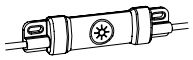
WLS70 Industrial LED Strip Light (DC)

Quick Start Guide

This guide is designed to help you set up and install the WLS70 Industrial LED Strip Light (DC). For complete information on programming, performance, troubleshooting, dimensions, and accessories, please refer to the Instruction Manual at www.bannerengineering.com. Search for p/n 220918 to view the Instruction Manual. Use of this document assumes familiarity with pertinent industry standards and practices.



For PWM dimming, use with the LC15T-127AP1RBGQP dimmer module. For more information, refer to the LC15T In-Line Touch Switch datasheet, p/n 217460.

Important: Read the following instructions before operating the light. Please download the complete WLS70 Industrial LED Strip Light (DC) technical documentation, available in multiple languages, from www.bannerengineering.com for details on the proper use, applications, Warnings, and installation instructions of this device.

Important: Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los WLS70 Industrial LED Strip Light (DC), disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

Important: Lisez les instructions suivantes avant d'utiliser le luminaire. Veuillez télécharger la documentation technique complète des WLS70 Industrial LED Strip Light (DC) sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

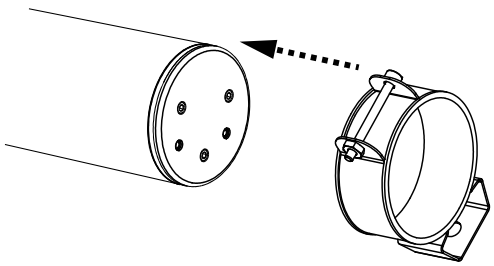
Models

Family	Cascade	Color	Lighted Length (mm)	Window	Control	Connection
WLS70	X	W	600	D	PWM	Q
	X = Non-Cascadable	W = Daylight White	300 = 300 mm 600 = 600 mm 900 = 900 mm 1200 = 1200 mm	D = Diffused Window	PWM Dimming	Blank = 4-wire, 2 m Cable Q = 4 pin Integral M12 QD*

*Models with a quick disconnect require a mating cordset. See Cordsets on p. 3.

Installing the WLS70 Industrial LED Strip Light

Figure 1. Attaching the Clamp Brackets (Step 3)



1. Turn off power at DC power supply.

Note: This device requires a Class 2 or SELV DC power supply, max 4 A.

2. Remove the light from the packaging and inspect it for damage before installing it.
3. Attach the included LMBWLS70T clamp brackets to the light. Slide on gasket if desired.

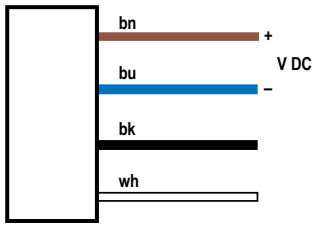
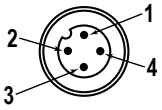
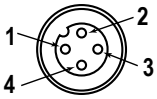
Refer to the instruction manual for a complete list of compatible brackets.

4. Select a suitable horizontal or vertical mounting location.
5. Place the light in the mounting location and mark the positions of the bracket mounting holes.

   The optional LMBWLS70HK bracket can be used to hang the light in conjunction with the LMBWLS70T (see Brackets on p. 3).
6. Drill the holes and use appropriate screws to secure the bracket to the mounting location.
7. Clamp the light onto the brackets.
8. Attach cables (cabled model) or cordsets (quick-disconnect model) per the wiring diagram. Terminate wire as appropriate per application.

Installation is complete. Turn on electricity at power supply.

Wiring Diagram

Diagram	Wire	Connection	Pinout (Male)	Pinout (Female)
	1 - Brown	300, 600, and 900 mm models: 12 V DC to 30 V DC 1200 mm models: 18 V DC to 30 V DC		
	2 - White	Not used	1 = Brown 2 = White 3 = Blue 4 = Black	1 = Brown 2 = White 3 = Blue 4 = Black
	3 - Blue	DC common		
	4 - Black	Pulse width modulation (PWM) input. For maximum intensity, leave the black wire floating or connected to common. Connecting to 12 V DC to 30 V DC causes LEDs to shut off.		

Specifications

Supply Voltage
300, 600, and 900 mm models: 12 V DC to 30 V DC
1200 mm models: 18 V DC to 30 V DC
Use only with a suitable Class 2 power supply (UL) or SELV power supply (CE)
See electrical characteristics on product label

Supply Current

Lighted Length (mm)	Max. Current Draw (A) at 12 V DC	Typical Current Draw (A)		
		18 V DC	24 V DC	30 V DC
300	1.100	0.510	0.385	0.310
600	2.000	1.055	0.775	0.635
900	2.650	1.630	1.170	0.935
1200	-	2.200 [1]	1.545	1.210

Dimming
Compatible with PWM LED dimming, dimmable to 5% intensity
Pulse Width Modulation (PWM)
Frequency: Up to 1000 Hz
Voltage: 12 V DC to 30 V DC
Current: 4 mA max. per foot
See Dimmers on p. 3

Construction
Clear anodized aluminum housing; polycarbonate outer housing

Supply Protection Circuitry
Protected against reverse polarity and transient voltages

Mounting
(2) LMBWLS70T brackets included and mounting hardware
Several optional mounting brackets are available (see Accessories)

Connections
Integral 4-pin M12 male quick disconnect (4-pin connecting cordset required), or 2 m (6.5 ft) integral PVC cable
See Cordsets on p. 3

Environmental Rating
IEC IP65

LED Lifetime
Lumen Maintenance - L_{70}
When operating within specifications, output will decrease less than 30% after 50,000 hours.

Operating Temperature
Surface Mount Installation: –40 °C to +50 °C (–40 °F to +122 °F)
85% at +50 °C maximum relative humidity (non-condensing)

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

Vibration and Mechanical Shock
Vibration: 10 Hz to 55 Hz, 0.5 mm peak-to-peak amplitude per IEC 60068-2-6 (5 minute sweep, 30 minute dwell)
Shock: 15G 11 ms duration, half sine wave per IEC 60068-2-27
Impact: IK10 (IEC 60068-2-75)

Certifications and Approvals

UL/cULus E338626

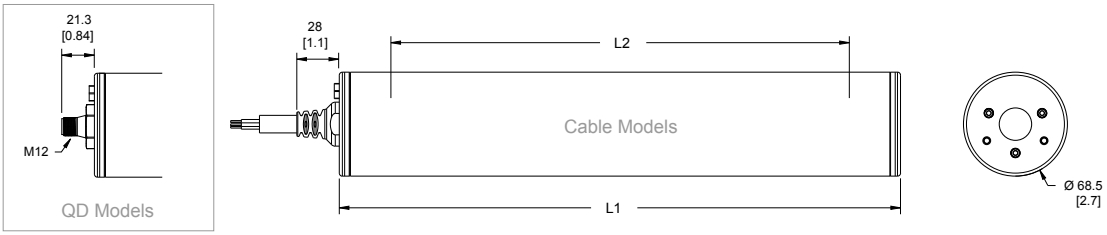
Light Characteristics
Daylight White Efficacy: up to 146 lumens/watt typical at 24 V AC at 25 °C (77 °F)
CRI: 82, typical

Model	Color	Color Temperature (CCT)	Lumens (Typical at 25 °C)	Watts at 24 V DC	Luminous Efficacy (lm/w)
300	Daylight White	5000 K (±300 K)	1350	9.3	145
600	Daylight White	5000 K (±300 K)	2700	18.6	145
900	Daylight White	5000 K (±300 K)	4050	28.1	144
1200	Daylight White	5000 K (±300 K)	5400	37.1	146

[1] Maximum current draw for 1200 mm model is at 18 V.

Dimensions

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



Model	Housing Length (L1)	Lighted Length (L2)
WLS70..300..	369.8	302
WLS70..600..	667.6	600
WLS70..900..	965.3	898
WLS70..1200..	1263	1196

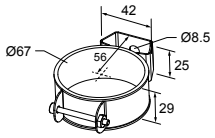
Accessories

Brackets

All measurements are listed in millimeters, unless noted otherwise. Refer to the instruction manual for a complete list of compatible brackets.

LMBWLS70T

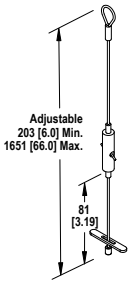
- Stainless steel
- Includes two clamp brackets for hanging or surface mount, two anti-rotation gaskets, and stainless steel hardware for securing the bracket to the light
- For use with M8 or 5/16" mounting hardware



Note: The LMBWLS70T is supplied with the light.

LMBWLS70HK

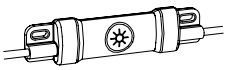
- Hanging bracket kit allows for suspended installation
- Includes two hanging bracket assemblies
- For use with bracket LMBWLS70T



Dimmers

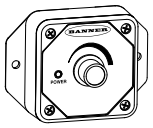
LC15T-127AP1RBGQP

- In-line capacitive touch switch with M12 connectors
- On/Off or PWM control with illuminated indication
- Rated for up to 30 V DC and 4 A maximum output current
- Rugged and waterproof IEC IP67 housing

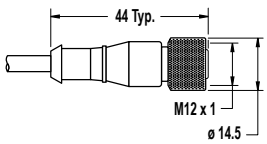
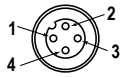


LC65P1T

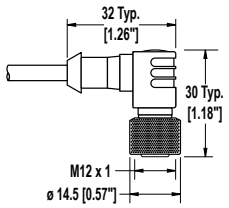
- Potentiometer with terminal and M12 connector options
- PWM control
- Rated for up to 30 V DC and 4 A maximum output current
- Unsealed IEC IP20 housing



Cordsets

4-Pin Threaded M12 Cordsets—Single Ended				
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)			

1 = Brown
2 = White
3 = Blue
4 = Black

4-Pin Threaded M12 Cordsets—Single Ended				
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)			

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For patent information, see www.bannerengineering.com/patents.

FCC Part 15 and CAN ICES-3 (B)/NMB-3(B)

This device complies with part 15 of the FCC Rules and 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.

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 and CAN ICES-3 (B)/NMB-3(B). 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 manufacturer.

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