EZ-STATUS® WLS28-2 Multicolor LED Strip Light

BANNER®
more sensors, more solutions

Datasheet

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
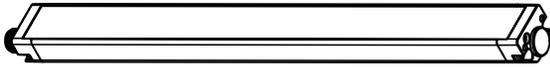
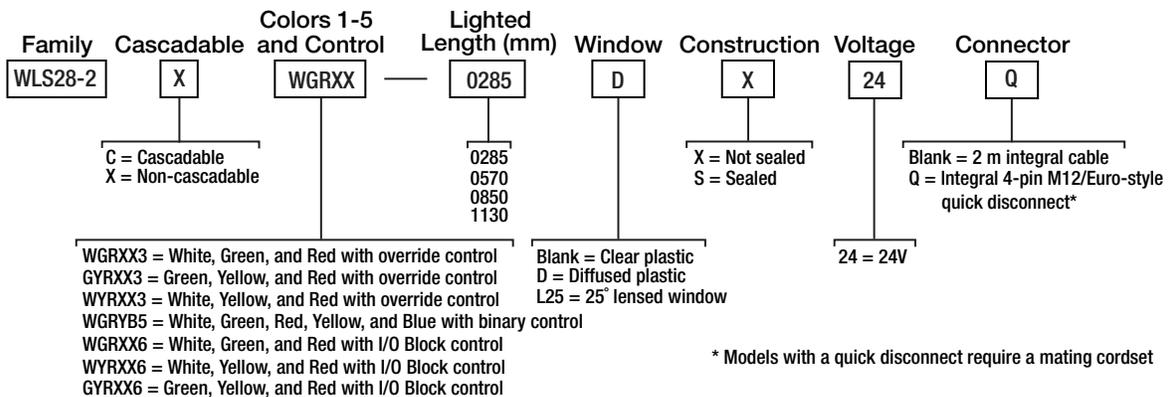**Stand-Alone Light or End Light in a Cascade**
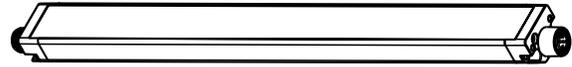
First or Middle of a Cascade

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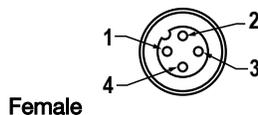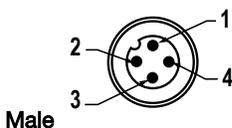
Stand-alone models have a male quick disconnect at one end for power connection and no connections at the opposite end. A stand-alone model may be used as the last model in the cascade series.

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.

Models

Family	Cascadable	Colors 1-5 and Control	Lighted Length (mm)	Window	Construction	Voltage	Connector
WLS28-2	X	WGRXX	0285	D	X	24	Q

Cascadable
C = Cascadable
X = Non-cascadable

Colors 1-5 and Control
WGRXX3 = White, Green, and Red with override control
GYRXX3 = Green, Yellow, and Red with override control
WYRXX3 = White, Yellow, and Red with override control
WGRYB5 = White, Green, Red, Yellow, and Blue with binary control
WGRXX6 = White, Green, and Red with I/O Block control
WYRXX6 = White, Yellow, and Red with I/O Block control
GYRXX6 = Green, Yellow, and Red with I/O Block control

Lighted Length (mm)
0285
0570
0850
1130

Window
Blank = Clear plastic
D = Diffused plastic
L25 = 25° lensed window

Construction
X = Not sealed
S = Sealed

Voltage
24 = 24V

Connector
Blank = 2 m integral cable
Q = Integral 4-pin M12/Euro-style quick disconnect*

* Models with a quick disconnect require a mating cordset

Wiring Diagrams

Male

Female

Key
Pin-1 Brown: Input 1
Pin-2 White: Input 3
Pin-3 Blue: DC Common
Pin-4 Black: Input 2

3 Color Override Control *(Color 3 overrides Colors 1 and 2, Color 2 overrides Color 1)*				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	Input 1: Pin 1 Brown Wire	Input 2: Pin 4 Black Wire	Input 3: Pin 2 White Wire	LED Color
—	—	—	Light OFF	—	—	—	Light OFF
+24 V dc	—	—	Color 1 ON	+24 V dc	—	—	Color 1 ON
—	+24 V dc	—	Color 2 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	Color 3 ON	+24 V dc	+24 V dc	—	Color 4 ON
+24 V dc	—	+24 V dc	Color 3 ON	+24 V dc	—	+24 V dc	Color 5 ON
—	+24 V dc	+24 V dc	Color 3 ON	—	+24 V dc	+24 V dc	Light OFF
+24 V dc	+24 V dc	+24 V dc	Color 3 ON	+24 V dc	+24 V dc	+24 V dc	Light OFF

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

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)

Lighted Length	Typical Current (A) at 25° C[1]	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

Leakage Current Immunity
400 µA

LED Lifetime
Lumen Maintenance - L_{70}
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/Euro-style quick disconnect

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

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[1] 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.

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)[2]			
		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

Environmental Rating

Non-sealed models: IEC IP50
Sealed models: IEC IP65, IEC IP67, DIN IP69K

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

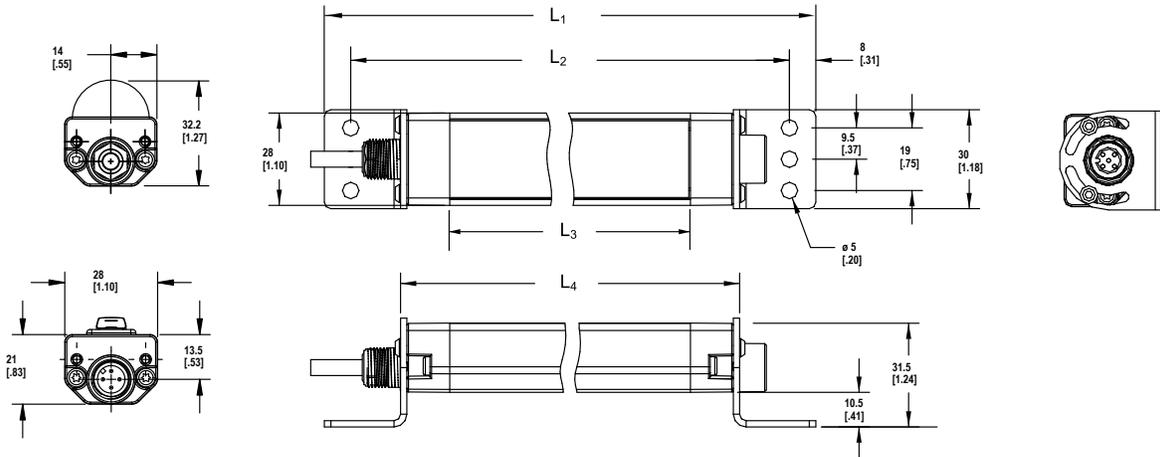When connecting cascadable lights in series it is important not to exceed maximum current limitations:
Maximum length of light at 24 V dc: 3.0 m (9.8 ft)
Do not spray cable with high-pressure sprayer, or cable damage will result

Certifications

Dimensions

Dimensions are shown with the included SMBWLS28RA brackets.

IP50 Models	IP67/IP69K Models	L_1	L_2	L_3	L_4
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)

All measurements are listed in millimeters [inches], unless noted otherwise.

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.

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[2] 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 Threaded M12/Euro-Style Cordsets

Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	1.83 m (6 ft)	Straight	44 Typ. / M12 x 1 / ø 14.5	
MQDC-415	4.57 m (15 ft)			
MQDC-430	9.14 m (30 ft)			1 = Brown
MQDC-450	15.2 m (50 ft)			2 = White
MQDC-406RA	1.83 m (6 ft)	Right-Angle	32 Typ. [1.26"] / 30 Typ. [1.18"] / M12 x 1 / ø 14.5 [0.57"]	3 = Blue
MQDC-415RA	4.57 m (15 ft)			4 = Black
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	40 Typ. [1.58"] / M12 x 1 / ø 14.5 [0.57"]	Female
MQDEC-403SS	0.91 m (3 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			Male
MQDEC-420SS	6.10 m (20 ft)		44 Typ. [1.73"] / M12 x 1 / ø 14.5 [0.57"]	
MQDEC-430SS	9.14 m (30 ft)			1 = Brown
MQDEC-450SS	15.2 m (50 ft)			2 = White
				3 = Blue
				4 = Black

4-Pin Threaded M12/Euro-Style Cordsets—Washdown, Stainless Steel

Model	Length	Style	Dimensions	Pinout (Female)
MQDC-WDSS-0406	1.83 m (6 ft)	Straight	Ø15.5 mm / Ø4.8 mm / 43.5 mm	
MQDC-WDSS-0415	4.57 m (15 ft)			1 = Brown
MQDC-WDSS-0430	9.14 m (30 ft)			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 1 2 4 3 Male 1 2 4 3 1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-WDSS-403SS	0.91 m (3 ft)			
MQDEC-WDSS-406SS	1.83 m (6 ft)			
MQDEC-WDSS-412SS	3.66 m (12 ft)			

4-Pin Threaded M12/Euro-Style Splitter Cordsets—Flat Junction

| Model	Branches (Female)	Trunk (Male)	Pinout
CSB-M1240M1240	No branch	No trunk	Female 1 2 4 3 Male 1 2 4 3 1 = Brown 2 = White 3 = Blue 4 = Black
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	

Brackets

SMBWLS28RA

The bracket kit is available as a replacement for the one that comes with the Work Light Strip. The kit contains two end brackets and four screws.
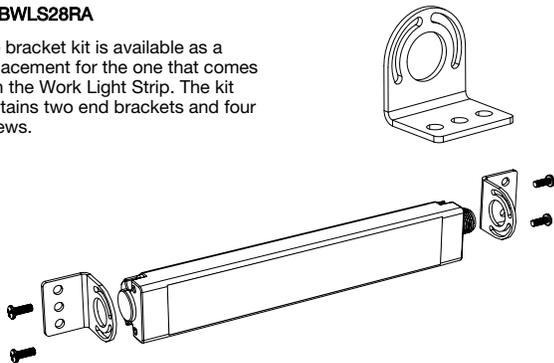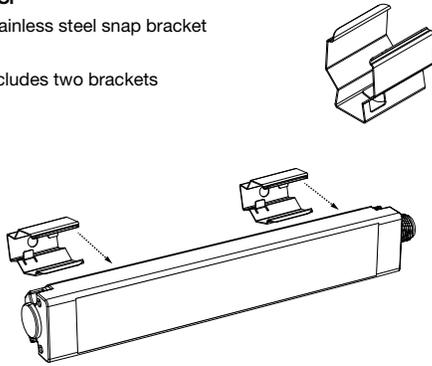

SMBWLS28SM

This kit allows the light to be mounted at a right angle to the mounting surface. The kit contains two end brackets and four screws.
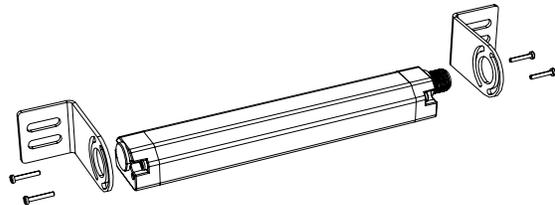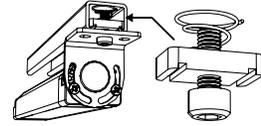
SMBWLS28SP

- Stainless steel snap bracket kit
- Includes two brackets

SMH1316

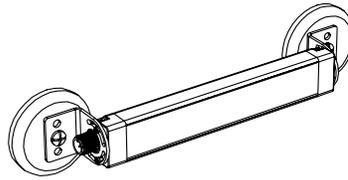This kit allows the light to be mounted to a 13/16-inch Unistrut channel. The kit includes:

- #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

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