# WLS28 Pro LED Strip Light Product Manual

Original Instructions
p/n: 220693 Rev. E
08-Oct-26
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ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

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# Chapter 1 Product Overview

Banner’s WLS28 Pro LED Strip Lights have sturdy aluminum housings, shatterproof windows, and impressive environmental ratings, making them an ideal general-purpose LED light for machine, enclosure, or other industrial lighting applications.



- High-quality illumination and indication from RGBW LEDs
- Six white color temperatures for comfort and compatibility
- 13 color options for varied indication and inspection uses
- Programmable using Banner's Pro Editor software and Pro Converter Cable
- Pro Editor software configuration and three discrete inputs gives access to color, flashing, intensity, and animation settings, as well as advanced operating modes for displaying distance, count, time and position
- Available in six lengths from 145 mm to 1130 mm
- Lensed models or choice of clear or diffuse window

**IMPORTANT:** Read the following instructions before operating the light. Please download the complete WLS28 Pro LED Strip Light 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 WLS28 Pro LED Strip Light, 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 WLS28 Pro LED Strip Light sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

## Models

| Family | Style | Cascadable | Color | Lighted Length (mm) | Window | Construction | Connector |
|---|---|---|---|---|---|---|---|
| **WLS28** | **P** | **X** | **RGBW** | **285** | **D** | **X** | **Q** |
| | P = Pro | X = Non-cascadable | RGBW = RGBW Multicolor | 145<br>285<br>430<br>570<br>850<br>1130 | Blank = Clear<br>D = Diffused<br>L25 = 25° Lensed Window<br>L25D = 25° Diffused Lensed Window | X = IP50 | Q = Integral 4-pin M12 male quick-disconnect connector |


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# Chapter 2 Specifications

### Supply Voltage

18 V DC to 30 V DC

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

See the electrical characteristics on the product label.

| Light Length | Typical Current | | | Maximum Current | Maximum Power |
|---|---|---|---|---|---|
| | 18 V DC | 24 V DC | 30 V DC | A | W |
| 145 mm | 0.24 | 0.18 | 0.15 | 0.275 | 4.95 |
| 285 mm | 0.48 | 0.36 | 0.3 | 0.55 | 9.9 |
| 430 mm | 0.72 | 0.54 | 0.45 | 0.825 | 15.5 |
| 570 mm | 0.96 | 0.72 | 0.6 | 1.1 | 19.8 |
| 850 mm | 1.44 | 1.08 | 0.9 | 1.65 | 30.1 |
| 1130 mm | 1.92 | 1.44 | 1.2 | 2.2 | 39.6 |

### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

### Input Rating

Leakage Current Immunity: 400 µA

Indicator On/Off Response Time: 300 ms (maximum)

PWM Duty Cycle Range: 0 to 100%

PFM Frequency Range: 100 to 10000 Hz

### Mounting

(2) SMBWLS28RA swivel brackets and (4) screws included

### Construction

Housing: Clear anodized aluminum

End Caps: Painted zinc

Polycarbonate window on clear and diffuse plastic models, acrylic window on L25 models

Brackets: Zinc-plated steel

### Connections

Integral 4-pin M12 male quick-disconnect connector

### Environmental Rating

Rated IP50

### Vibration and Mechanical Shock

Vibration: 10 Hz to 55 Hz, 1.0 mm peak-to-peak amplitude per IEC 60068-2-6

Shock: 15G 11 ms duration, half sine wave per IEC 60068-2-27

### Operating Temperature

–40 °C to +50 °C (–40 °F to +122 °F)

**Storage Temperature:** –40 °C to +70 °C (–40 °F to +158 °F)

### 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 |

### 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

### Advanced Capabilities

PULSE® PRO I/O


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### Light Characteristics

RGBW LED PWM Frequency: 2kHz

| Color | Dominant Wavelength (nm) or Color Temperature (CCT) | CRI | Color Coordinates[1] | | Lumens at Specified Length (Typical at 25 °C)[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | X | Y | 145 mm | 285 mm | 430 mm | 570 mm | 850 mm | 1130 mm |
| Daylight White | 5000K | 93 | 0.345 | 0.352 | 245 | 490 | 735 | 980 | 1470 | 1960 |
| Incandescent White | 2700K | 42 | 0.46 | 0.411 | 110 | 220 | 330 | 440 | 660 | 880 |
| Warm White | 3000K | 50 | 0.44 | 0.404 | 110 | 220 | 330 | 440 | 660 | 880 |
| Fluorescent White | 4100K | 80 | 0.376 | 0.374 | 205 | 410 | 615 | 820 | 1230 | 1640 |
| Neutral White | 5700K | 86 | 0.328 | 0.337 | 265 | 530 | 795 | 1060 | 1590 | 2120 |
| Cool White | 6500K | 85 | 0.314 | 0.324 | 265 | 530 | 795 | 1060 | 1590 | 2120 |
| Green | 522 | - | 0.153 | 0.704 | 145 | 290 | 435 | 580 | 870 | 1160 |
| Red | 620 | - | 0.688 | 0.31 | 55 | 110 | 165 | 220 | 330 | 440 |
| Yellow | 574 | - | 0.447 | 0.488 | 95 | 190 | 285 | 380 | 570 | 760 |
| Blue | 467 | - | 0.14 | 0.061 | 40 | 80 | 120 | 160 | 240 | 320 |
| Magenta | - | - | 0.348 | 0.155 | 50 | 100 | 150 | 200 | 300 | 400 |
| Cyan | 490 | - | 0.146 | 0.308 | 110 | 220 | 330 | 440 | 660 | 880 |
| Amber | 589 | - | 0.542 | 0.417 | 80 | 160 | 240 | 320 | 480 | 640 |
| Rose | - | - | 0.486 | 0.217 | 50 | 100 | 150 | 200 | 300 | 400 |
| Lime Green | 562 | - | 0.376 | 0.538 | 110 | 220 | 330 | 440 | 660 | 880 |
| Orange | 599 | - | 0.605 | 0.371 | 70 | 140 | 210 | 280 | 420 | 560 |
| Sky Blue | 483 | - | 0.143 | 0.213 | 90 | 180 | 270 | 360 | 540 | 720 |
| Violet | - | - | 0.223 | 0.097 | 45 | 90 | 135 | 180 | 270 | 360 |
| Spring Green | 505 | - | 0.15 | 0.518 | 130 | 260 | 390 | 520 | 780 | 1040 |

# 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.

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[1] Refer to the CIE 1931 (x,y) Chromaticity Diagram to show equivalent color with indicated color coordinates. Actual coordinates may differ ± 5%.

[2] Lumen values shown apply to diffused models only. Heavy diffused models are 30% lower.


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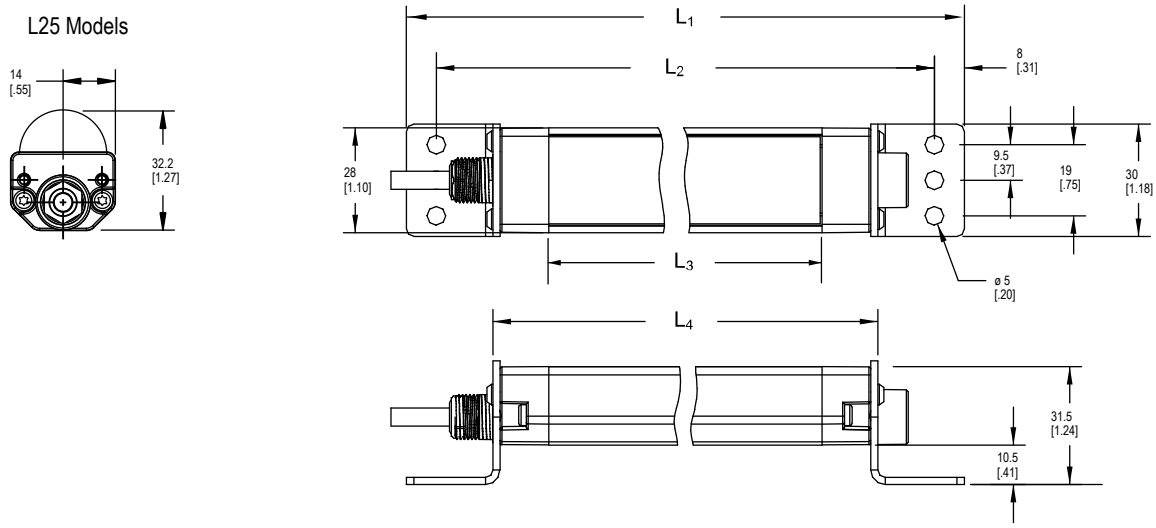
# Dimensions

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

Dimensions are shown with the included SMBWLS28RA bracket.




| Models | $L_1$ | $L_2$ | $L_3$ | $L_4$ |
|---|---|---|---|---|
| WLS28..145.. | 221 mm (8.7 in) | 205 mm (8.1 in) | 145 mm (5.71 in) | 175 mm (6.9 in) |
| WLS28..285.. | 362 mm (14.3 in) | 346 mm (13.6 in) | 286 mm (11.26 in) | 316 mm (12.4 in) |
| WLS28..430.. | 503 mm (19.8 in) | 487 mm (19.2 in) | 427 mm (16.81 in) | 457 mm (18.0 in) |
| WLS28..570.. | 644 mm (25.4 in) | 628 mm (24.7 in) | 568 mm (22.36 in) | 598 mm (23.5 in) |
| WLS28..850.. | 926 mm (36.5 in) | 910 mm (35.8 in) | 850 mm (33.46 in) | 880 mm (34.6 in) |
| WLS28..1130.. | 1208 mm (47.6 in) | 1192 mm (46.9 in) | 1132 mm (44.57 in) | 1162 mm (45.7 in) |

# Optical Data

Optical data shown below is for standard clear, and 25° clear window daylight white models only. To get lux and candela values for other colors, multiply the values shown on the charts by the following factors:

Incandescent White: 0.449
Warm White: 0.449
Fluorescent White: 0.837
Neutral White: 1.082
Cool White: 1.082
Green: 0.592
Red: 0.224
Yellow: 0.388
Blue: 0.163
Magenta: 0.204
Cyan: 0.449
Amber: 0.327
Rose: 0.204
Lime Green: 0.449
Orange: 0.286
Sky Blue: 0.367
Violet: 0.184
Spring Green: 0.531

For models with a standard diffused window, multiply lux and candela values by an additional 0.75. Photometric data for 25° diffused lensed models is not shown.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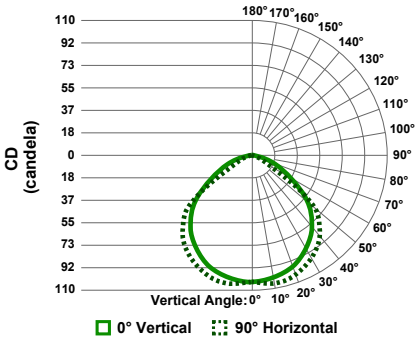
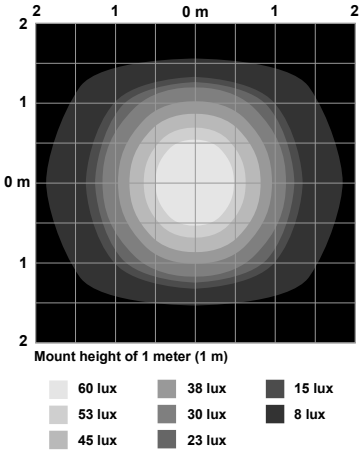
*145 mm Models - Clear Window*

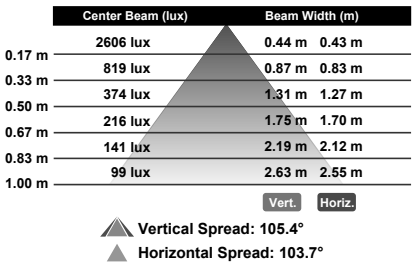
**Polar Candela Distribution**




**Isolux Pattern**

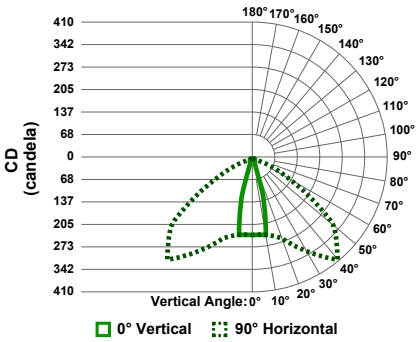



**Illuminance at a Distance**

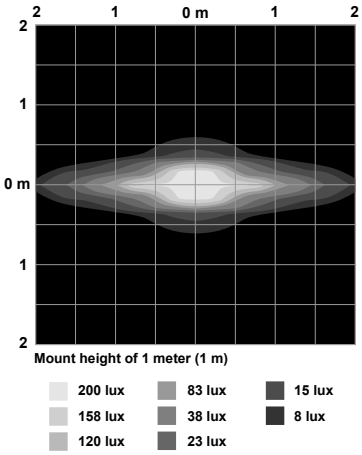



*145 mm Models - L25 Window*

**Polar Candela Distribution**




**Isolux Pattern**

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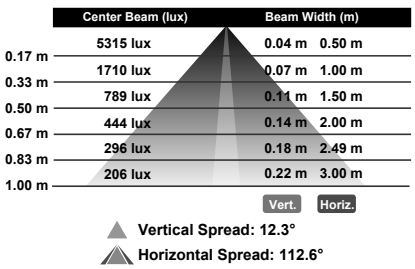
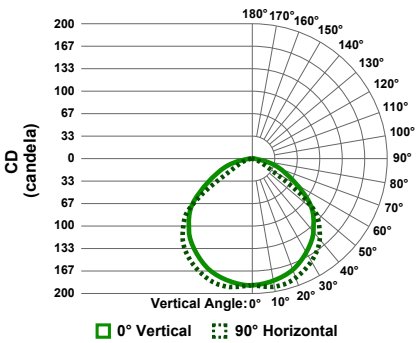



*285 mm Models - Clear Window*

**Polar Candela Distribution**

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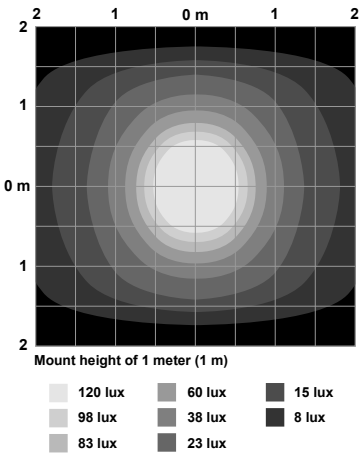


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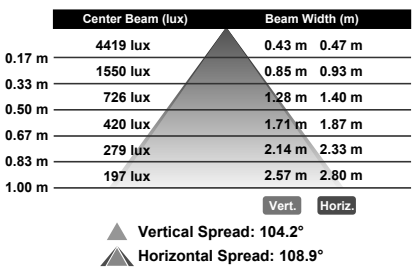



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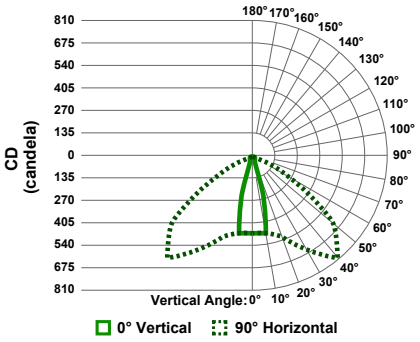
*285 mm Models - L25 Window*

**Polar Candela Distribution**

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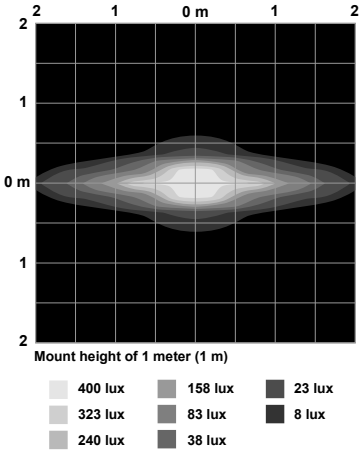


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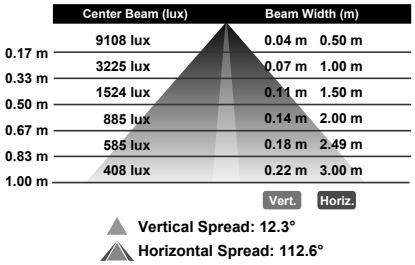
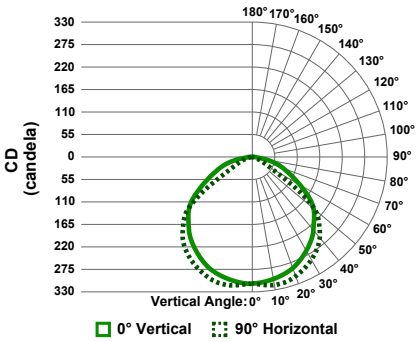



*430 mm Models - Clear Window*

**Polar Candela Distribution**

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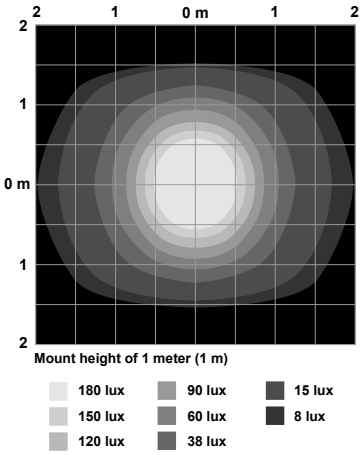


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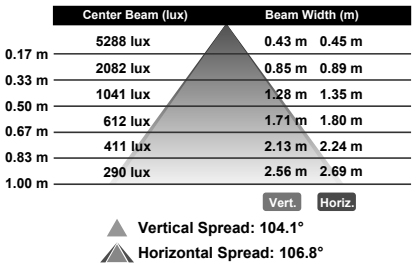
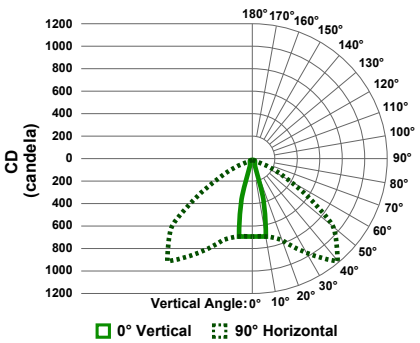



*430 mm Models - L25 Window*

**Polar Candela Distribution**

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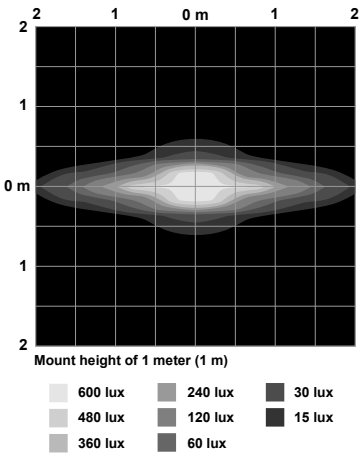


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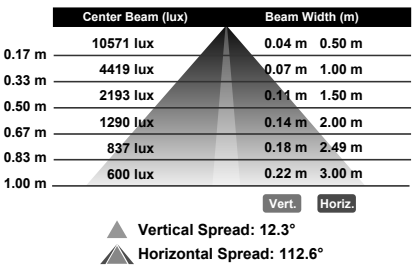



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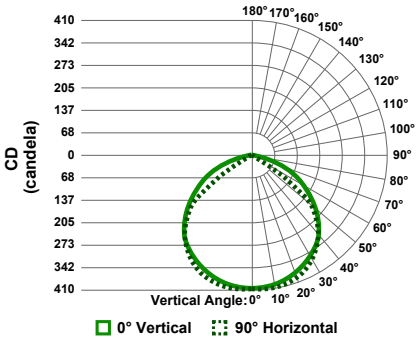
*570 mm Models - Clear Window*

**Polar Candela Distribution**

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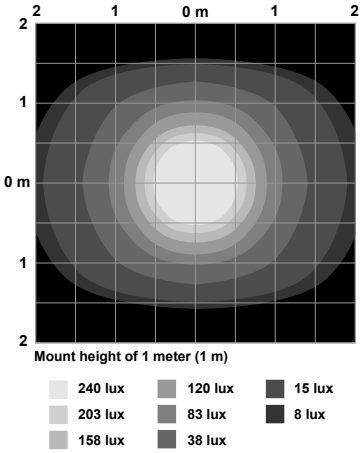


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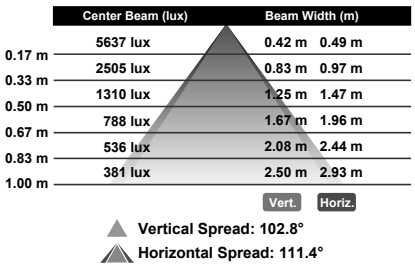
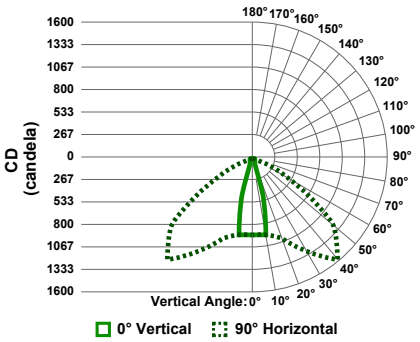



*570 mm Models - L25 Window*

**Polar Candela Distribution**

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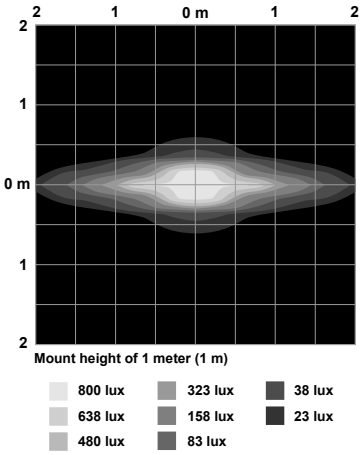


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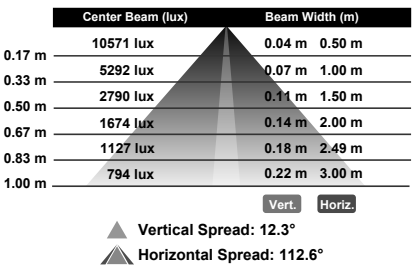
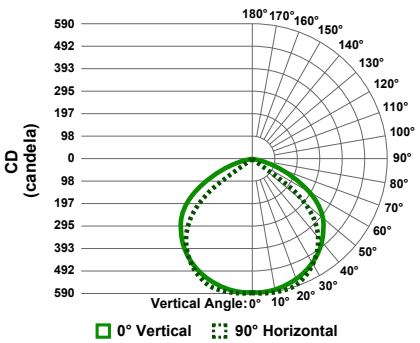
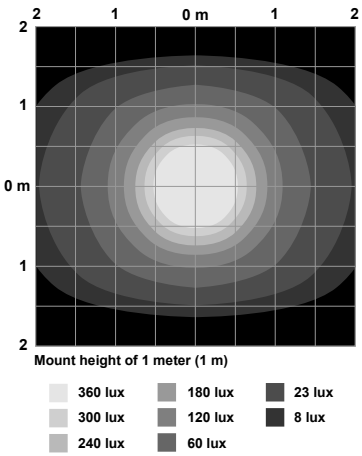



*850 mm Models - Clear Window*

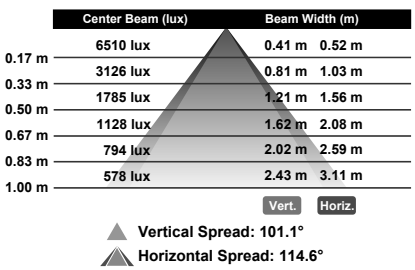
**Polar Candela Distribution**




**Isolux Pattern**




**Illuminance at a Distance**





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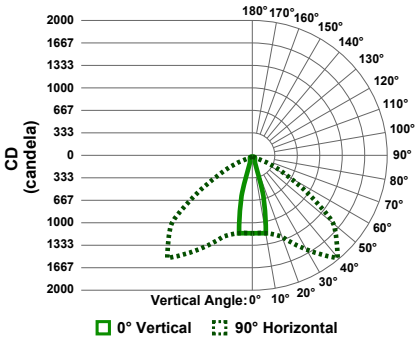
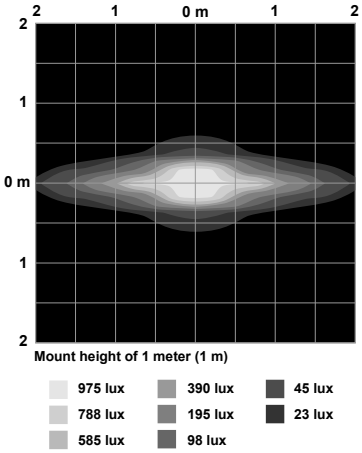
*850 mm Models - L25 Window*

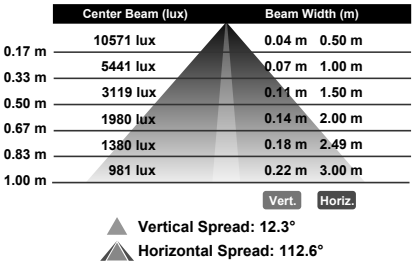
**Polar Candela Distribution**




**Isolux Pattern**

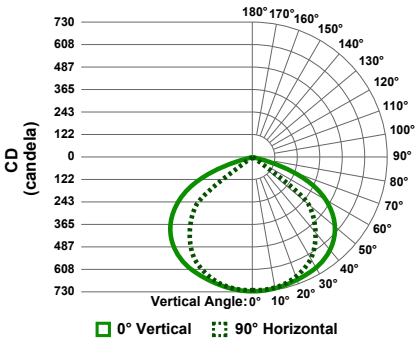



**Illuminance at a Distance**

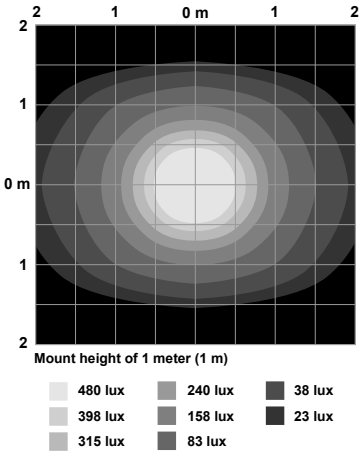



*1130 mm Models - Clear Window*

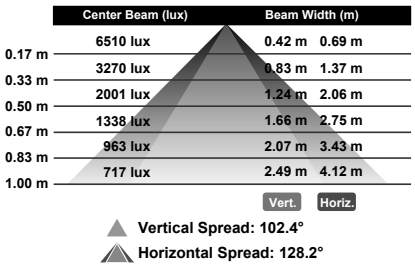
**Polar Candela Distribution**




**Isolux Pattern**

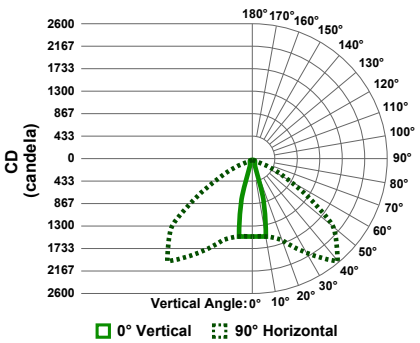



**Illuminance at a Distance**

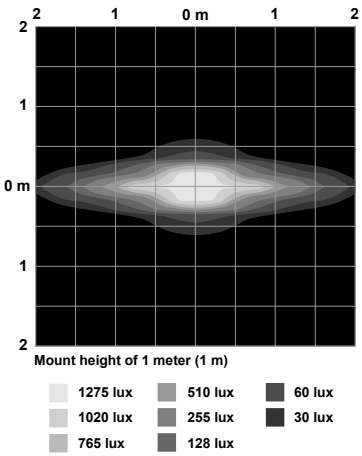



*1130 mm Models - L25 Window*

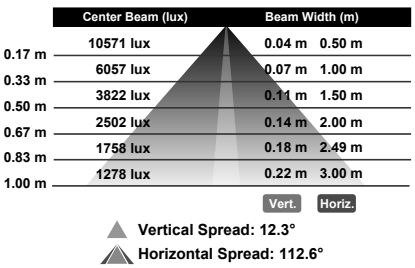
**Polar Candela Distribution**




**Isolux Pattern**




**Illuminance at a Distance**





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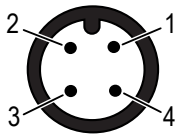
# Chapter 3 Wiring

| 4-pin M12 Male | Pin | Wire Color | Description[3] |
|---|---|---|---|
|  | 1 | Brown | Input 1 |
| | 2 | White | Input 3 |
| | 3 | Blue | DC common |
| | 4 | Black | Input 2 |

*7 Color Binary Control (Binary input state controls color, default configuration)*

| Input 1: Pin 1 Brown Wire | Input 2: Pin 4 Black Wire | Input 3: Pin 2 White Wire | LED Color |
|---|---|---|---|
| — | — | — | Light OFF |
| 18 V DC to 30 V DC | — | — | Daylight White |
| — | 18 V DC to 30 V DC | — | Green |
| — | — | 18 V DC to 30 V DC | Red |
| 18 V DC to 30 V DC | 18 V DC to 30 V DC | — | Yellow |
| 18 V DC to 30 V DC | — | 18 V DC to 30 V DC | Blue Bounce with Daylight White Background |
| — | 18 V DC to 30 V DC | 18 V DC to 30 V DC | Daylight White with Red Ends Flash |
| 18 V DC to 30 V DC | 18 V DC to 30 V DC | 18 V DC to 30 V DC | Warm White |

[3] Input functionality can change depending on the configuration created with Pro Editor.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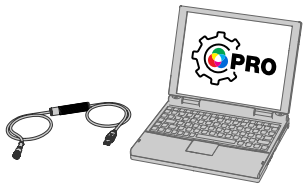
# Chapter 4 Configuration Instructions

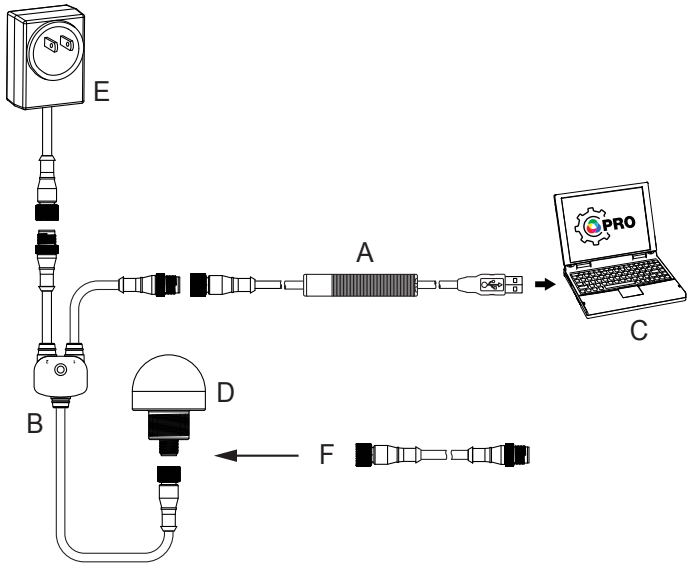
## Pro Editor




Use Banner's Pro Editor software and Pro Converter Cable to create custom configurations by selecting different colors, flash patterns, and animations. For more information visit www.bannerengineering.com/proeditor.

### Full Preview Connection (Required)

The full preview connection must be used for the WLS28 Pro LED Strip Light.




A = Pro Converter Cable (MQDC-506-USB)
B = Splitter (CSB-M1251FM1251M)
C = PC running Pro Editor software
D = Any Banner Pro Series-enabled device (K50 shown)
E = Power Supply (PSW-24-1, PSW-24-2, or PSD-24-4)
F = 8-Pin to 5-Pin Double-Ended Cordset (MQDC-801-5M-PRO), required for 8-Pin models

## Pro Editor Configuration for the WLS28

Banner's Pro Editor software offers an easy way to configure Pro Series-enabled touch and indicator devices, allowing users full control of device states. The easy-to-use configuration software provides a variety of tools and capabilities to solve a wide range of applications. Configure any Pro Series-enabled device using the free Pro Editor software, available for download at www.bannerengineering.com/proeditor.

**Machine and Work Cell**—Choose colors and animations to create up to seven discretely controlled illumination and status states. Spans functionality from single-segment to two-colored animations.

**Single Segment**—The single-segment option shows the WLS28 in one solid color. The input wires are used to change colors. Flashing and intensity options are available. Presets are available for common configurations, which can be adjusted as desired.
**End Status**—The end status option shows the inside section of the WLS28 in one color and the ends of the light in another. The size of the two sections are customizable. The input wires are used to change color states. Flashing and intensity options are available.
**Process Visualization**—The process visualization option enables a choice of colors, animations, speeds, and intensities to provide visual information that corresponds to equipment or process status. Single-color illumination states are also available.

**Tower Light**—Choose colors, intensities, and animations to create a discretely controlled two or three-segment indicator. The segments are controlled independently with input wires.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**Timer**—The timer option uses the WLS28 as a timer, counting up or counting down. Set the total time and choose up to four thresholds to change the visual appearance of the light as time advances. The timer starts when 18 V DC to 30 V DC is applied to the timer run input wire, and pauses when left floating or tied to ground. The timer resets when 18 V DC to 30 V DC is applied to the reset wire. The timer automatically resets when it reaches the final count. A steady global background can be applied, from which color and intensity can be defined.

**Counter**—The counter option counts up or down by converting input pulses into movement of LEDs along the length of the light based on up to four thresholds that define colors, intensity, and flashing. When the rising edge of an 18 V DC to 30 V DC pulse is applied to the counter input wire, the count changes by one. The counter resets when 18 V DC to 30 V DC is applied to the reset wire. The counter automatically resets when it reaches the final count. A steady global background can be applied, from which color and intensity can also be defined.

**Distance**—The distance mode uses the light to display colored LEDs proportional to a PFM (pulse frequency modulation) or PWM (pulse width modulation) input and set range. The light adjusts position and color continuously based on the input value and defined color, flash, and intensity in up to four thresholds while maintaining an optional steady background for LEDs outside the active threshold range. The PFM signal frequency range can be from 100 to 10,000 Hz. The PWM duty cycle range can be from 0 to 100%.

**Gauge**—The gauge option controls the color and position of a band of LEDs based on a defined PFM or PWM input value and range. The width of the band is defined as a percentage of total lighted length. The light adjusts the position and color of the band and background continuously based on the input signal and defined color, flash, intensities, and animations in upper, lower, and center thresholds. The PFM signal frequency range can be from 100 to 10,000 Hz. The PWM duty cycle range can be from 0 to 100%.

### Animation Settings

| Animation | Description |
|---|---|
| Off | Device OFF, no animation displays |
| Steady | Color 1 is solid ON at the defined intensity |
| Flash | Color 1 flashes at the defined speed, color intensity, and pattern (normal, strobe, three pulse, SOS, or random) |
| Two Color Flash | Color 1 and Color 2 flash alternately at the defined speed, color intensities, and pattern (normal, strobe, three pulse, SOS, or random) |
| Two Color Shift | Color 1 and Color 2 flash alternately on adjacent LEDs at defined speed and color intensities |
| Ends Steady | Color 1 defines the center 75% of the light. Color 2 defines the 12.5% of the light on each end. Center and ends are on steady. Center proportion can be defined in **End Status** mode |
| Ends Flash | Color 1 defines the center 75% of the light. Color 2 defines the 12.5% of the light on each end. The ends will flash at defined speed and pattern. Center proportion can be defined in **End Status** mode |
| Scroll | Color 1 defines a band 20% of the length of the light that moves in one direction up or down against the background of Color 2 at the defined speed and color intensities |
| Center Scroll | Color 1 defines a band 10% the length of the light that moves from the center of the light to the ends against the background of Color 2 at the defined speed and color intensity |
| Bounce | Color 1 defines a band 20% of the length of the light that moves up and down between the top and bottom of the light against the background of Color 2 at the defined speed and color intensities |
| Center Bounce | Color 1 defines a band 10% the length of the light that moves from the center of the light to the ends and back against the background of Color 2 at the defined speed and color intensity |
| Intensity Sweep | Color 1 continuously increases and decreases intensity between 0% to 100% at defined speed and color intensity |
| Two Color Sweep | Color 1 and Color 2 define the end values of a line across the color gamut. The light continuously displays a color by moving along the line at the defined speed and color intensity |
| Color Spectrum | The light scrolls through the 13 predefined colors with a different color on each LED at the defined speed, Color 1 intensity, and direction |
| Single End Steady (WLS15 Pro only) | Color 1 is solid ON at the defined intensity on one end of the device |
| Single End Flash (WLS15 Pro only) | Color 1 flashes at the defined speed, color intensity, and pattern (normal, strobe, three pulse, SOS, or random) on one end of the device |

By default, when the sub-applications for Machine and Work Cell are selected, Pro Editor opens **I/O State** configuration in **Advanced**. Three **I/O states** are available:


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| I/O State Configuration Settings | Description |
|---|---|
| **Basic** | Configurations made in this state assign one wire to one state, with the following override control:<br>• Pin 4 (Black) overrides Pin 1 (Brown)<br>• Pin 2 (White) overrides Pins 1 and 4 (Brown and Black) |
| **Advanced** | I/O state with full seven state options for maximum configuration. Configurations made in Advanced assign binary wiring combinations of all valid inputs to each state. |
| **I/O Block** | Three state control for use with I/O block. Configurations made in I/O Block assign states to the black, white, and combination of black and white wires for use with I/O blocks for which power (brown) and common (blue) are always on for five pin connections. |


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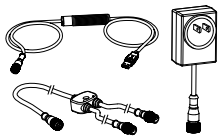
# Chapter 5 Accessories

## Cordsets

**PRO-KIT**

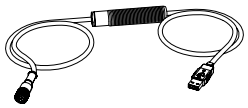
Includes:

- Pro Converter Cable (MQDC-506-USB)
- Splitter (CSB-M1251FM1251M)
- Power Supply (PSW-24-1)



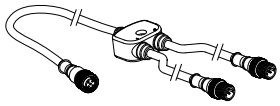
**MQDC-506-USB**

- Pro Converter Cable
- 1.83 m (6 ft) length 5-pin M12 quick disconnect to Device and USB to PC
- Required for connection to the configuration software



**CSB-M1251FM1251M**

- 5-pin parallel Y splitter (Male-Male-Female)
- For full Pro Editor preview capability
- Requires external power supply, sold separately



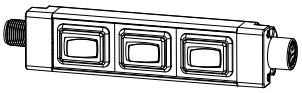
**PSD-24-4**

- 90 to 264 V AC 50/60 Hz input
- Includes a 1.8 m (6 ft) US-style 5-15P input plug
- 24 V DC UL Listed Class 2 M12 connector output
- 4 A total current

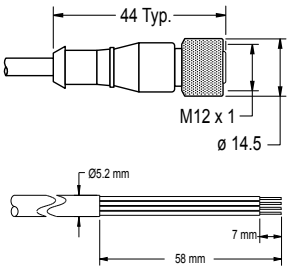
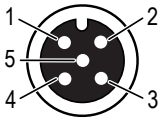


**LC28PB2-3Q**

- In-line switch with M12 connectors
- Rugged metal housing
- Perfect for DC-powered task lights, indicators, and tower lights
- Rated for up to 30 V DC



**4-Pin Single-Ended M12 Female Cordsets**

| Model | Length | Style | Dimensions | Pinout (Female) | |
|---|---|---|---|---|---|
| MQDC-406 | 2 m (6.56 ft) | Straight |  |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Not used |
| MQDC-415 | 5 m (16.4 ft) | | | | |
| MQDC-430 | 9 m (29.5 ft) | | | | |
| MQDC-450 | 15 m (49.2 ft) | | | | |





Continued on page 16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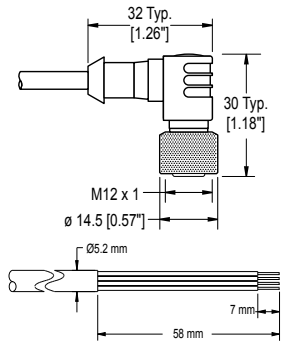
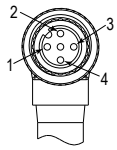
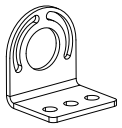
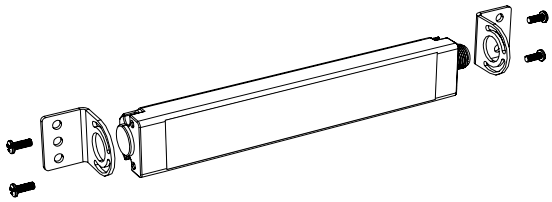
Continued from page 15

| 4-Pin Single-Ended M12 Female Cordsets | | | | | |
|---|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout (Female)** | |
| **MQDC-406RA** | 2 m (6.56 ft) | Right-Angle |  |  | |
| **MQDC-415RA** | 5 m (16.4 ft) | | | | |
| **MQDC-430RA** | 9 m (29.5 ft) | | | | |
| **MQDC-450RA** | 15 m (49.2 ft) | | | | |

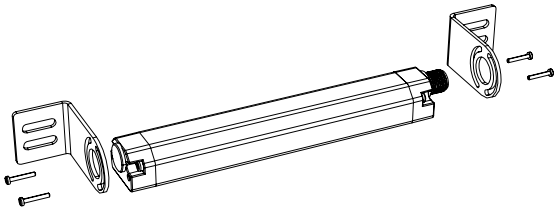
# Brackets

**SMBWLS28RA**
The bracket kit is available as a replacement for the one that comes with the light or switch. The kit contains two end brackets and four screws.



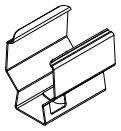


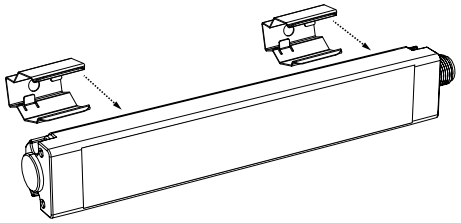
**SMBWLS28SM**
This kit allows the light or switch to be mounted at a right angle to the mounting surface. The kit contains two end brackets and four screws.



**SMBWLS28SP**

- Stainless steel snap bracket kit
- Includes two brackets



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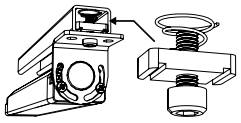
**SMH1316**
This kit allows the light or switch to be mounted to a 13/16-inch Unistrut channel. Light is shown. The kit includes:

- #10-32 spring nuts (qty 2)
- #10-32 socket head cap screws (qty 2)
- #10 lock washers (qty 2)
- CAD Files: DXF, PDF, IGS, STP

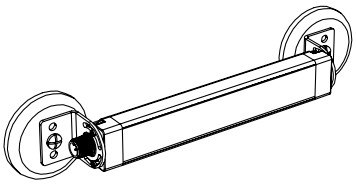


**SMBWLSMAG**

- Magnetic mounting bracket for easy attachment to steel surfaces
- CAD Files: DXF, PDF, IGS, STP

**SMBWLSMAGR**

- Protective cover also available to prevent scratches to painted surfaces
- CAD Files: DXF, PDF, IGS, STP

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# Chapter 6 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 and Translations (No Field-Replaceable Parts)

**English**

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.
```

Obtain assistance with product repairs by contacting your local Banner Engineering Corp distributor or by calling Banner directly at (763) 544-3164. Access literature translated into your native language on the Banner website at www.bannerengineering.com or contact Banner directly at (763) 544-3164.

**Deutsch**

Wenden Sie sich zur Fehlerbehebung dieses Geräts an Banner Engineering. **Versuchen Sie nicht, Reparaturen an diesem Banner-Gerät vorzunehmen. Das Gerät enthält keine am Einsatzort auszuwechselnden Teile oder Komponenten.** Wenn ein Banner-Anwendungstechniker zu dem Schluss kommt, dass dieses Gerät, ein Teil oder eine Komponente davon defekt ist, erhalten Sie von dem Techniker Erläuterungen zu Banners RMA-Verfahren (Return Merchandise Authorization) für die Warenrückgabe.

```
WICHTIG: Wenn Sie der Techniker anweist, das Gerät zurückzusenden, verpacken Sie es bitte
sorgfältig. Transportschäden bei der Rücksendung werden von der Garantie nicht abgedeckt.
```

Unterstützung bei Produktreparaturen erhalten Sie von Ihrem örtlichen Banner Engineering Corp Händler oder direkt von Banner unter Tel. (763) 544-3164. Die in Ihre Muttersprache übersetzte Literatur finden Sie auf der Banner-Website unter www.bannerengineering.com oder kontaktieren Sie Banner direkt unter Tel. (763) 544-3164.

**Français**

Pour plus d'informations sur le dépannage du produit, contactez Banner Engineering. **Ne tentez pas de réparer ce dispositif Banner. Il ne contient aucun composant ou pièce qui puisse être remplacé sur place.** Si un ingénieur de Banner conclut que le dispositif ou l'une de ses pièces ou composants est défectueux, il vous informera de la procédure à suivre pour le retour des produits (RMA).

```
Important : Si vous devez retourner le dispositif, emballez-le avec soin. Les dégâts
occasionnés pendant le transport de retour ne sont pas couverts par la garantie.
```

Pour vous aider lors de la réparation de produits, contactez votre distributeur Banner local our appelez directement Banner au (763) 544-3164. La documentation traduite dans votre langue est disponible sur le site internet de Banner www.bannerengineering.com ou contactez directement Banner au (763) 544-3164.

**Italiano**

Per le procedure di individuazione e riparazione dei guasti di questo dispositivo, contattare Banner Engineering. **Non tentare di riparare questo dispositivo Banner, in quanto non contiene parti o componenti sostituibili dall'utente.** Se il dispositivo, una parte del dispositivo o un componente del dispositivo viene riscontrato difettoso da un tecnico Banner, il nostro personale vi comunicherà la procedura da seguire per ottenere l'autorizzazione al reso.

```
Importante: Se si ricevono istruzioni di rispedire il dispositivo al produttore, imballarlo con
cura. I danni dovuti al trasporto non sono coperti dalla garanzia.
```

Per assistenza nelle riparazioni dei prodotti, contattare il distributore locale Banner Engineering Corp o contattare direttamente Banner al numero (763) 544-3164. È possibile accedere alla documentazione tradotta nella propria lingua madre sul sito Web Banner all'indirizzo www.bannerengineering.com o contattare direttamente Banner al numero (763) 544-3164.


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**Español**

Comuníquese con Banner Engineering para solucionar de problemas de este dispositivo. **No intente ninguna reparación a este dispositivo de Banner, contiene piezas o componente que no se pueden cambiar en terreno.** Si algún ingeniero de aplicaciones de Banner determina que el dispositivo, alguna de las piezas o alguno de los componentes del dispositivo está defectuoso, le informará el procedimiento de autorización de devolución de mercancía (RMA, por sus siglas en inglés) de Banner.

**Importante:** Si se le solicita devolver el dispositivo, empáquelo con cuidado. Puede haber daños durante el envío de devolución que no estén cubiertos por la garantía.

Para reparaciones de productos, por favor contacte a su distribuidor local de Banner Engineering o llame a Banner directamente al 00 1 (763) 544-3164. Vea la literatura traducida en su idioma en el sitio web Banner en www.bannerengineering.com o comuníquese con Banner directamente al 00 1 (763) 544-3164.

**中国人**

如需对本装置进行故障排查，请联系邦纳。**请勿尝试自行维修该邦纳装置；本装置不包含任何可在现场更换的部件或组件。** 若经邦纳应用工程师确认设备、设备部件或组件存在缺陷，他们将告知您邦纳退货授权 (RMA) 流程。

**重要注意事项：** 如被要求退回装置，请妥善包装后寄回。退货运输过程中发生的损坏不在保修范围内。

请联系当地的 Banner Engineering Corp 经销商或直接致电 Banner +1 (763) 544-3164，以获得产品维修帮助。请访问邦纳网站 www.bannerengineering.com 或直接拨打 +1 (763) 544-3164 联系邦纳，获取翻译成您母语的资料。

**한국인**

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**중요:** 제품을 반송하도록 안내 받으셨다면 잘 포장해주십시오. 반송 도중에 발생한 손상은 보증 서비스가 적용되지 않습니다.

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**日本語**

この装置のトラブルシューティングについては、バナーエンジニアリングにお問い合わせください。**このバナー装置には、現場では交換できない部品またはコンポーネントが含まれているため、修理を試みてはいけません。** バナーのアプリケーションエンジニアが装置、装置の部品、または装置のコンポーネントに欠陥があると判断した場合、バナーのRMA（返品承認）手続きについてお知らせします。

**重要 ：** 返品を指示された場合は、装置を丁寧に梱包してください。返品時に発生した破損は保証の対象外となります。

製品の修理については、最寄りのBanner Engineering Corp代理店にお問い合わせいただくか、米国+1 (763) 544-3164まで直接お電話でお問い合わせください。バナーのウェブサイト（www.bannerengineering.com）でお客様の言語に翻訳された資料にアクセスするか、米国+1 (763) 544-3164まで直接お電話でお問い合わせください。

**čeština**

Pro řešení problémů se zařízením kontaktujte společnost Banner Engineering. **Neprovádějte žádné opravy zařízení Banner. Neobsahují žádné komponenty nebo části, které by byly vyměnitelné.** Pokud je zařízení, jeho část nebo díl označen technikem společnosti Banner jako poškozený, bude Vám doporučeno vyplnit reklamační RMA protokol.

**Důležité:** Pokud byl vydán požadavek na vrácení zařízení, pečlivě ho zabalte. Poškození vzniklé při dopravě není považováno za záruční opravu.

Pokud produkt potřebuje opravu, vyžádejte si pomoc od místního distributora společnosti Banner Engineering Corp nebo přímo na telefonním čísle (763) 544-3164. Dokumentaci přeloženou do vašeho jazyka si vyhledejte na webových stránkách společnosti Banner na adrese www.bannerengineering.com nebo se obraťte přímo na společnost Banner na telefonním čísle (763) 544-3164.


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**Polski**

W celu rozwiązania problemów z urządzeniem należy skontaktować się z działem technicznym firmy Banner Engineering. **Pod żadnym pozorem nie próbuj naprawiać tego urządzenia firmy Banner; nie zawiera ono części ani elementów, które można wymieniać samodzielnie.** Jeśli urządzenie, jego część lub element zostaną uznane za wadliwe przez inżyniera technicznego Banner, poinformuje on użytkownika o firmowej procedurze zwrotu towaru (RMA) firmy Banner.

**Ważne:** Jeśli urządzenie ma zostać zwrócone, należy je starannie zapakować. Uszkodzenia powstałe podczas odsyłki nie są objęte gwarancją.

Aby uzyskać pomoc w zakresie naprawy produktu, należy skontaktować się z lokalnym dystrybutorem Banner Engineering Corp lub zadzwonić bezpośrednio do firmy Banner pod numer (763) 544-3164. Dostęp do literatury przetłumaczonej na swój język ojczysty można uzyskać na stronie internetowej firmy Banner pod adresem www.bannerengineering.com lub kontaktując się bezpośrednio z firmą Banner pod numerem (763) 544-3164.

**Português**

Entre em contato com a Engenharia da Banner para a solução de problemas deste dispositivo. **Não tente fazer nenhum reparo neste dispositivo Banner; ele não contém peças ou componentes substituíveis em campo.** Se um técnico de aplicações da Banner determinar que o dispositivo, peça ou componente do dispositivo está com defeito, ele o informará sobre o procedimento de RMA (Autorização de Devolução de Mercadoria) da Banner.

**Importante:** Se for instruído a devolver o dispositivo, embale-o com cuidado. Os danos ocorridos no transporte de devolução não são cobertos pela garantia.

Obtenha assistência para reparos do produto entrando em contato com o distribuidor local da Banner Engineering Corp ou ligando diretamente para a Banner no telefone (763) 544-3164. Acesse a literatura traduzida para seu idioma nativo no site da Banner em www.bannerengineering.com ou entre em contato diretamente com a Banner pelo telefone (763) 544-3164.

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Bu cihazda sorun giderme işlemleri için Banner Engineering ile iletişime geçin. **Bu Banner cihazını onarmaya çalışmayın; cihaz sahada değiştirilebilir parça veya bileşen içermez.** Bir Banner Uygulama Mühendisi tarafından cihazın, cihazın bir parçasının veya bir cihaz bileşeninin kusurlu olduğu tespit edilirse, Banner RMA (İade Mal Yetkilendirme) prosedürü hakkında bilgilendirilirsiniz.

**ÖNEMLİ:** İade etmeniz istenirse, cihazı dikkatli bir şekilde paketleyin. İade nakliyesinde meydana gelecek hasarlar garanti kapsamında değildir.

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# Contact Us

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

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