



Bridgelux® Vesta-X4 Quad Channel 150W (DMX) Constant Current Driver

Product Data Sheet DS1246

Product Feature Map

Bridgelux Vesta-X4 (DMX) Quad Channel 150W Driver provides dynamic constant current output for LED modules and arrays. This Driver interoperates with DMX control lighting systems and protocols and allows for simple integration of Bridgelux's RGBW and 3CCT White Arrays and Linear modules. Please visit www.bridgelux.com for more information.



Product Nomenclature

The part number designation for Bridgelux Vesta-X4 (DMX) Quad Channel 150W Driver is explained as follows:

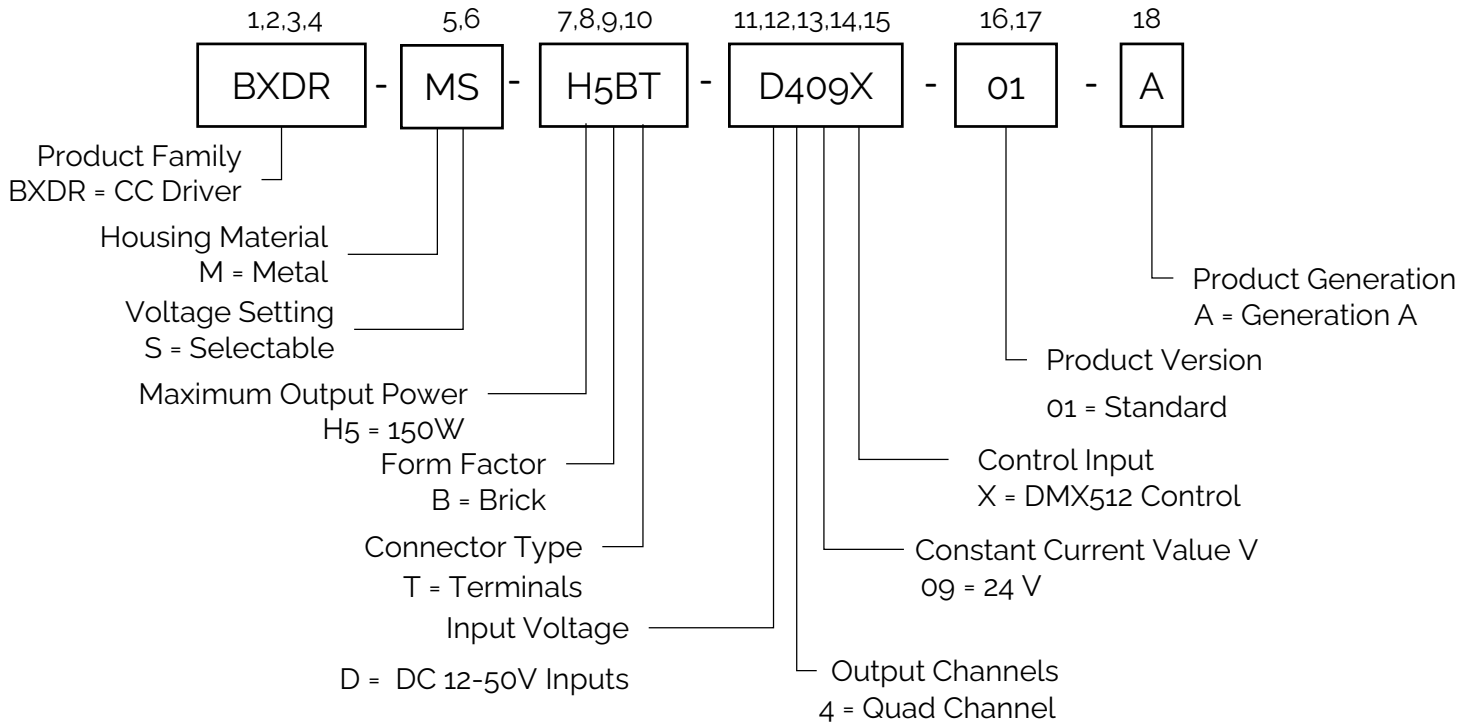
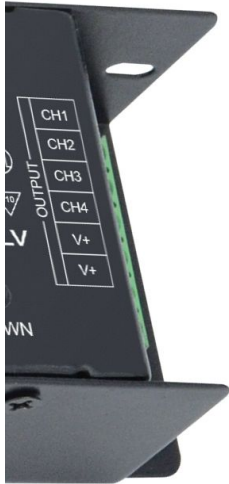


Table 1: Product Selection Guide

| Part Number | Configuration |
|-------------------------|--|
| BXDR-MS-H5BT-D409X-01-A | DMX 4 Channel CC Driver, DC 12 – 50VDC |

Wiring and setup instructions



- V+ (All Ch +)
- CH 1 (-)
- CH 2 (-)
- CH 3 (-)
- CH 4 (-)

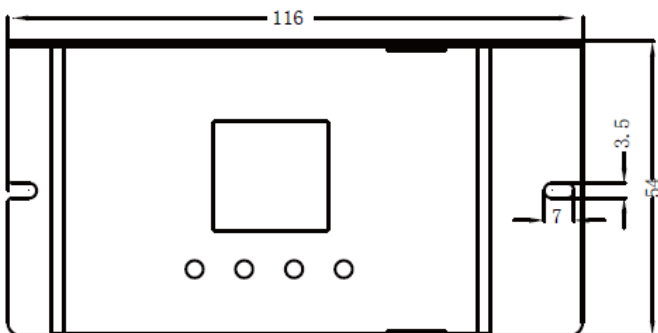
Bridgelux Vesta-X4 driver can power up various Bridgelux 4 Channels LEDs (RGBW series). Below table provides some examples of the driver channel mapping to different LEDs channels (further instructions please contacts Bridgelux).

| Driver Channel | LED Channel | | | |
|----------------|---------------------------|-------------------|-------------------|-------------------|
| | Array (COB) RGBW (CRI 95) | SMD RGBW (CRI 95) | SMD 3CCT (CRI 90) | SMD 3CCT (CRI 97) |
| CH 1 | Red | Red | 1 | 1 |
| CH 2 | Green | Green | 1 | 2 |
| CH 3 | Blue | Blue | 2 | 3 |
| CH 4 | White | White | 3 | 3 |

Electrical Characteristics

Table 2: Electrical Characteristics

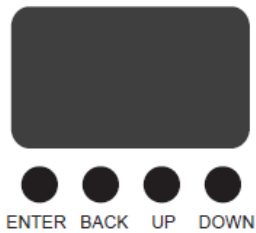
| Parameter | Unit | Specification |
|----------------|------|---|
| Number of Ch | | 4 |
| Input Voltage | V | 12 – 50V DC (~ 6V above Output Voltage) |
| Output Voltage | V | 1 – 42V DC |
| Output Current | mA | 100 / 150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 550 / 600 / 650 / 700 / 750 / 800 / 850 / 900 mA |
| Output Power | W | 37.5W x 4 CH (150W Max. total) |
| Efficiency | % | ≥ 95% (@ Full Load) |
| Dimension | mm | 116 x 54 x 35 mm |
| Weight | g | 230 |



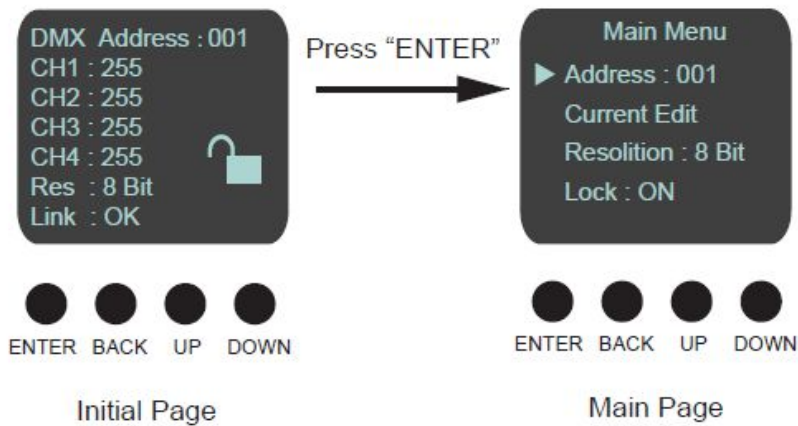
Driver Configuration

Table 3: Button Controls

| Button | Function |
|--------|---|
| Enter | Execute the function (whereas cursor pointed) |
| Back | Return to previous menu, exit the current stage |
| Up | Move cursor up / Increase the value |
| Down | Move cursor down / decrease the value |



When power on, driver will enter the Initial page that shows the current parameter information and working status. Please press "ENTER" to enter homepage. When driver idle for more than 1 minute, initial page will be shown.

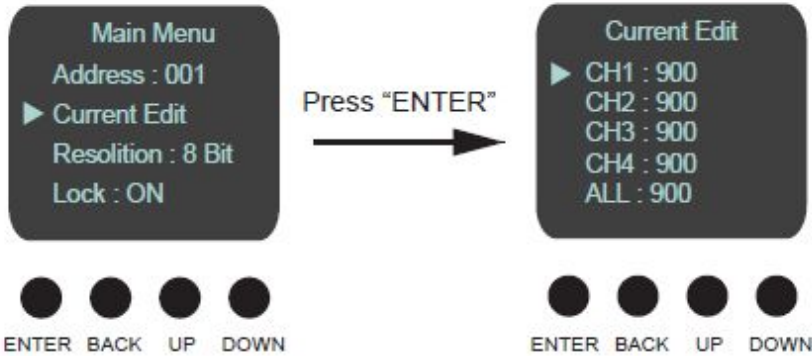


DMX Address setting

Press "up" or "down" key to set DMX Address

Address : 1-511 adjustable

Driver Configuration (cont.)



Current Edit

CH1 : 100-900m A adjustable
 CH2 : 100-900m A adjustable
 CH3 : 100-900m A adjustable
 CH4 : 100-900m A adjustable
 ALL : 100-900m A adjustable



Resolution setting

Press "up" or "down" key to set resolution
 Resolution : 8Bit
 16Bit



Lock : ON
 Screen will be locked if unmaned operation
 for 1 min , press "Enter" key for 3s to unlock

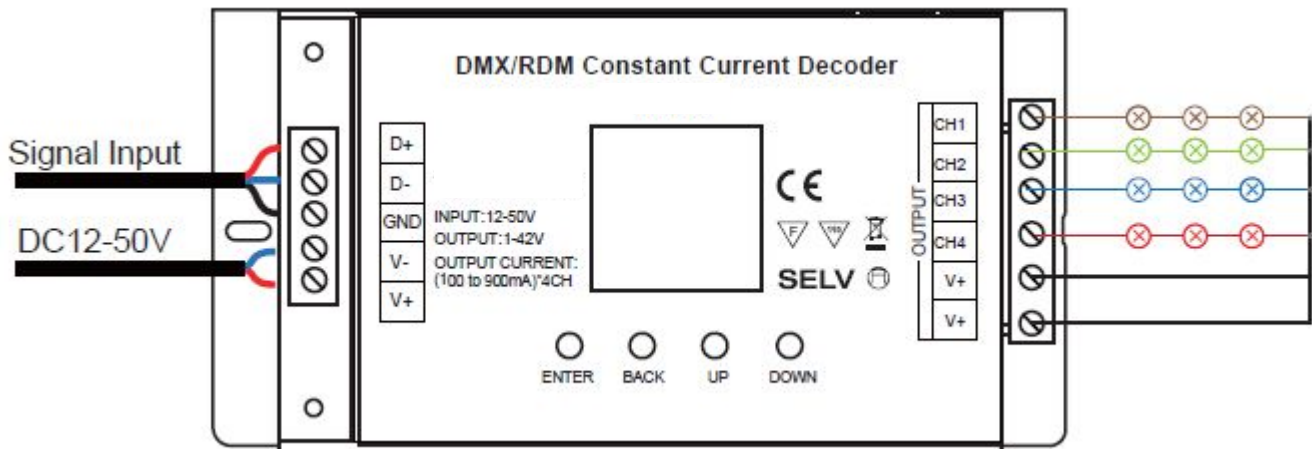
Wiring & Connections

Table 3: **Wiring**

| | Specification item | Value |
|-----|---------------------|-------------------------------|
| PRI | Cable cross-section | 1.5 mm ² / AWG 18 |
| | Length | 152 mm |
| SEC | Cable cross-section | 0.25 mm ² / AWG 24 |
| | Length | 152 mm |

Notes for Table 3:

1. Unless otherwise specified, all linear tolerances are +/-1.0mm



Environmental and Regulatory Standards

Table 4: Environmental Conditions

| Parameter | Specification |
|-------------------------------|---|
| Ambient Operating Temperature | -20°C to + 50°C |
| Humidity Rating | Maximum 90% Relative Humidity, non condensing |
| Storage Temperature | -40°C to + 80°C |
| Expected Lifetime | > 50,000 hours (Ta < 50°C) |

Table 5: Regulatory Approvals and Compliance

| Specification | Reference Standard | Condition |
|----------------------------------|---|--|
| Harmonic Current Emissions | EN IEC 61000-3-2:2014 | |
| Voltage Fluctuations & Flicker | IEC 61000-3-3:2013 | |
| ESD (Electrostatic Discharge) | IEC 61547:2009 Section 5.2 Test des.: IEC 61000-4-2 | 2 kV contact discharge, 4 kV air discharge, level 3 |
| Continuous Radiated Disturbance | IEC 61547:2009 Section 5.3 Test des.: IEC 61000-4-3 | 3 V/m, 80 - 1000 MHz, 80% modulated at distance of 3 meters |
| Electrical Fast Transient | IEC 61547:2009 Section 5.5 Test des.: IEC 61000-4-4 | ± 1 kV on AC power port for 1 minute, |
| Surge | IEC 61547 Section 5.7 Test des.: IEC 61000-4-5 | ± 1 kV (differential mode) |
| Continuous Conducted Disturbance | IEC 61547:2009 Section 5.6 Test des.: IEC 61000-4-6 | 3V, 0.15-80 MHz, 80% modulated, Level 2 |
| Voltage Dips | IEC 61547 Section 5.8, 5.9 Test des.: IEC 61000-4-11 | 70% dip during 25 cycles @ 50Hz, 30 cycles @ 60Hz 0% dip during ½ cycles |

Regulatory Standards (continued)

Table 6: Safety Agency Approvals

| Specification | Reference Standard | Condition |
|---------------|--|-----------|
| ETL | UL8750, CAN/CSA-C22.2 No. 250.13 | |
| CE / UKCA | EN 61347-1:2015, EN 61347-2-13:2014/A1:2017 | |



Protection

Table 7: Protection

| Parameters | Specification |
|-----------------------------|-------------------|
| Over Current Protection | Yes / Auto Resume |
| Over Temperature Protection | Yes / Auto Resume |
| Short Circuit Protection | Yes / Auto Resume |

Design Resources

Application Notes

Please contact your Bridgelux sales representative for assistance on obtaining application support when designing with the Bridgelux Vesta-X4 Quad Channel Driver. For a list of available resources, visit www.bridgelux.com.

Precautions

CAUTION: PRODUCT HANDLING

Handle the Vesta-X4 Quad Channel Driver with care to prevent any damage from mechanical shock. It is recommended to handle this driver in a static-free environment. To maintain product warranty, the product must not be opened or disassembled and the installer must ensure that the driver's operating conditions do not exceed the maximum conditions stated within this data sheet.

CAUTION: PRODUCT INSTALLATION

Incorrect installation of the Vesta-X4 Quad Channel Driver can cause irreparable damage to the driver, connected LEDs. Pay attention when connecting the LED load and observe the correct polarity of the output terminals as specified in this data sheet and on the driver label. Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

CAUTION: ELECTRIC SHOCK

Be aware of the possibility of an electric shock hazard which can result in serious injury or death. Disconnect power before servicing or installing this device.

Disclaimers

MINOR PRODUCT CHANGE POLICY

The rigorous qualification testing on products offered by Bridgelux provides performance assurance. Slight cosmetic changes that do not affect form, fit, or function may occur as Bridgelux continues product optimization.

About Bridgelux: Bridging Light and Life™

At Bridgelux, we help companies, industries and people experience the power and possibility of light. Since 2002, we've designed LED solutions that are high performing, energy efficient, cost effective and easy to integrate. Our focus is on light's impact on human behavior, delivering products that create better environments, experiences and returns—both experiential and financial. And our patented technology drives new platforms for commercial and industrial luminaires.

For more information about the company, please visit

bridgelux.com

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linkedin.com/company/bridgelux

WeChat ID: BridgeluxInChina



46410 Fremont Blvd

Fremont, CA 94538 USA

Tel (925) 583-8400

www.bridgelux.com