WLB32V Industrial LED Light Bar (DC) Product Manual

Original Instructions
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03-Oct-25

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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 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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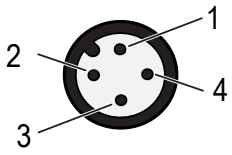
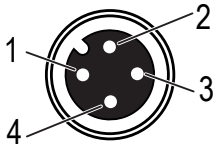
Chapter 2 Wiring

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

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)

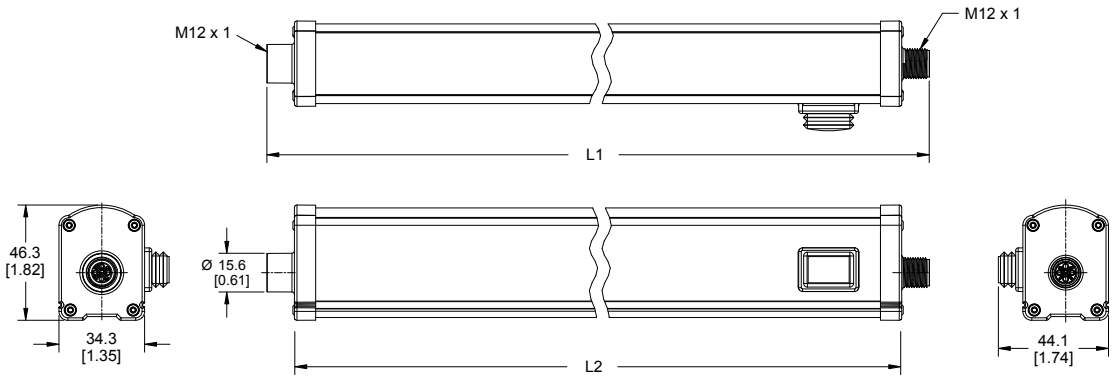
This device complies with CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

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.

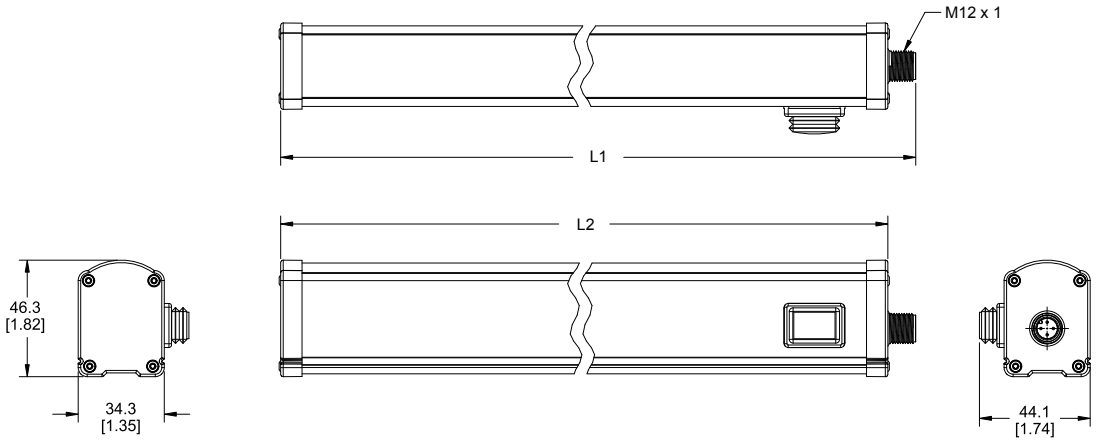
Dimensions

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

Cascadable Models



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).

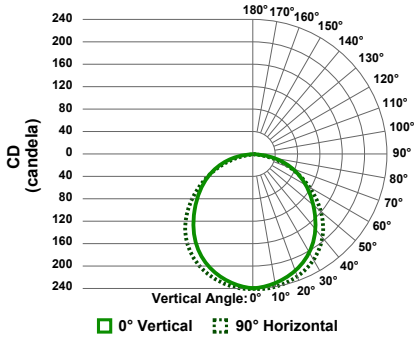
Luminaire Spacing = SC × Height to Illuminated Plane

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

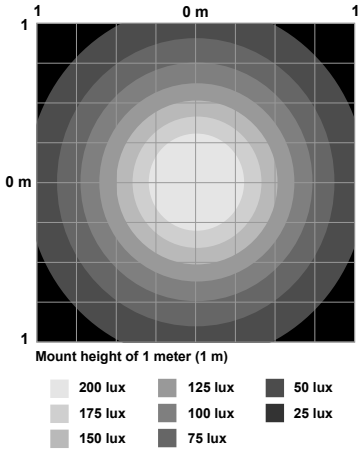
Light Characteristics

285 mm Models

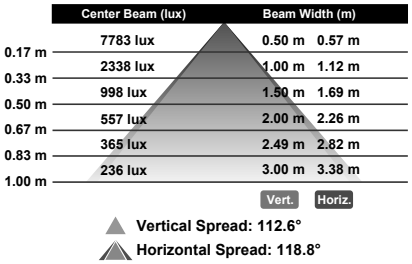
Polar Candela Distribution



Isolux Pattern

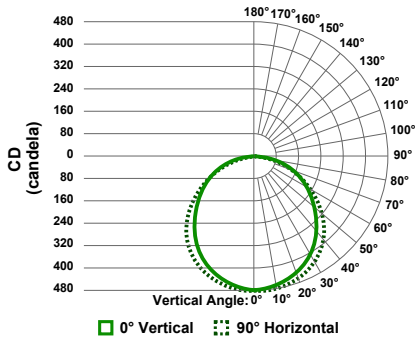


Illuminance at a Distance

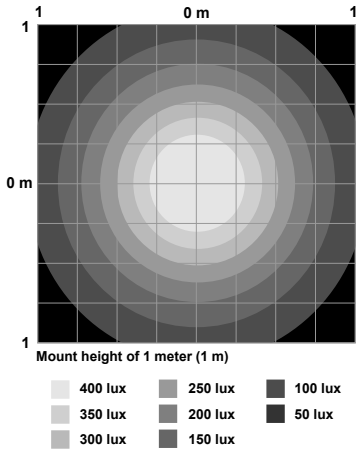


570 mm Models

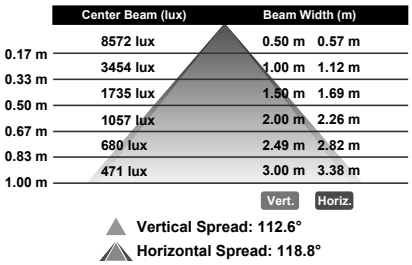
Polar Candela Distribution



Isolux Pattern

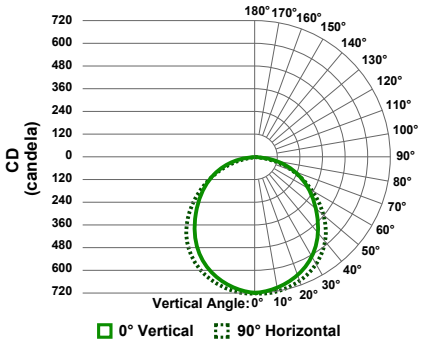


Illuminance at a Distance

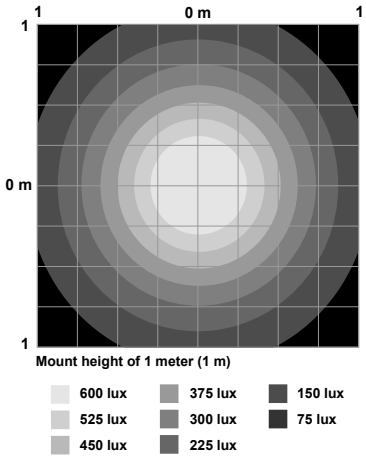


855 mm Models

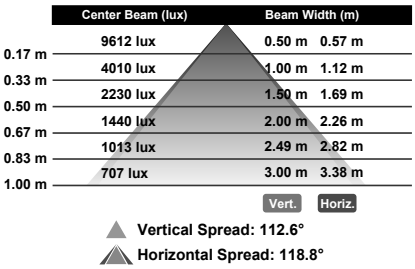
Polar Candela Distribution



Isolux Pattern

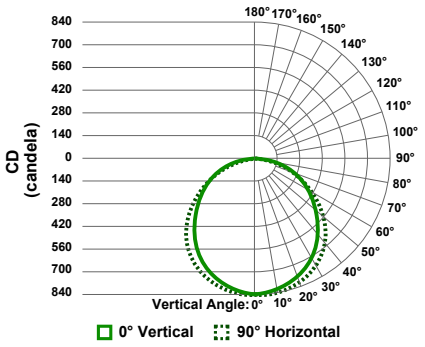


Illuminance at a Distance

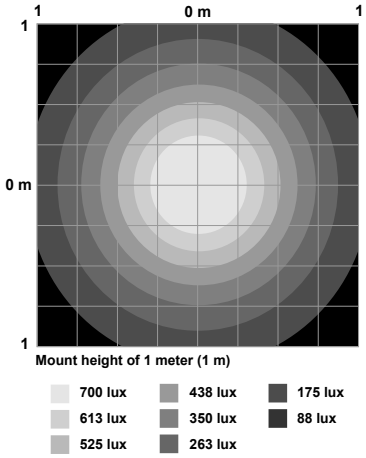


1140 mm Models

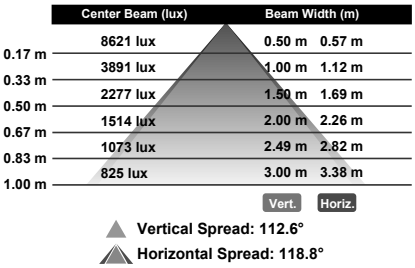
Polar Candela Distribution



Isolux Pattern



Illuminance at a Distance



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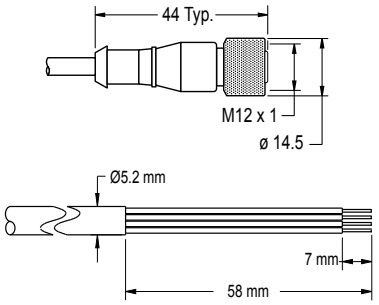
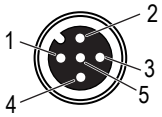
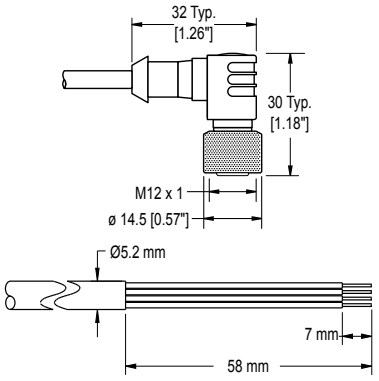
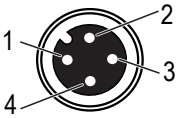
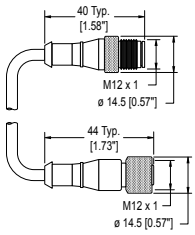
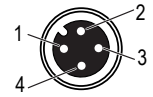
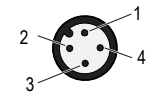
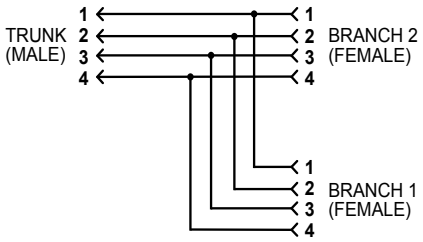
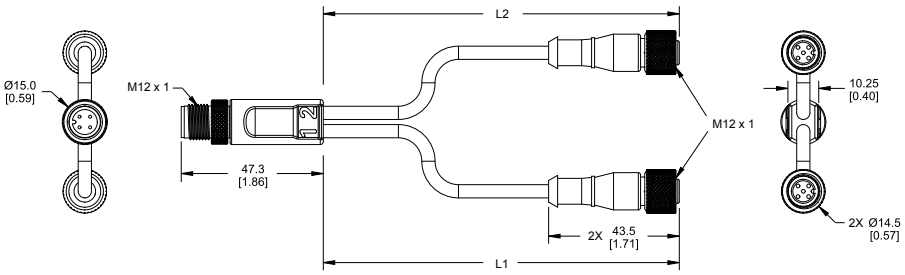
Chapter 4 Accessories

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 2 = White 3 = Blue 4 = Black 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 2 = White 3 = Blue 4 = Black 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)			

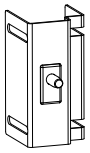
4-pin A-Code Double-Ended M12 Female to M12 Male Cordsets				
Model	**Length**	**Dimensions (mm)**	**Pinouts**	
BC-M12F4-M12M4-22-1	1 m (3.28 ft)		Female  Male 	1 = Brown 2 = White 3 = Blue 4 = Black
BC-M12F4-M12M4-22-2	2 m (6.56 ft)			
BC-M12F4-M12M4-22-3	3 m (9.84 ft)			
BC-M12F4-M12M4-22-4	4 m (13.12 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)			

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

Enclosure Accessories

LMBEDS Switch

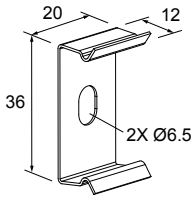
- Bracket with plunger switch to power lights when the enclosure is opened
- Refer to datasheet 160672 for more information



Brackets

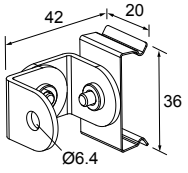
LMBWLB32

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



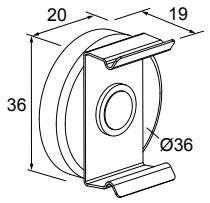
LMBWLB32-180S

- Swivel bracket kit allows 180° of movement



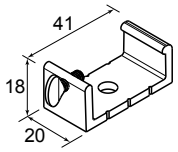
LMBWLB32MAG

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



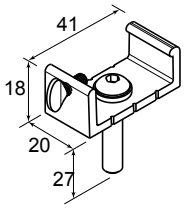
LMBWLB32U

- 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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