# WLB32V Industrial LED Light Bar (DC) Product Manual

Original Instructions
p/n: 243196 Rev. C
03-Oct-25
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ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

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Chapter Contents

# Chapter 1 Features and Models



Banner's WLB32 Industrial LED Light Bar (DC) is a bright LED fixture that features even light output for a no-glare glow and limited lateral emissions. Suitable for a variety of environments and applications, including workstations, machine lighting, control cabinets, and manufacturing lines, the WLB32 uses advanced LED lighting technology to provide a high-quality and maintenance-free industrial lighting solution for years of service.

- Highly energy efficient for overall cost savings
- On/Off switch
- Cascadeable power connection with individual fixture control
- Easy installation with included snap clips, or a choice of magnetic, swivel, and heavy-duty brackets

Cascadeable WLB32 series models can be connected in series for a continuous length of lighting with a minimum of wiring. Each light can be turned on or off independently of other lights in the chain. A double-ended accessory cordset must be used between each pair of connecting lights.

| 12 V DC to 30 V DC Models[1] | | | |
|---|---|---|---|
| **Cascadable** | **Non-Cascadable** | **Lighted Length (mm)** | **Connector** |
| WLB32VCW285PBQ | WLB32VXW285PBQ | 285 | Non-cascadeable models: One 4-pin M12 male quick-disconnect connector<br><br>Cascadable models: One 4-pin M12 male and one 4-pin M12 female quick-disconnect connector |
| WLB32VCW570PBQ | WLB32VXW570PBQ | 570 | |
| WLB32VCW855PBQ | WLB32VXW855PBQ | 855 | |
| WLB32VCW1140PBQ | WLB32VXW1140PBQ | 1140 | |

**IMPORTANT:** Read the following instructions before operating the light. Please download the complete WLB32 Industrial LED Light Bar (DC) technical documentation, available in multiple languages, from www.bannerengineering.com for details on the proper use, applications, Warnings, and installation instructions of this device.

**IMPORTANT:** Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los WLB32 Industrial LED Light Bar (DC), disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

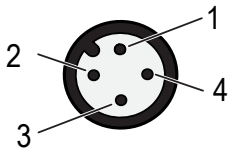
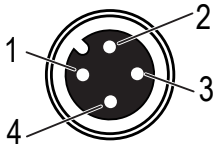
**IMPORTANT:** Lisez les instructions suivantes avant d'utiliser le luminaire. Veuillez télécharger la documentation technique complète des WLB32 Industrial LED Light Bar (DC) sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

[1] Standard models shown. Contact factory for other options.


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# Chapter 2 Wiring

| 4-pin M12 Male Pinout | 4-pin M12 Female Pinout | Pin | Wire Color | Connection |
|---|---|---|---|---|
|  |  | 1 | Brown | 12 V DC to 30 V DC |
| | | 2 | White | Not used |
| | | 3 | Blue | DC common |
| | | 4 | Black | Not used |


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# Chapter 3 Specifications

**Supply Voltage**

12 V DC to 30 V DC

Use only with a suitable Class 2 power supply (UL) or SELV power supply (CE)

See electrical characteristics on product label

**Supply Protection Circuitry**

Protected against reverse polarity and transient voltages

**LED Lifetime**

Lumen Maintenance - $L_{70}$

When operating within specifications, output will decrease less than 30% after 50,000 hours.

**Supply Current**

| Lighted Length (mm) | Maximum Current Draw (A) | Typical Current Draw (A) | | |
|---|---|---|---|---|
| | | 12 V DC | 24 V DC | 30 V DC |
| 285 | 0.56 | 0.51 | 0.255 | 0.22 |
| 570 | 1.12 | 1.02 | 0.51 | 0.44 |
| 855 | 1.67 | 1.53 | 0.765 | 0.64 |
| 1140 | 2 | 1.785 | 0.89 | 0.77 |

**Light Characteristics**

Color: Daylight white

Color temperature (CCT): 5000K (±300K)

CRI: 82, typical

| Lighted Length (mm) | Lumens |
|---|---|
| 285 | 725 |
| 570 | 1450 |
| 855 | 2175 |
| 1140 | 2540 |

**Switch**

ON/OFF

**Construction**

Polycarbonate housing, nylon end caps

**Spacing Criterion**

Vertical: 1.26

Horizontal: 1.34

**Mounting**

Snap clips are included. Optional magnetic mount or swivel bracket accessories are available.

**Connections**

Non-cascadeable models: One 4-pin M12 male quick-disconnect connector

Cascadable models: One 4-pin M12 male and one 4-pin M12 female quick-disconnect connector

4-pin connecting cordsets are required; see "Accessories" on page 10

**Environmental Rating**

IP54

**Vibration and Mechanical Shock**

Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 1.0 mm amplitude, 5 minutes sweep, 30 minutes dwell)

Meets IEC 60068-2-27 requirements (Shock: 15G 11 ms duration, half sine wave)

**Operating Temperature**

–40 °C to +70 °C (–40 °F to +158 °F)

Light output begins to decrease above 50 °C (122 °F) and will be approximately 65% of max intensity at 60 °C (140 °F) and 30% of max intensity at 70 °C (158 °F)

**Storage Temperature**

–40 °C to +70 °C (–40 °F to +158 °F)

**Certifications**

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

Turck Banner LTD Blenheim House
Blenheim Court
Wickford, Essex SS11 8YT
GREAT BRITAIN


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### Required Overcurrent Protection

**WARNING:** Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.

Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

For additional product support, go to www.bannerengineering.com.

| Supply Wiring (AWG) | Required Overcurrent Protection (A) | Supply Wiring (AWG) | Required Overcurrent Protection (A) |
|---|---|---|---|
| 20 | 5.0 | 26 | 1.0 |
| 22 | 3.0 | 28 | 0.8 |
| 24 | 2.0 | 30 | 0.5 |

### Application Note

When connecting cascadable lights in series it is important not to exceed the maximum current limitation of 4 Amps

Maximum length of light at 12 V DC: 2 m (6.6 ft)

Maximum length of light at 24 V DC: 4.3 m (14.1 ft)

Maximum length of light at 30 V DC: 5.1 m (16.7 ft)

# FCC Part 15 Class B for Unintentional Radiators

(Part 15.105(b)) This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

# Industry Canada ICES-003(B)

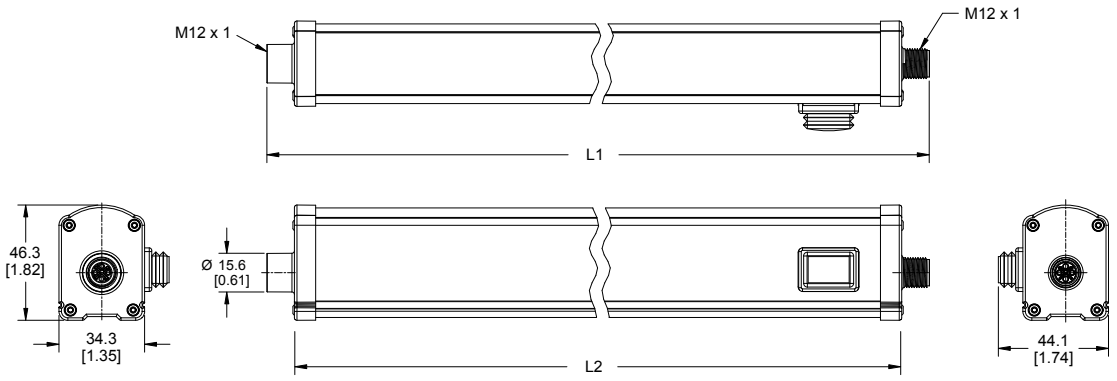
This device complies with CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la norme NMB-3(B). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.

# Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

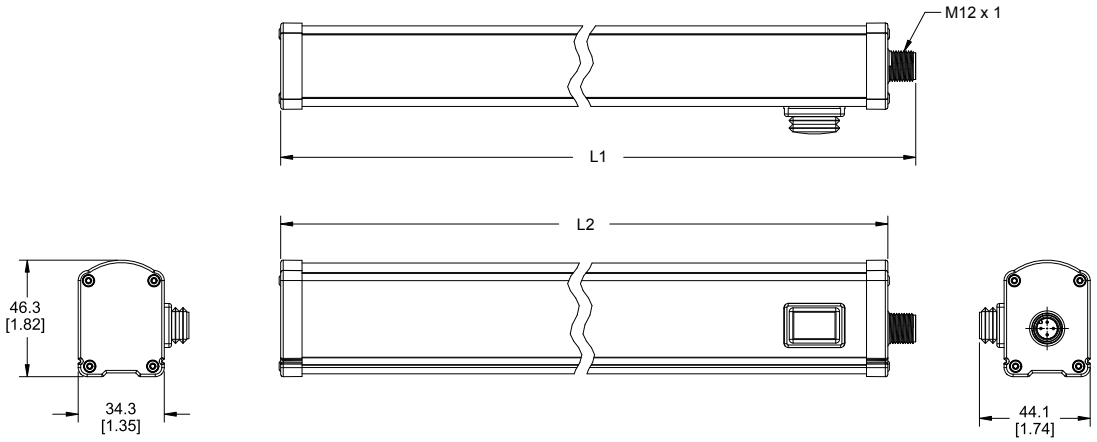
*Cascadable Models*





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*Non-Cascadable Models*




| Model | L1 | L2 |
|---|---|---|
| WLB32VC...285PBQ | 325 mm (12.8 in) | 303 mm (11.9 in) |
| WLB32VC...570PBQ | 609 mm (24 in) | 587 mm (23.1 in) |
| WLB32VC...855PBQ | 894 mm (35.2 in) | 872 mm (34.3 in) |
| WLB32VC...1140PBQ | 1179 mm (46.4 in) | 1157 mm (45.6 in) |
| WLB32VX...285PBQ | 314 mm (12.4 in) | 303 mm (11.9 in) |
| WLB32VX...570PBQ | 598 mm (23.5 in) | 587 mm (23.1 in) |
| WLB32VX...855PBQ | 883 mm (34.8 in) | 872 mm (34.3 in) |
| WLB32VX...1140PBQ | 1168 mm (46 in) | 1157 mm (45.6 in) |

# Spacing Criteria (SC)

The spacing criteria is the fixture-spacing-to-mounting-height ratio and aids in laying out a pattern of fixtures. Multiply the spacing criteria by the mounting height to get the maximum fixture spacing that still provides even illumination (no shadowing between fixtures).

Luminaire Spacing = SC × Height to Illuminated Plane

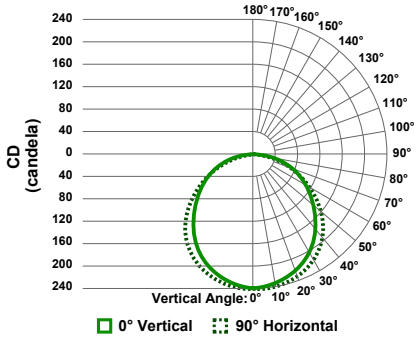
The mounting height is the distance from the fixture to the surface you are lighting.


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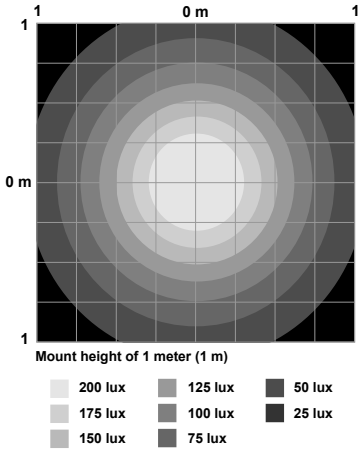
# Light Characteristics

*285 mm Models*

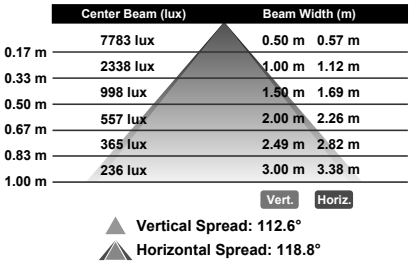
**Polar Candela Distribution**




**Isolux Pattern**

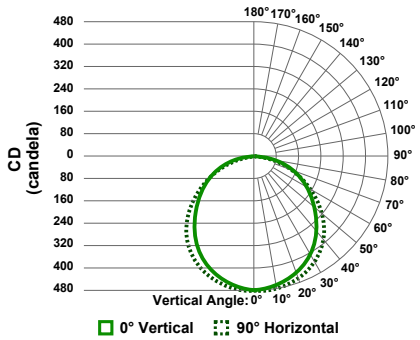



**Illuminance at a Distance**

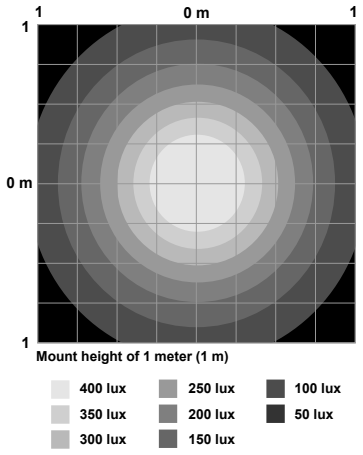



*570 mm Models*

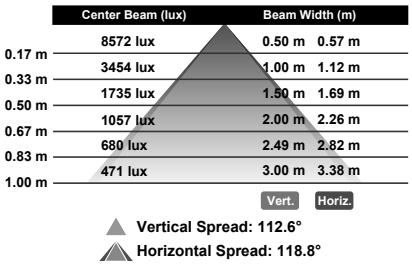
**Polar Candela Distribution**




**Isolux Pattern**




**Illuminance at a Distance**

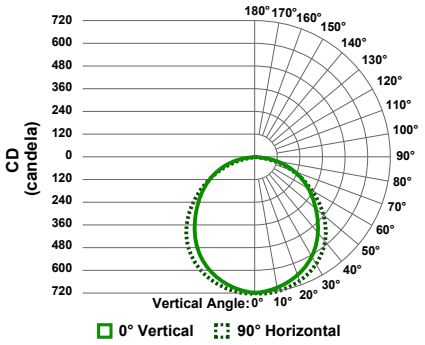




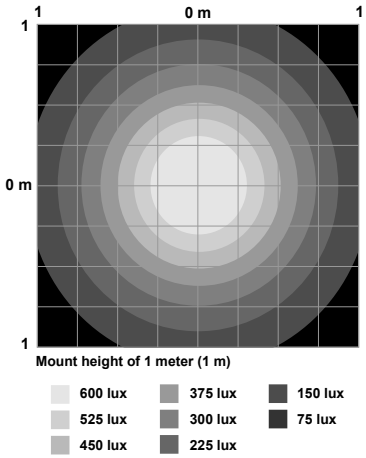
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*855 mm Models*

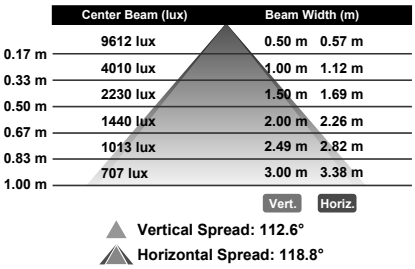
**Polar Candela Distribution**




**Isolux Pattern**

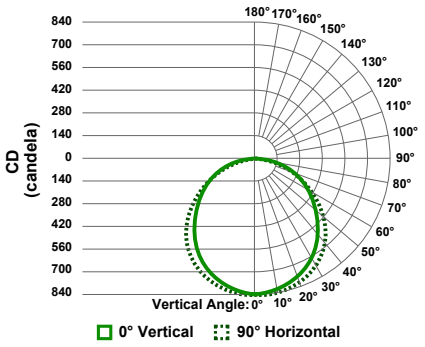



**Illuminance at a Distance**

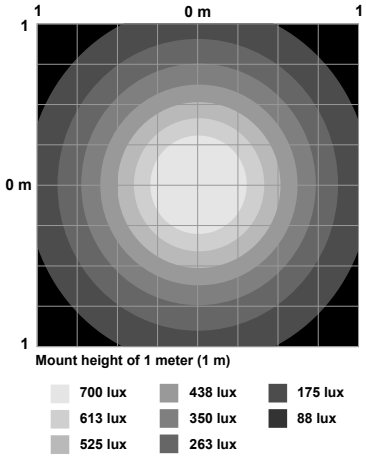



*1140 mm Models*

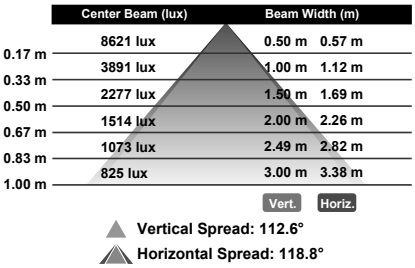
**Polar Candela Distribution**




**Isolux Pattern**




**Illuminance at a Distance**





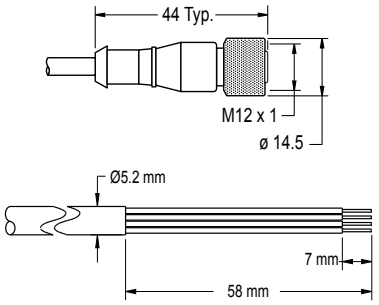
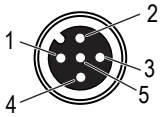
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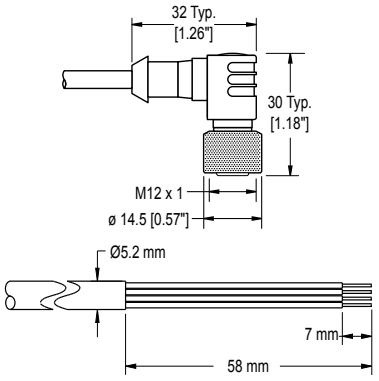
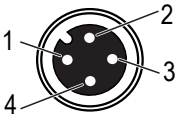
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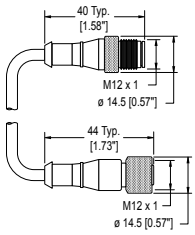
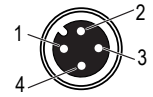
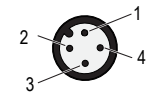
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# Chapter 4 Accessories

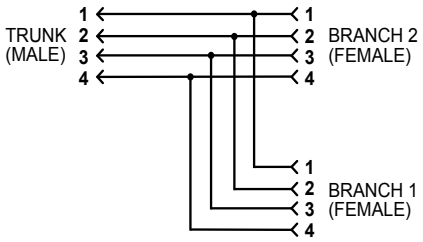
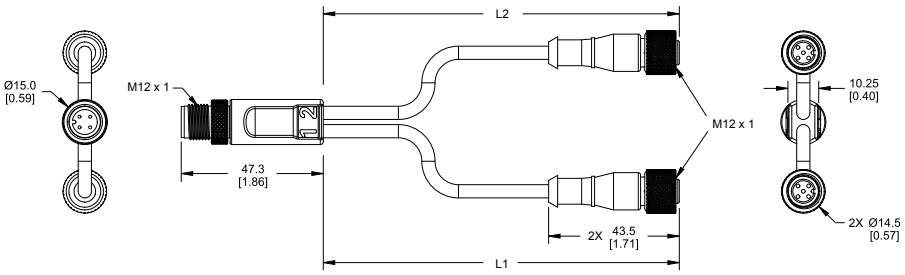
## Cordsets

| 4-pin Single-Ended M12 Female Cordsets | | | | |
|---|---|---|---|---|
| **Model** | **Length** | **Dimensions (mm)** | **Pinout (Female)** | |
| **BC-M12F4-22-1** | 1 m (3.28 ft) |  |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Unused |
| **BC-M12F4-22-2** | 2 m (6.56 ft) | | | |
| **BC-M12F4-22-5** | 5 m (16.4 ft) | | | |
| **BC-M12F4-22-8** | 8 m (26.25 ft) | | | |
| **BC-M12F4-22-10** | 10 m (30.81 ft) | | | |
| **BC-M12F4-22-15** | 15 m (49.2 ft) | | | |
| **BC-M12F4-22-20** | 20 m (65.61 ft) | | | |
| **BC-M12F4-22-25** | 25 m (82.02 ft) | | | |
| **BC-M12F4-22-30** | 30 m (98.42 ft) | | | |

| 4-pin Single-Ended M12 Female Right-Angle Cordsets | | | | |
|---|---|---|---|---|
| **Model** | **Length** | **Dimensions (mm)** | **Pinout (Female)** | |
| **BC-M12F4A-22-1** | 1 m (3.28 ft) |  |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Unused |
| **BC-M12F4A-22-2** | 2 m (6.56 ft) | | | |
| **BC-M12F4A-22-5** | 5 m (16.4 ft) | | | |
| **BC-M12F4A-22-8** | 8 m (26.25 ft) | | | |
| **BC-M12F4A-22-10** | 10 m (30.81 ft) | | | |
| **BC-M12F4A-22-15** | 15 m (49.2 ft) | | | |

| 4-pin A-Code Double-Ended M12 Female to M12 Male Cordsets | | | | |
|---|---|---|---|---|
| **Model** | **Length** | **Dimensions (mm)** | **Pinouts** | |
| **BC-M12F4-M12M4-22-1** | 1 m (3.28 ft) |  | Female<br><br>Male<br> | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black |
| **BC-M12F4-M12M4-22-2** | 2 m (6.56 ft) | | | |
| **BC-M12F4-M12M4-22-3** | 3 m (9.84 ft) | | | |
| **BC-M12F4-M12M4-22-4** | 4 m (13.12 ft) | | | |
| **BC-M12F4-M12M4-22-5** | 5 m (16.4 ft) | | | |
| **BC-M12F4-M12M4-22-10** | 10 m (30.81 ft) | | | |
| **BC-M12F4-M12M4-22-15** | 15 m (49.2 ft) | | | |

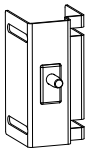

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| 4-Pin M12 Male to 5-Pin M12 Female Splitter Cordset | | |
|---|---|---|
| **Model** | **Branches (Female)** | **Wiring** |
| **S15YB-M124-M124-0.2M** | **L1, L2**<br>2 × 0.2 m (7.9 in) |  |
|  | | |

# Enclosure Accessories

**LMBEDS Switch**

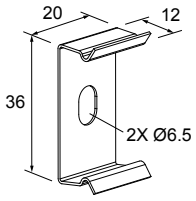
- Bracket with plunger switch to power lights when the enclosure is opened
- Refer to datasheet 160672 for more information



# Brackets

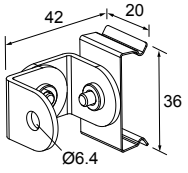
**LMBWLB32**

- Replaces the bracket that ships with the WLB32 light
- Stainless steel
- Includes 4 snap clips, 4 screws, and 2 insulator caps




**LMBWLB32-180S**

- Swivel bracket kit allows 180° of movement

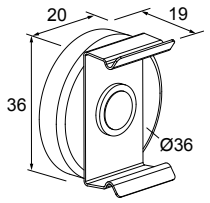




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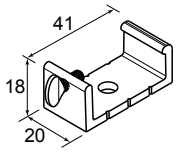
**LMBWLB32MAG**

- Magnetic mounting bracket for easy attachment to steel and iron surfaces



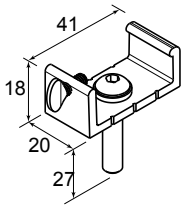

**LMBWLB32U**

- Die-cast bracket for rugged applications
- Secured to light with included thumb screw
- Clearance hole for 6 mm (1/4 in) button head screw




**LMBWLB32UT**

- Die-cast bracket for rugged applications
- Secured to light with included thumb screw
- Integral 1/4-20 stud for mounting





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# Chapter 5 Product Support and Maintenance

## Clean with Mild Detergent and Warm Water

Wipe down the device with a soft cloth dampened with a mild detergent and warm water solution. Do not use any other chemicals for cleaning.

## Repairs

Contact Banner Engineering for troubleshooting of this device. **Do not attempt any repairs to this Banner device; it contains no field-replaceable parts or components.** If the device, device part, or device component is determined to be defective by a Banner Applications Engineer, they will advise you of Banner's RMA (Return Merchandise Authorization) procedure.

> **IMPORTANT:** If instructed to return the device, pack it with care. Damage that occurs in return shipping is not covered by warranty.

## Contact Us

Banner Engineering Corp. | 9714 Tenth Avenue North | Plymouth, MN 55441, USA | Phone: + 1 888 373 6767

For worldwide locations and local representatives, visit www.bannerengineering.com.

## Banner Engineering Corp Limited Warranty

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For patent information, see www.bannerengineering.com/patents.

## Mexican Importer

Banner Engineering de Mèxico, S. de R.L. de C.V. | David Alfaro Siqueiros 103 Piso 2 Valle oriente | San Pedro Garza Garcia Nuevo Leòn, C. P. 66269

81 8363.2714


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