

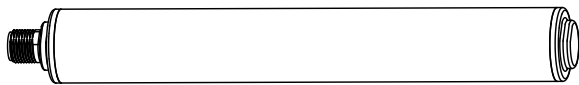
# WLS27 Multicolor LED Strip Light with EZ-STATUS™



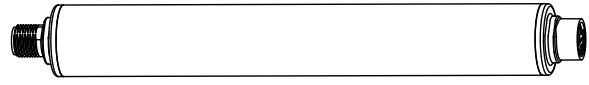
## Instruction Manual

Banner's WLS27 Multicolor LED Strip Light has a sturdy aluminum housing and is encased in a shatterproof, UV-stabilized, copolyester shell, making it ideal for harsh indoor and outdoor applications.

- EZ-STATUS combines lighting and indication in one device to illuminate an area or machine, and show status change
- Models with 3 or 5 colors available, all with only 3 inputs
- Rugged, water-resistant IP69K per DIN 40050-9 rating
- Four available lengths from 285 mm to 1130 mm
- Daisy chain power to multiple lights
- Heavy diffused housing option provides uniform light for indication purposes



Stand-Alone Light or End Light in a Cascade



First or Middle of a Cascade

Available as stand-alone models, or as cascade models that can be daisy-chained together for a continuous length of lighting, with a minimum of wiring.

Stand-alone models have a male quick disconnect at one end for power connection and no connections at the opposite end. A stand-alone model may be used as the last model in the cascade series.

Cascade models have a male quick disconnect at one end for power connection, and a female quick disconnect at the opposite end for connecting to other lights in the cascade. A double-ended accessory cordset must be used between each pair of lights in a cascade.

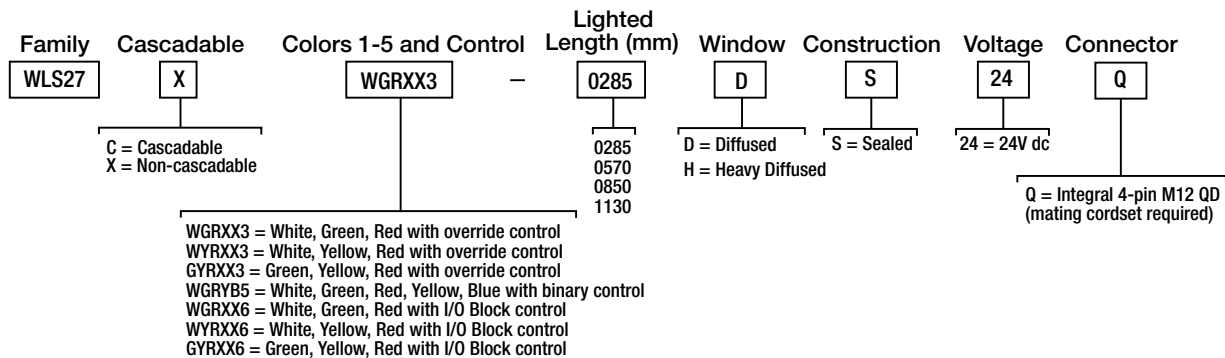


**Important:** Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde [www.bannerengineering.com](http://www.bannerengineering.com) toda la documentación técnica de los WLS27 Multicolor LED Strip Light, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

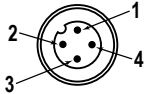
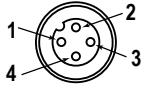


**Important:** Lisez les instructions suivantes avant d'utiliser le luminaire. Veuillez télécharger la documentation technique complète des WLS27 Multicolor LED Strip Light sur notre site [www.bannerengineering.com](http://www.bannerengineering.com) pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

## Models



## Wiring Diagrams

Male	Female	Pin	Wire Color	Description
		1	Brown	Input 1
		2	White	Input 3
		3	Blue	dc common
		4	Black	Input 2

3 Color Override Control ( <i>Color 3 overrides Colors 1 and 2, Color 2 overrides Color 1</i> )			
Input 1: Pin 1 Brown Wire	Input 2: Pin 4 Black Wire	Input 3: Pin 2 White Wire	LED Color
—	—	—	Light OFF
+24 V dc	—	—	Color 1 ON
—	+24 V dc	—	Color 2 ON
+24 V dc	+24 V dc	—	Color 2 ON
—	—	+24 V dc	Color 3 ON
+24 V dc	—	+24 V dc	Color 3 ON
—	+24 V dc	+24 V dc	Color 3 ON
+24 V dc	+24 V dc	+24 V dc	Color 3 ON

5 Color Binary Control ( <i>Binary input state controls color</i> )			
Input 1: Pin 1 Brown Wire	Input 2: Pin 4 Black Wire	Input 3: Pin 2 White Wire	LED Color
—	—	—	Light OFF
+24 V dc	—	—	Color 1 ON
—	+24 V dc	—	Color 2 ON
—	—	+24 V dc	Color 3 ON
+24 V dc	+24 V dc	—	Color 4 ON
+24 V dc	—	+24 V dc	Color 5 ON
—	+24 V dc	+24 V dc	Light OFF
+24 V dc	+24 V dc	+24 V dc	Light OFF

3 Color I/O Block Control ( <i>Input 1 is always ON through the block</i> )			
Input 1: Pin 1 Brown Wire	Input 2: Pin 4 Black Wire	Input 3: Pin 2 White Wire	LED Color
+24 V dc	—	—	Light OFF
+24 V dc	+24 V dc	—	Color 1 ON
+24 V dc	—	+24 V dc	Color 2 ON
+24 V dc	+24 V dc	+24 V dc	Color 3 ON

## Specifications

### Supply Voltage

24 V dc (+ 20% / - 10%)  
 Use only with suitable Class 2 power supply (UL) or a SELV power supply (CE)  
 See electrical characteristics on product label

Lighted Length	Typical Current (A) at 25° C <sup>1</sup>	Maximum Current (A)
285 mm	0.315	0.400
570 mm	0.630	0.800
850 mm	0.945	1.200
1130 mm	1.260	1.600

### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

### Light Characteristics

Daylight White Efficacy: 85 lumens/watt typical at 24 V dc at 25 °C (77 °F)  
 CRI: 80, minimum

Color	Dominant Wavelength (nm) or Color Temperature	Lighted Length Lumens (Typical at 25 °C) <sup>1</sup>			
		285 mm	570 mm	850 mm	1130 mm
Daylight White	5000 K (±300 K)	650	1300	1950	2600
Green	525 nm	400	800	1200	1600
Red	625 nm	185	370	555	740
Yellow	580 nm	570	1140	1710	2280
Blue	470 nm	125	250	375	500

### Application Notes

When connecting cascadable lights in series it is important not to exceed maximum current limitations:

Maximum length of light at 24 V dc: 3.0 m (9.8 ft)

Do not spray cable with high-pressure sprayer, or cable damage will result.

### Leakage Current Immunity

400 µA

### LED Lifetime

Lumen Maintenance - L<sub>70</sub>  
 When operating within specifications, output decreases less than 30% after 50,000 hours

### Mounting

Bracket LMBWLS27EC included (2 for lights up to 570 mm or 3 for lights 850 mm and longer)

### Construction

Clear anodized aluminum inner housing and FDA-grade copolyester outer housing

### Connections

Integral 4-pin M12/Euro-style male quick disconnect

### Environmental Rating

Rated IEC IP66, IEC IP67, and IP69K per DIN 40050-9

### 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)

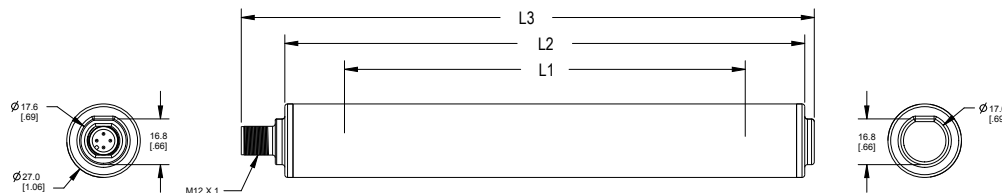
**Storage Temperature:** -40 °C to +70 °C (-40 °F to +158 °F)

### Certifications

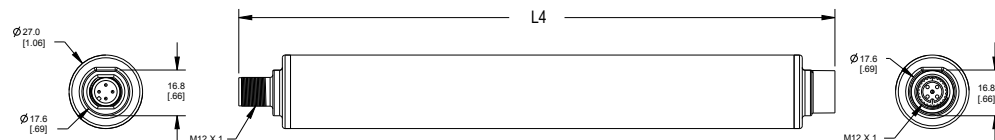


## Dimensions

### Quick Disconnect Models



### Cascade Models



Models	L1	L2	L3	L4
WLS27..0285..	286 mm (11.3 in)	330 (13 in)	349.5 mm (13.8 in)	358 mm (14.1 in)
WLS27..0570..	569 mm (22.4 in)	612 mm (24.1 in)	631.5 mm (24.9 in)	640 mm (25.2 in)
WLS27..0850..	849 mm (33.4 in)	893 mm (35.2 in)	912.5 mm (35.9 in)	921 mm (36.2 in)
WLS27..1130..	1120 mm (44.1 in)	1164 mm (45.8 in)	1183.5 mm (46.4 in)	1192 mm (46.9 in)

<sup>1</sup> Values shown at 25 °C - current and lumen values decrease 0.4% per 1 °C from ambient. For example, a 1130 mm unit will have a maximum current of 1.600 A at -40 °C and 1.134 A at +50 °C.

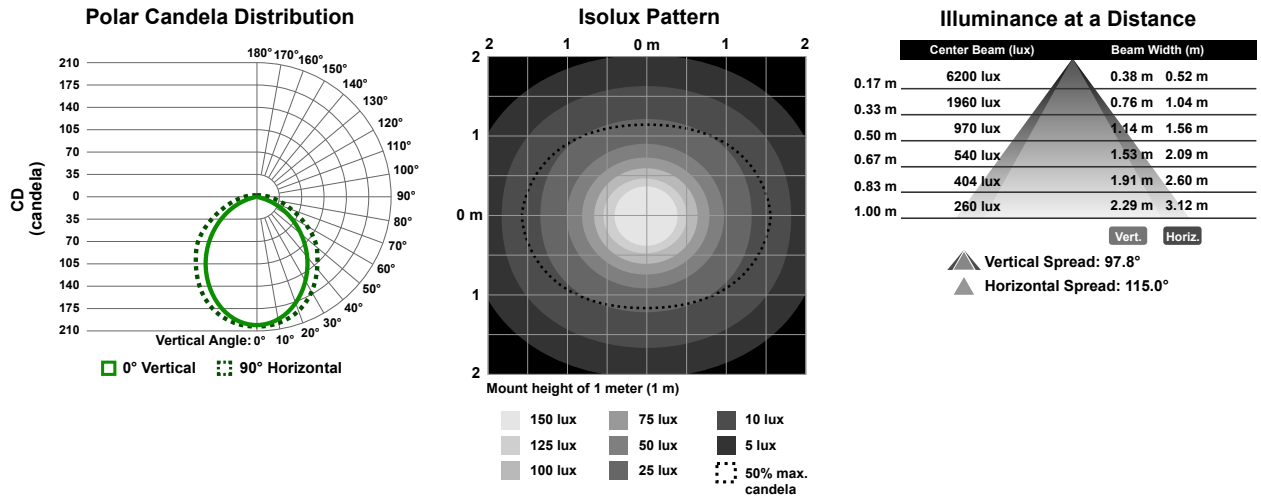
## Performance Curves

Optical data shown below is for daylight white only. To get lux and candela values for green, red, yellow, and blue, multiply the values shown on the charts by the following factors:

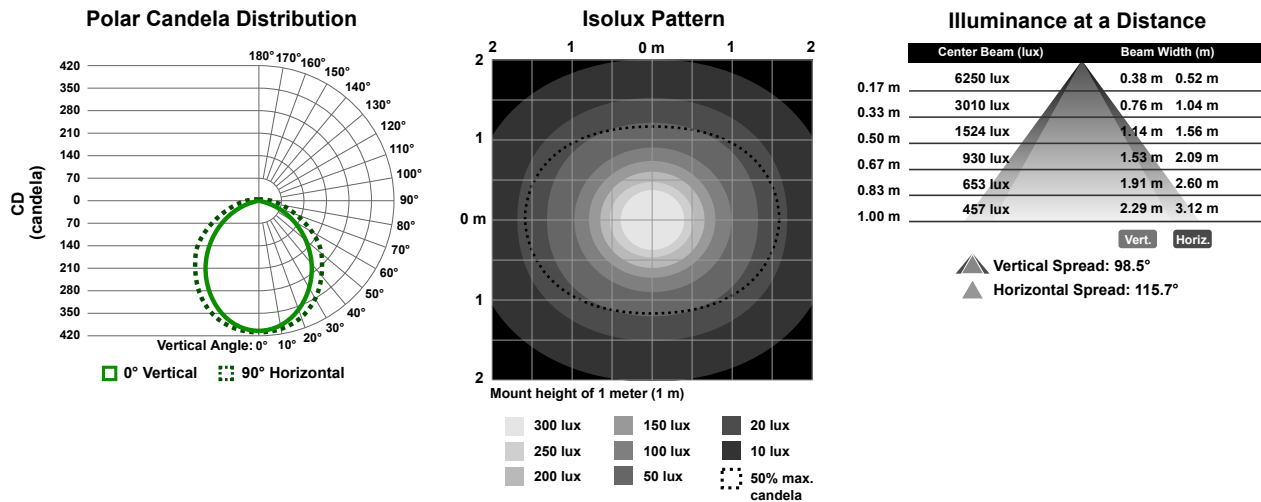
- Green: 0.615
- Red: 0.285
- Yellow: 0.875
- Blue: 0.195

For models with heavy diffused housing, multiply lumen values by 0.8.

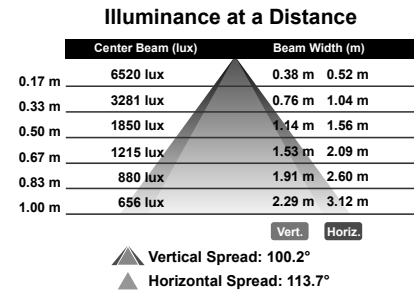
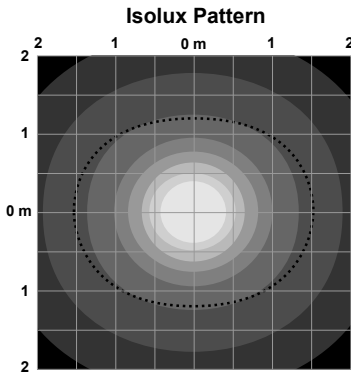
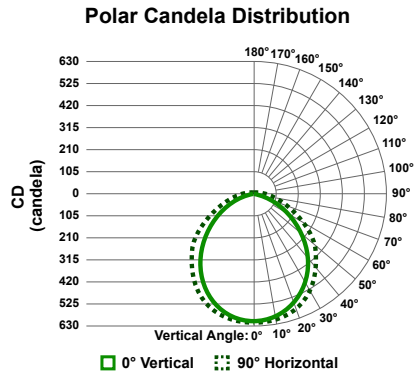
### 285 mm Models



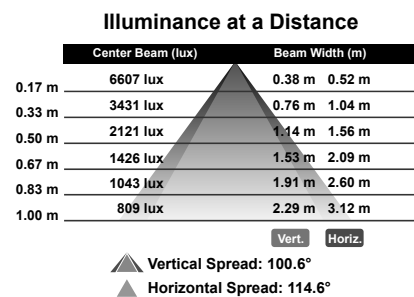
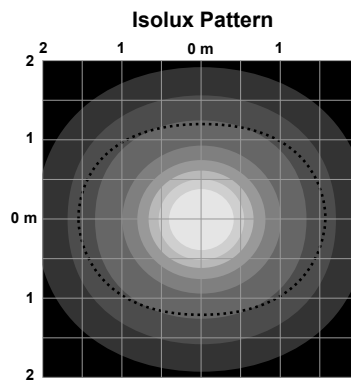
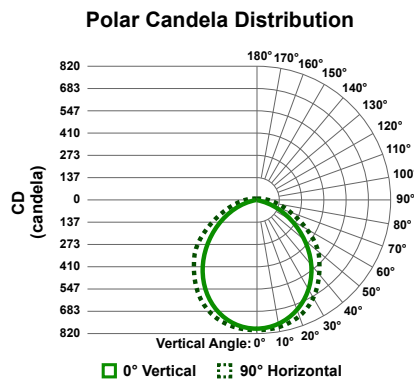
### 570 mm Models



## 850 mm Models



## 1130 mm Models



## Accessories

### Cordsets

Use single-ended cordsets between the power source and the quick disconnect connection of a stand-alone light or the first light in a cascade. Use double-ended cordsets between lights in a cascade.

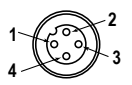
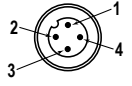
4-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	1.83 m (6 ft)	Straight		<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
MQDC-415	4.57 m (15 ft)			
MQDC-430	9.14 m (30 ft)			
MQDC-450	15.2 m (50 ft)			

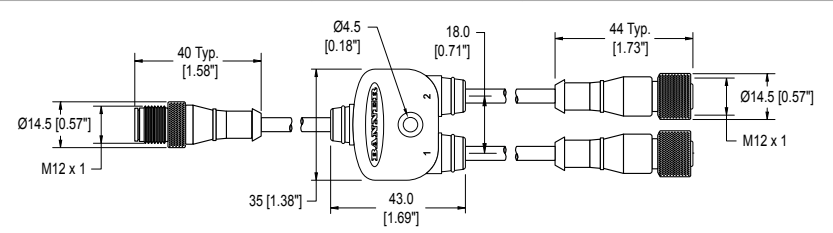
4-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406RA	1.83 m (6 ft)	Right-Angle		
MQDC-415RA	4.57 m (15 ft)			
MQDC-430RA	9.14 m (30 ft)			
MQDC-450RA	15.2 m (50 ft)			

4-Pin Threaded M12/Euro-Style Cordsets—Double Ended				
Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight/ Female Straight		Female
MQDEC-403SS	0.91 m (3 ft)			
MQDEC-406SS	1.83 m (6 ft)			Male
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30 ft)			
MQDEC-450SS	15.2 m (50 ft)			
				1 = Brown 2 = White 3 = Blue 4 = Black

4-Pin Threaded M12/Euro-Style Cordsets—Washdown, Stainless Steel, Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-WDSS-0406	1.83 m (6 ft)	Straight		
MQDC-WDSS-0415	4.57 m (15 ft)			
MQDC-WDSS-0430	9.14 m (30 ft)			
				1 = Brown 2 = White 3 = Blue 4 = Black

4-Pin Threaded M12/Euro-Style Cordsets—Double Ended, Washdown, Stainless Steel				
Model	Length	Style	Dimensions	Pinout
MQDEC-WDSS-401SS	0.3 m (1 ft)	Male Straight/ Female Straight		Female
MQDEC-WDSS-403SS	0.91 m (3 ft)			
MQDEC-WDSS-406SS	1.83 m (6 ft)			Male
MQDEC-WDSS-412SS	3.66 m (12 ft)			
				1 = Brown 2 = White 3 = Blue 4 = Black

4-Pin Threaded M12/Euro-Style Splitter Cordsets—Flat Junction			
Model	Branches (Female)	Trunk (Male)	Pinout
CSB-M1240M1240	No branch	No trunk	<p>Female</p>  <p>Male</p>  <p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
CSB-M1240M1241	2 x 0.30 m (1 ft)	No trunk	
CSB-M1241M1241		0.30 m (1 ft)	
CSB-M1248M1241		2.50 m (8 ft)	
CSB-M12415M1241		4.57 m (15 ft)	
CSB-M12425M1241		7.60 m (25 ft)	
CSB-UNT425M1241		7.60 m (25 ft) Unterminated	

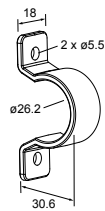
  


Technical drawing dimensions:  
 - Trunk length: 40 Typ. [1.58"]  
 - Branch length: 44 Typ. [1.73"]  
 - Connector diameter: Ø14.5 [0.57"]  
 - Pin diameter: Ø4.5 [0.18"]  
 - Pin length: 18.0 [0.71"]  
 - Pin thread: M12 x 1  
 - Body length: 35 [1.38"]  
 - Body diameter: Ø26.2  
 - Body width: 18  
 - Body depth: 43.0 [1.69"]

## Brackets

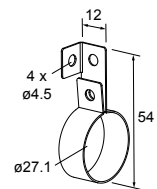
### LMBWLS27EC

- Clear copolyester
- Clearance for M5 or #10 hardware



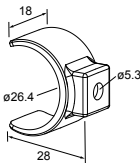
### LMBWLS27H

- 300 series stainless steel mounting brackets
- M4 stainless steel hardware included



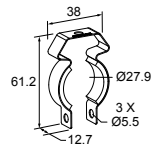
### LMBWLS27SP

- Clear copolyester
- Clearance for M5 or #10 hardware
- Snap bracket for light duty applications



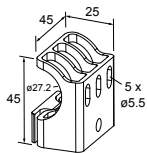
### LMBWLS27T

- Stainless steel mounting brackets with rubber grips
- M5 stainless steel hardware included
- Clearance for M5 or #10 hardware



### LMBWLS27U

- Clear copolyester
- Clearance for M5 or #10 hardware
- Clamps securely around the light body



## Banner Engineering Corp. Limited Warranty

---

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

**THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), AND WHETHER ARISING UNDER COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE.**

This Warranty is exclusive and limited to repair or, at the discretion of Banner Engineering Corp., replacement. **IN NO EVENT SHALL BANNER ENGINEERING CORP. BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY EXTRA COSTS, EXPENSES, LOSSES, LOSS OF PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM ANY PRODUCT DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.**

Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp. Any misuse, abuse, or improper application or installation of this product or use of the product for personal protection applications when the product is identified as not intended for such purposes will void the product warranty. Any modifications to this product without prior express approval by Banner Engineering Corp will void the product warranties. All specifications published in this document are subject to change; Banner reserves the right to modify product specifications or update documentation at any time. Specifications and product information in English supersede that which is provided in any other language. For the most recent version of any documentation, refer to: [www.bannerengineering.com](http://www.bannerengineering.com).

For patent information, see [www.bannerengineering.com/patents](http://www.bannerengineering.com/patents).

## Mexican Importer

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

81 8363.2714



more sensors, more solutions