

# EZ-STATUS® WLS28-2 Multicolor LED Strip Light



## Features

Banner's WLS28-2 Multicolor LED Strip Lights have sturdy aluminum housings, shatterproof windows, and environmental ratings that make 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
- Four available lengths from 285 mm to 1130 mm
- Daisy chain power to multiple lights



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:** Read the following instructions before operating the light. Please download the complete EZ-STATUS® WLS28-2 Multicolor LED Strip Light technical documentation, available in multiple languages, from [www.bannerengineering.com](http://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](http://www.bannerengineering.com) toda la documentación técnica de los EZ-STATUS® WLS28-2 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 EZ-STATUS® WLS28-2 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.

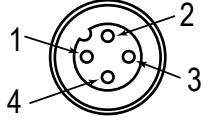
## Models

Family	Cascadable	Colors 1-5 and Control	—	Lighted Length (mm)	Window	Construction	Voltage	Connector <sup>(1)</sup>
WLS28-2	X	WGRXX	—	0285	D	X	24	Q
		WGRXX3 = White, Green, and Red with override control						
		GYRXX3 = Green, Yellow, and Red with override control						
		WYRXX3 = White, Yellow, and Red with override control		0285	Blank = Clear plastic			Blank = 2 m (6.5 ft) integral PVC-jacketed cable
	C = Cascadeable	WGRYB5 = White, Green, Red, Yellow, and Blue with binary control		0570	D = Diffused plastic	X = Not sealed		
	X = Non-cascadeable	WGRXX6 = White, Green, and Red with I/O Block control		0850		S = Sealed	24 = 24 V	Q = Integral 4-pin M12 male quick-disconnect connector
		WYRXX6 = White, Yellow, and Red with I/O Block control		1130	L25 = 25° lensed window			
		GYRXX6 = Green, Yellow, and Red with I/O Block control						

<sup>(1)</sup> Models with a quick-disconnect connector require a mating cordset.



## Wiring

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 (Color 3 overrides Colors 1 and 2, Color 2 overrides Color 1)*

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

*3 Color I/O Block Control (Input 1 is always ON through the block)*

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

*5 Color Binary Control (Binary input state controls color)*

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

## Specifications

### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

### 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>(2)</sup>	Maximum Current (A)
285 mm	0.315	0.4
570 mm	0.63	0.8
850 mm	0.945	1.2
1130 mm	1.26	1.6

### Leakage Current Immunity

400 µA

<sup>(2)</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.

### LED Lifetime

Lumen Maintenance - L<sub>70</sub>

When operating within specifications, output decreases less than 30% after 50,000 hours

### Mounting

2 SMBWLS28RA swivel brackets and 4 screws included

### Connections

Integral 4-pin M12 male quick-disconnect connector

### Construction

Clear anodized aluminum housing; painted zinc end caps; polycarbonate window on clear and diffuse plastic models; acrylic window on L25 models; zinc plated steel brackets

### Environmental Rating

Non-sealed models: IP50

Sealed models: IP65, IP67, IP69K per ISO 20653

### 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)

### Application Notes

When connecting cascable 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

## Certifications



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



## Light Characteristics

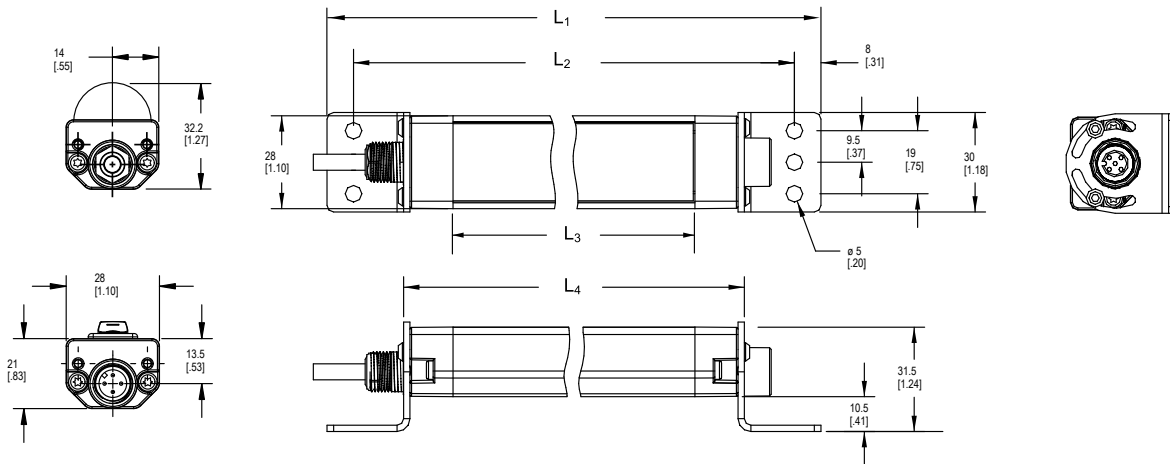
Daylight White Efficacy: 85 lumens/watt typical at 24 V DC at 25 °C (77 °F)

CRI: 80, minimum

Color	Dominant Wavelength (nm) or Color Temperature	Lighted Length Lumens (Typical at 25 °C) <sup>(3)</sup>			
		285 mm	570 mm	850 mm	1130 mm
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
Daylight White	5000 K (±300 K)	650	1300	1950	2600

## 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 brackets.

IP50 Models	IP67/IP69K Models	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>
WLS28-2..0285	WLS28-2..285S	362 mm (14.3 in)	346 mm (13.6 in)	286 mm (11.26 in)	316 mm (12.4 in)
WLS28-2..0570	WLS28-2..570S	644 mm (25.4 in)	628 mm (24.7 in)	568 mm (22.36 in)	598 mm (23.5 in)
WLS28-2..0850	WLS28-2..850S	926 mm (36.5 in)	910 mm (35.8 in)	850 mm (33.46 in)	880 mm (34.6 in)
WLS28-2..1130X	WLS28-2..1130S	1208 mm (47.6 in)	1192 mm (46.9 in)	1132 mm (44.57 in)	1162 mm (45.7 in)

## 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.

<sup>(3)</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.

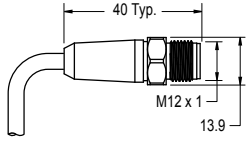
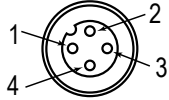
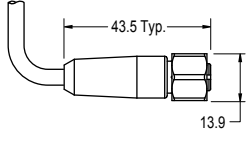
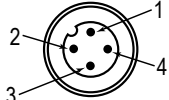
4-Pin Single-Ended M12 Female Cordsets				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	2 m (6.56 ft)	Straight		
MQDC-415	5 m (16.4 ft)			
MQDC-430	9 m (29.5 ft)			
MQDC-450	15 m (49.2 ft)	Right-Angle		
MQDC-406RA	2 m (6.56 ft)			
MQDC-415RA	5 m (16.4 ft)			
MQDC-430RA	9 m (29.5 ft)			
MQDC-450RA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

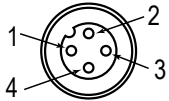
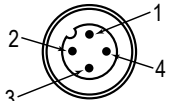
1 = Brown  
2 = White  
3 = Blue  
4 = Black  
5 = Not used

cULus

4-Pin Double-Ended M12 Female to M12 Male Cordsets				
Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight/Female Straight		<p>Female</p> <p>Male</p> <p>1 = Brown 2 = White 3 = Blue 4 = Black</p> <p>cULus</p>
MQDEC-403SS	0.91 m (2.99 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-415SS	4.58 m (15 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			

4-Pin Single-Ended M12 Female Washdown, Stainless Steel Cordsets				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-WDSS-0406	2 m (6.56 ft)	Straight		<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
MQDC-WDSS-0415	5 m (16.4 ft)			
MQDC-WDSS-0430	9 m (29.5 ft)			

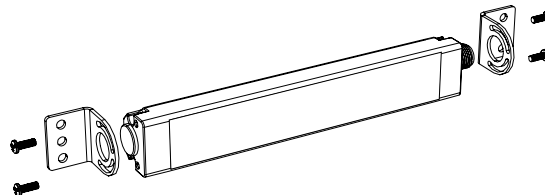
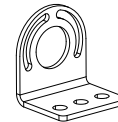
4-Pin Double-Ended M12 Female to M12 Male Washdown Stainless Steel Cordsets				
Model	Length	Style	Dimensions	Pinout
MQDEC-WDSS-401SS	0.31 m (1 ft)	Male Straight/Female Straight		Female 
MQDEC-WDSS-403SS	0.91 m (2.99 ft)			
MQDEC-WDSS-406SS	1.83 m (6 ft)			
MQDEC-WDSS-412SS	3.66 m (12 ft)			Male  1 = Brown 2 = White 3 = Blue 4 = Black

4-Pin Flat Junction M12 Female Branch to M12 Male Trunk Splitter Cordsets			
Model	Branches (Female)	Trunk (Male)	Pinout
CSB-M1240M1240	No branch	No trunk	Female 
CSB-M1240M1241	2 × 0.3 m (1 ft)	No trunk	
CSB-M1241M1241		0.31 m (1 ft)	
CSB-M1248M1241		2.44 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	
CSB-M1243M1243	2 × 1 m (3.28 ft)	1 m (3.28 ft)	Male  1 = Brown 2 = White 3 = Blue 4 = Black

## Brackets

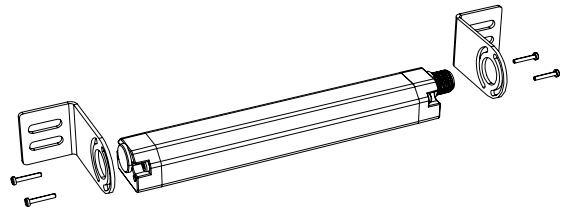
### SMBWLS28RA

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.

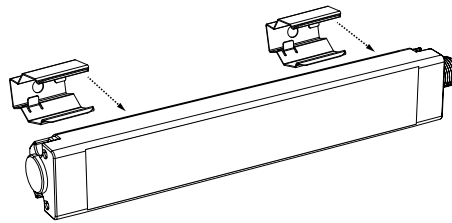
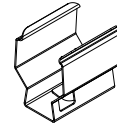


**SMBWLS28SM**

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.

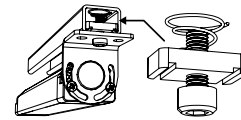
**SMBWLS28SP**

- Stainless steel snap bracket kit
- Includes two brackets

**SMH1316**

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

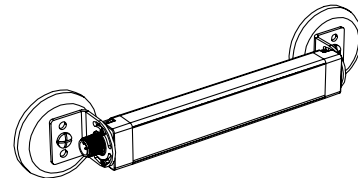
- #10-32 spring nuts (qty 2)
- #10-32 socket head cap screws (qty 2)
- #10 lock washers (qty 2)

**SMBWLSMAG**

- Magnetic mounting bracket for easy attachment to steel surfaces

**SMBWLSMAGR**

- Protective cover also available to prevent scratches to painted surfaces



## 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 García Nuevo León, C. P. 66269

81 8363.2714