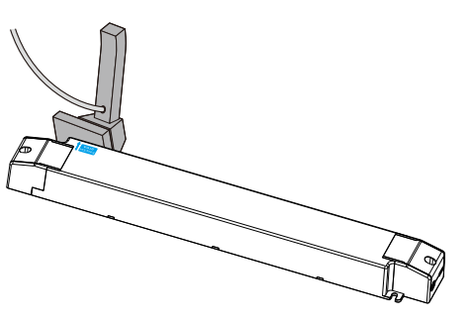

BOKE EasySet(APP)

Driver in unpowered/de-energized state

## NFC scanning area



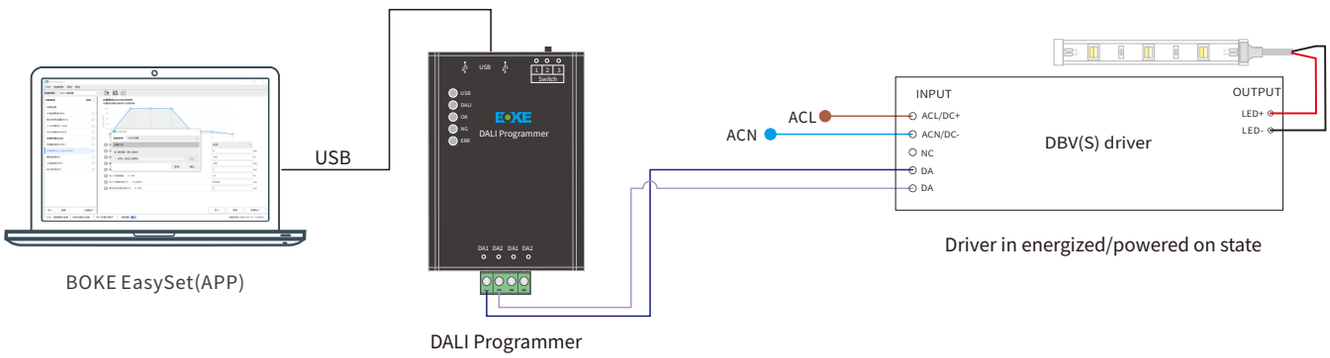
**Error scanning mode**



**Correct scanning mode**

## Device configuration

### Optional 2:




### 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 Kit | FEIG | RF-LRM1002-300/300 Kit | V1.3.4 | - |
| | DALI programmer | BOKE | BK-CS01-SDL | V1.0.0 | - |
| 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 |
| PUSH dimming(pushDIM) | Activated | YES | Read/Write |
| Corridor dimming(corridorDIM) | Activated | YES | Read/Write |
| Emergency lighting(EL) | Activated | YES | Read/Write |
| Power-on fadeing(POF) | Deactivated | YES | Read/Write |
| Constant light output(CLO) | Deactivated | YES | Read/Write |
| Hot plug-in protection(HPP) | Deactivated | YES | Read/Write |
| Run-time(RT) | | NO | Read Only |
| DALI Address(DA) | Activated | YES | Read/Write |
| DALI basic parameters(DP) | Activated | YES | Read/Write |
| DALI scene setting(DS) | Activated | YES | Read/Write |
| Luminaire data (LMD) | Activated | YES | Read/Write |
| Other parameters | | YES | |

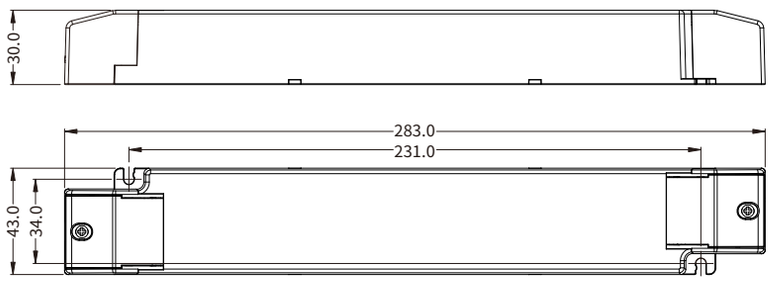
Note: The default factory mode of emergency lighting is derated mode, and the emergency brightness is 15%

## Mechanical Specification

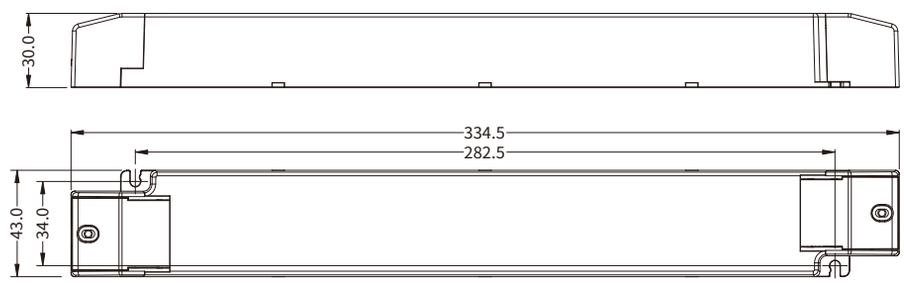
**Size(Excluding accessories)**

**Unit:mm**

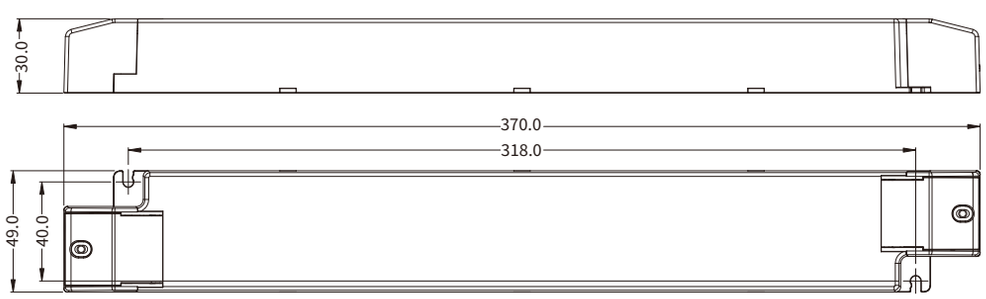
DBV080S-AHA/DBV100S-AHA




DBV150S-AHA/DBV200S-AHA



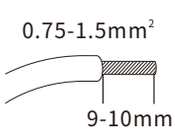

DBV240S-AHA




INPUT

| Numbering | function | colour |
|---|---|---|
| 1 | ACL/DC+ | grey |
| 2 | ACN/DC- | grey |
| 3 | NC | grey |
| 4 | DA | grey |
| 5 | DA | grey |

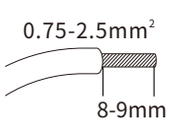
Input wire




OUTPUT

| Numbering | function | colour |
|---|---|---|
| 1 | LED+ | red |
| 2 | LED- | black |

Output wire




## Installation note

**Hot plug-in**

- When this 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.

**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.

**Replace LED module**

1. Mains off
2. Wait more than 15 seconds
3. Remove LED module
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 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.
  3.Two power outputs cannot be connected in parallel.

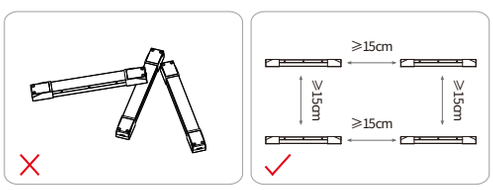



Figure 1

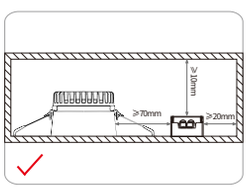



Figure 2

## Packaging



Product

Packaging

8pcs×4boxes=32pcs/CTN
8pcs×2boxes=16pcs/CTN
4pcs×4boxes=16pcs/CTN

| Model | Product size | Weight | Packaging size | Carton size | Qty/carton | N.W | G.W |
|---|---|---|---|---|---|---|---|
| DBV080S-AHA | L283*W43*H30mm | 252g | L298*W125*H90mm | L315*W270*H200mm | 32pcs | 8.01KG | 9.25KG |
| DBV100S-AHA | L283*W43*H30mm | 257g | L298*W125*H90mm | L315*W270*H200mm | 32pcs | 8.22KG | 9.58KG |
| DBV150S-AHA | L334.5*W43*H30mm | 348g | L350*W125*H92mm | L370*W270*H115mm | 16pcs | 5.57KG | 6.98KG |
| DBV200S-AHA | L334.5*W43*H30mm | 522g | L350*W125*H92mm | L370*W270*H115mm | 16pcs | 8.35KG | 9.75KG |
| DBV240S-AHA | L370*W49*H30mm | 460g | L375*W125*H55mm | L390*W270*H130mm | 16pcs | 7.36KG | 8.41KG |

## 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.
- Power supply shall be connected to load before power-on.
- When the load is a DC-DC module, its input inrush current must be controlled to <30A.
- The LED lamp load is a constant voltage load.
- 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.