# Lighting & Indication Solutions



more sensors, more solutions

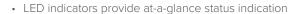


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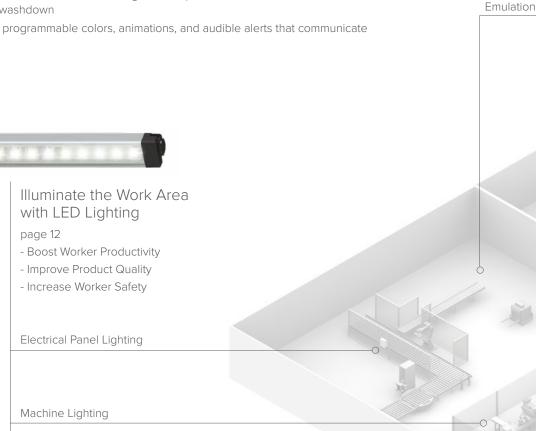
Visual Factory.....

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# Light Up the Visual Factory









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Loading Dock/Bay

Communication

- Empower Operators
- Alert Supervisors
- Accelerate Resolution





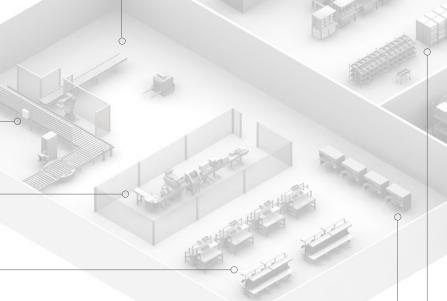
- Guide Operators
- Indicate Status Conditions



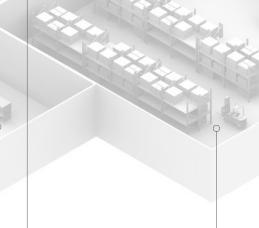


Workstation Lighting

Visual Inspection Station



Sensor



Call for

Parts



Machine and

Process Status

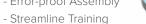
Put-to-Light for

Warehouse and Logistics





- Reduce Cycle Time
- Error-proof Assembly





Wireless options to avoid costly wiring runs



Variety of audible options, including programmable



options available



Multiple colors in one unit with flexible I/O configuratuion



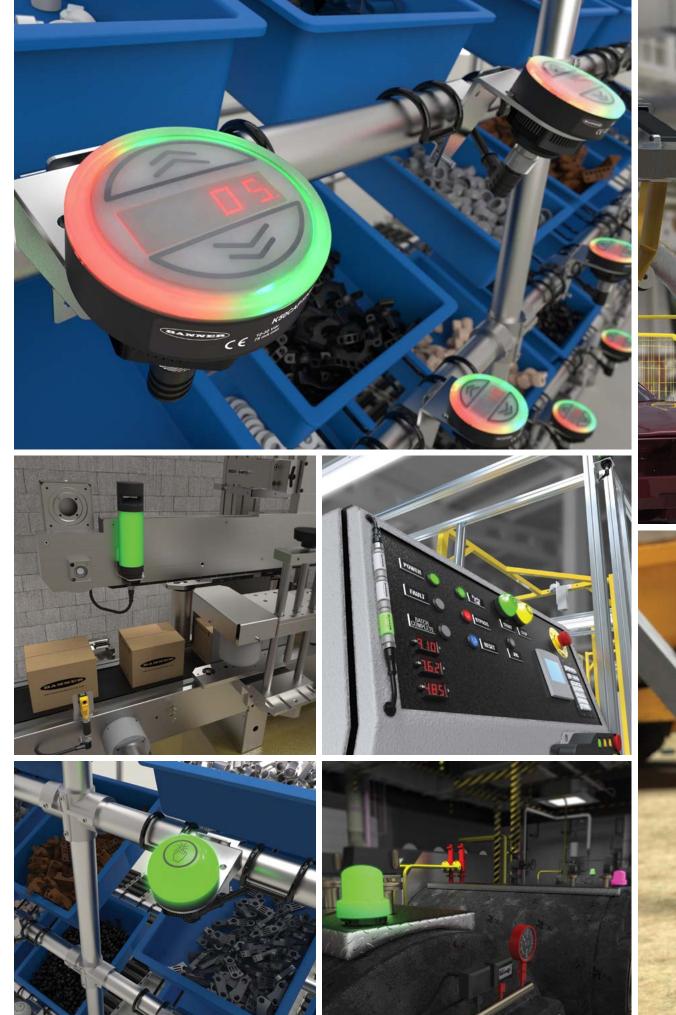
Cascadeable lights

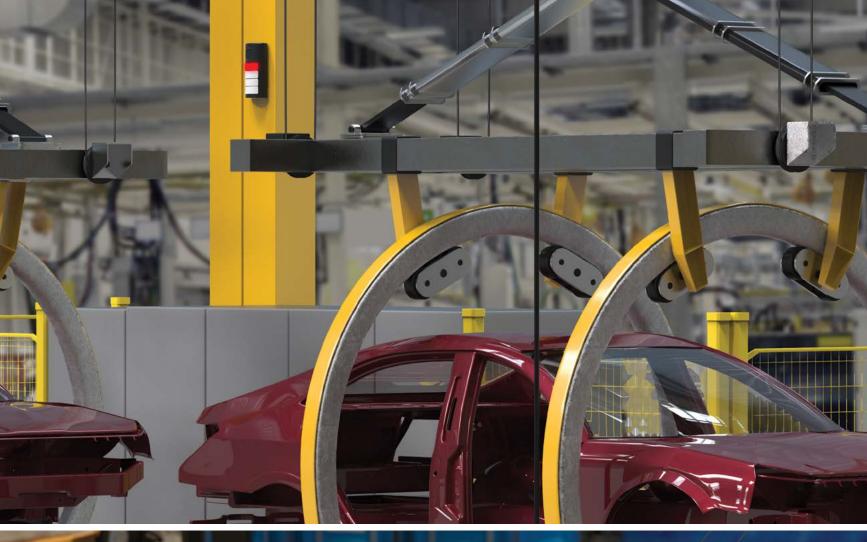


Magnetic mounting options for easy installation and



Light sections can be permanently laser marked with custom text or images









#### **K50 Pro Touch with Display**

- 4-digit, 7-segment LED display
- Two independent touch areas
- Clearly communicate status and receive feedback, improving throughput and productivity
- Ideal interface device for pick-to-light, condition monitoring, and general operator interaction in industrial environments
- Excellent immunity to false triggering by water spray, oils, and other foreign materials
- Can be actuated with bare hands or gloves



#### **CL50 Pro Column Lights**

- Rugged, versatile, and easy-to-install multicolor indicators
- Bright, easy-to-see operator guidance and indication of equipment status
- Programmable using Pro Editor software or dynamically controlled with IO-Link
- Customized indication possibilities, including color, flash patterns, and light intensity control
- Audible models available with sealed, omni-directional audible element



#### **TL15 In-Line Tower Lights**

- · Modular 15 mm diameter indicator
- Multiple device kits can be connected together to form a tower light
- Over-molded design for use in harsh environments
- Green, yellow, red, and blue models, each with a specific activation pin
- All signals pass through M12 in-line connection, simplifying installation without disruption to I/O
- TL15A offers additional audible capability so users can receive color status and audio alerts locally



#### **TLF100 Pro Flush Mount Tower Lights**

- Rugged, versatile, and easy-to-install three and four-segment tower lights
- Flush mounting allows for easy integration to machines and equipment
- Illuminated segments provide easy-to-see operator guidance and indication of equipment status
- Audible models available with sealed audible element, 14 selectable audible tones, and audible intensity control
- IO-Link gives full access to color, flashing, and dimming settings, as well as advanced animations like run and level modes, which provide dynamic response to changing machine conditions
- Bright, single-color LEDs provide highly visible indication for indoor or outdoor applications



#### **K50 Pro Touch Buttons**

- Integral audible alarm has fourteen tones with customization and intensity control
- Excellent immunity to false triggering by water spray, detergents, oils, and other foreign materials
- Integral audible can be used as standalone indicator or as an input to touch conditions
- 12 different tones available including intensity and input control
- Can be actuated with bare hands or gloves
- Compact models available for lower profile applications
- Configurable input/output with Pro Editor software

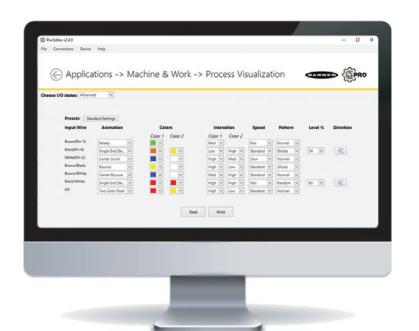


#### **K100 Pro Beacons**

- Industrial beacon delivers bright, configurable indication for OEMs and users that need visible status information
- Daylight Visible models provide bright light, even in direct sunlight
- Rugged construction provides years of uninterrupted operation
- Multiple colors in one device
- Programmable using Banner's Pro Editor software and Pro Converter Cable (DC models)
- Rugged UV-stabilized polycarbonate base and window

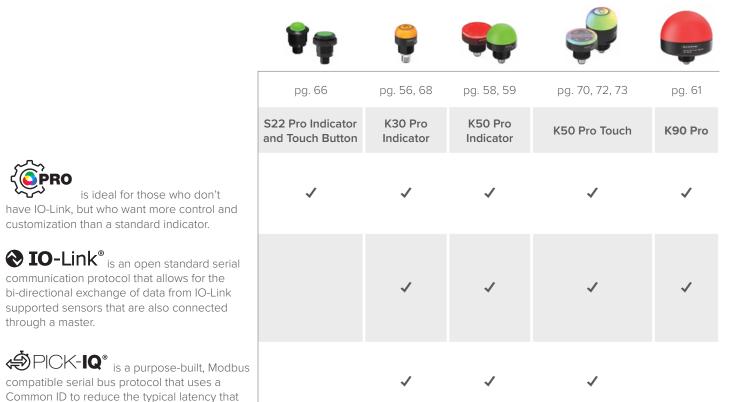
BANNER

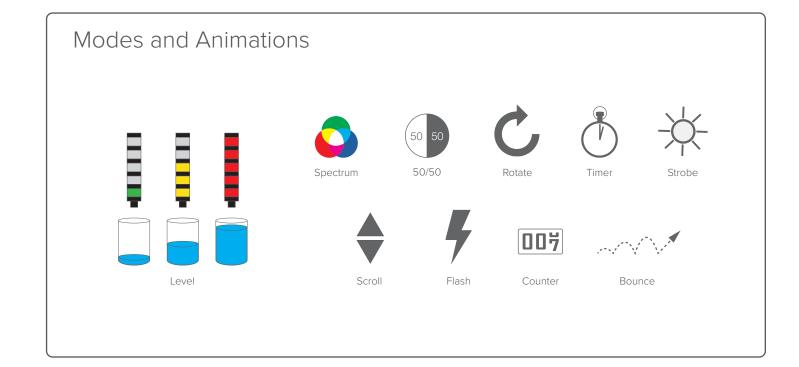
# Pro Products

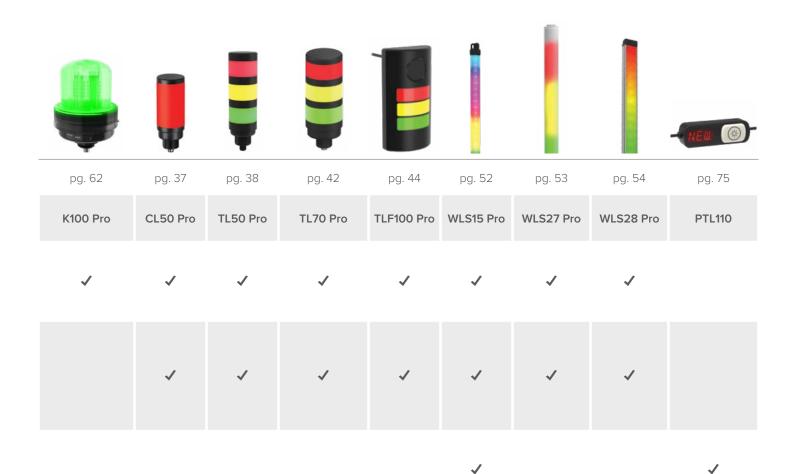


#### Software for Programmable Devices

Banner's Pro Editor software allows users to program device status, colors, animations, and much more for control via discrete inputs, bringing intuitive indication and interaction to the visual factory. Programmable RGB devices make supply chains more efficient by allowing you to standardize on one model that can be customized as needed. The application-based interface makes it easy to configure a device for a wide range of applications such as displaying machine warm-up time, indicating unique steps in an assembly process, showing distance and position information, and communicating multiple machine states.











through a master.

results from polling multiple devices.

customization than a standard indicator.

# LED Task Lighting Selection Guide

	pg. 14	pg. 15	pg. 16	pg. 18	pg. 20	pg. 21	pg. 22
	S15WL	WLS15	WLS27	WLS28-2	WLB32	WLS70	WLB72
Length (mm)	28	220 to 1200	145 to 1130	145 to 1130	285 to 1130	300 to 1200	1200 to 2400
AC/DC	DC	DC	DC	DC	AC and DC	AC and DC	AC
White Lumens per Foot (300 mm)	55	350 standard 750 high intensity	800	800	750	1350	1700
IP Rating	IP65, IP67, IP68	IP66, IP67	IP66, IP67, IP69K	IP50 (unsealed) IP67, IP69K (sealed)	IP50	IP65	IP20
Programmable		<b>(See pg. 52) (See pg. 52)</b>	<b>(See</b> pg. 53)	<b>♦ IO-Link®</b> (see pg. 54)			
Multicolor Options		<b>✓</b>	✓	✓			









#### S15WL

#### In-Line Work Lights

- Miniature devices providing 360-degree illumination to easily be added to existing components
- All signals pass through, simplifying installation
- Designed for enclosure or area lighting
- Rugged, over-molded design meets IEC IP65, IEC IP67, and IEC IP68
- Dimmable via two wire PWM input

Color	Connection	Model
Cool White	4-pin Male/Female M12 quick disconnect	S15WLWQ

Color Models page 48



Supply Voltage Lumens

Construction

Operating Conditions **Environmental Rating** 

Certifications

12 or 24 V DC

Coupling Material: Nickel-plated brass Connector Body: PVC translucent white Removable cap covering female quick disconnect included

-40 to +45 °C

IP65, IP67, IP68, NEMA/UL Type 1







#### Brackets



LMBM12MAG Attaches to M12 cordset end



LMBM12SP Attaches to M12 cordset end



LMBS15MAG



LMBS15SP

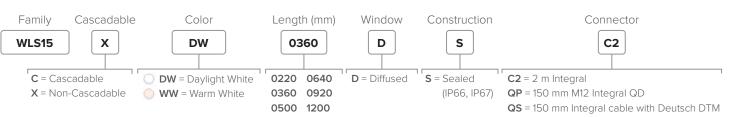


## WLS15

#### LED Strip Lights

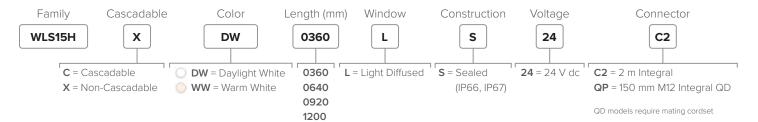
- Low-profile design for easy installation in tight spaces
- 12 or 24 V DC operation in one model
- Completely sealed with an IP67 rating for use in wet or dusty environments
- The rugged construction and polycarbonate shell resists shock and vibration while remaining lightweight
- LED lighting technology saves energy and minimizes replacement costs
- Brackets and connectors are available to keep installation simple
- Draws half the current of other lights for a low power device and high energy savings
- Offers stability in the presence of line voltage fluctuations

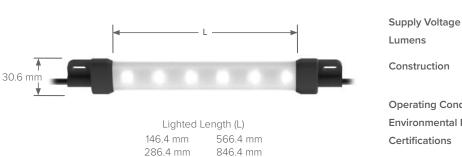
#### Single Color Models



QD models require mating cordset

#### High Intensity Models





1126.4 mm

12 or 24 V DC nominal

**Operating Conditions Environmental Rating**  Standard: 175-1400

High Intensite: 750-3000 Inner Housing: Clear Anodized Aluminum Outer Housing: Polycarbonate End Caps: Polyamide

−40 to +60 °C

IP66, IP67, UL 2108











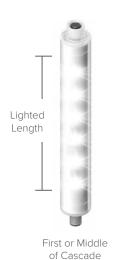


426.4 mm



#### WLS27 LED Strip Lights

- Cylindrical shape design, ideal for laminar airflow applications
- Rugged, water-resistant IP66, IP67 and IP69K construction
- Chemically resistant copolyester housing
- Available in eight lengths from 145 mm to 1130 mm
- Daisy chain power to multiple lights
- Capability to dim lights using the wiring pinout (Hi/Lo/Off)
- Optional snap clips for easy installation and repositioning
- Automatic temperature protection built into the unit. Above 50 °C, the light dims to manage heat and protect product lifetime



Stand-Alone or

Cascade End Light



Supply Voltage

White: 12 to 30 V DC Multicolor: 24 V DC

Lumens

White: 400-3200\* Multicolor: 125-2600\*

Construction

Housing: Copolyester

Operating Conditions Single Color: -40 to +70 °C

Environmental

Multicolor: -40 to +70 °C

Rating Certifications

IP67, IP66, IP69K per DIN 40050





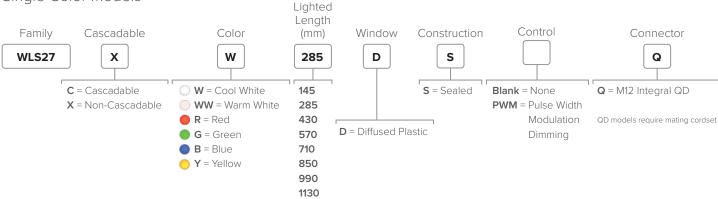
\*Depending on length and color

#### Lighted Length (L)

145 mm	710 mr
285 mm	850 m
430 mm	990 m
570 mm	112∩ m

45 mm	710 mm
285 mm	850 mm
130 mm	990 mm
70 mm	1130 mm

## Single Color Models



#### Multicolor Models



WGRXX6 = White, Green, Red with I/O Block control WYRXX6 = White, Yellow, Red with I/O Block control GYRXX6 = Green, Yellow, Red with I/O Block control

Brackets



LMBWLS27EC





LMBWLS27H

Stainless Steel





LMBWLS27T

Stainless Steel





LMBWLS27U

LMBWLS27SP

bannerengineering.com



#### WLS28-2

#### LED Strip Lights

- Compact, space-saving design
- Lensed models or choice of clear or diffuse window
- Cascade models for connecting multiple lights end-to-end, minimizing wiring
- High/Low/Off switch and non-switch models available
- Low power consumption less than 9 watts per foot
- Optional snap clips for easy installation and repositioning
- Automatic temperature protection built into the unit. Above 50 °C, the light dims to manage heat and protect product lifetime



145 mm 285 mm 430 mm

#### Lighted Length (L)

570 mm 1130 mm

710 mm 850 mm 990 mm

# Brackets



SMBWLS28RA Top Mount (included)



SMBWLS28SM Side Mount

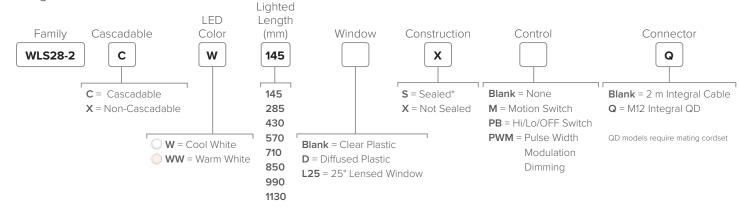


**SMBWLSMAG** Magnetic Mount Protective cover for magnet sold separately (SMBWLSMAGR).



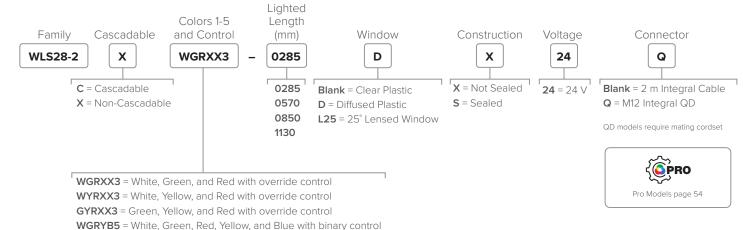
SMBWLS28SP Snap Mount

#### Single Color Models



\*Sealed models not available with ON/OFF Switch (PB) or Motion Switch (M)

#### Multicolor Models



WGRXX6 = White, Green, and Red with I/O Block control

WYRXX6 = White, Yellow, and Red with I/O Block control

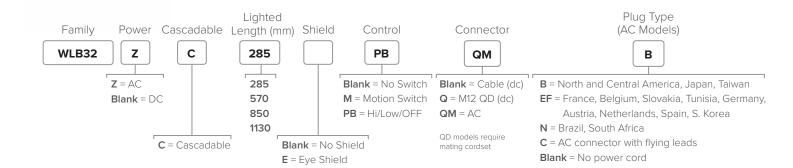
GYRXX6 = Green, Yellow, and Red with I/O Block control

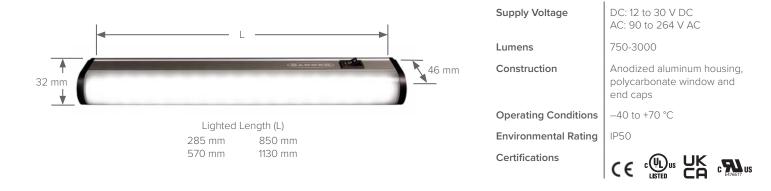


#### WLB32

#### LED Strip Lights

- Energy efficient for overall cost savings
- High/Low/Off switch allows users to customize light levels
- Available as cascadable models for a continuous length of lighting, with a minimum of wiring
- Metal housing, shatterproof window
- Easy installation with snap clips, or a choice of magnetic or angle brackets
- Available in AC or DC models
- Available in 285 mm, 570 mm, 850 mm or 1130 mm
- · Motion detection models are ideal for locations that cannot use a physical switch or where the placement of the switch is not useful
- Models featuring an eye shield window block direct line of sight to increase operator comfort





#### Brackets



LMBWLB32







LMBWLB32U

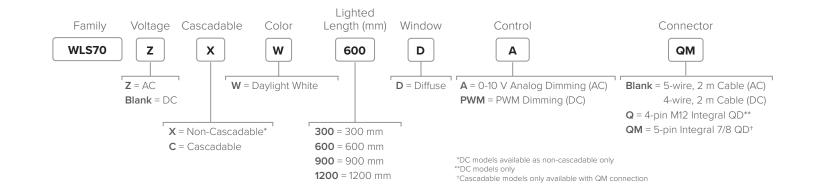


LMBWLB32UT

#### WLS70

#### Sealed High Output Strip Lights

- Exceptionally efficient for overall energy and cost savings
- Increase worker productivity and ergonomics with bright, high-quality, uniform light
- Sturdy aluminum housing encased in a shatterproof, UV-stabilized, polycarbonate shell
- Daisy chain long runs of AC lights quickly and easily with cascade quick disconnect models
- Dimming standard on all models





#### Brackets













LMBWLS70HHK Hanging Kit





#### WLB72

#### Industrial LED Light Bars

- Improve visibility with bright, uniform illumination
- Reduce costs through high-efficacy, low-maintenance design
- Simplify installation and wiring with versatile, reliable hardware





Supply Voltage Lumens **Operating Conditions** Certifications

120 to 277 V AC 6800-1300 -40 to +50 °C





Brackets







Angular Adjustment



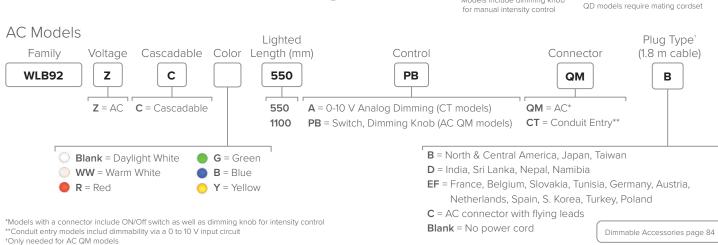
Suspended

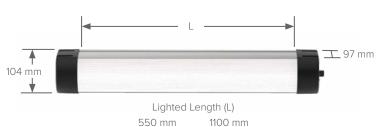
#### WLB92

#### Industrial LED Light Bars

- · Increase worker productivity and ergonomics with bright, high-quality, uniform light
- Durable light stands up in your environment with a rugged metal housing and shatterproof light cover
- No maintenance time or cost with long-life, energy-efficient LEDs
- Flexibility to place light where needed with AC and DC models
- Easy installation with variety of mounting options: surface, swivel, snap and hanging brackets







Supply Voltage Lumens **Color Temperature** Construction **Environmental Rating** Certifications

DC: 24 V DC, AC: 100 to 277 V AC 405-7150\* Daylight White: 5000 k, Warm White: 3000 k Housing: Anodized aluminum, Window: Polycarbonate

\*Depending on length and color

Brackets











LMBWLB92HK5 Suspended





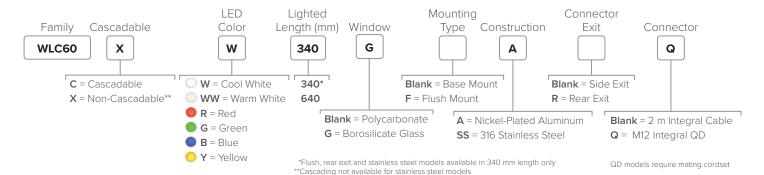
Surface Mount



#### WLC60

#### Heavy Duty LED Strip Lights

- Oil, chemical, and water resistant with IP67, IP68G, and IP69K ratings
- High brightness paired with advanced glare-reducing optics
- Easy to install with a wide variety of mounting solutions
- Resistant to vibration and shock
- Input voltage of 12–30 V DC
- Integral 4-pin M12 Quick Disconnect connector
- Models have four discrete intensity level settings
- Available with stainless steel or nickel-plated aluminum housing



Dimmable Accessories page 84



#### Brackets.









LMBWLC60RAS

4 Bracket Swivel Kit, can mount with SMBMAG3 magnet



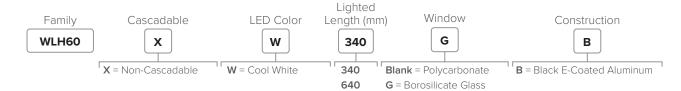
\*Do not use with stainless steel models Protective cover for magnet sold separately (SMBWLSMAGR).



#### WLH60

#### High Temperature LED Strip Lights

- Approved for use in environments up to 100 °C
- · IEC IP67, IEC IP68G, and IEC IP69K rated
- Rugged and durable for harsh environments
- · Resists high-pressure, high-temperature washdown, oils, and many chemicals
- Easy to install with a wide variety of mounting solutions
- Highly resistant to vibration and shock



NOTE: Connection for all WLH60 models is a 2 m (6.5') integral FEP cable



#### Brackets





LMBWLC60RAS 4 Bracket Swivel Kit, can mount with

SMBMAG3 magnet



\*Do not use with stainless steel models Protective cover for magnet sold separately (SMBWLSMAGR).



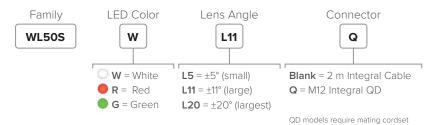


# WL50S

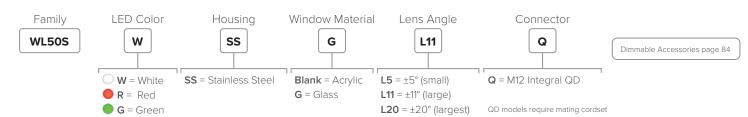
#### **LED Spot Lights**

- Highly concentrated, focused light available in three colors (white, red, or green)
- · Lenses come in three angles to cover area of concentration
- Illuminates a large area with an even pattern of light and no shadows
- Cabled and quick-disconnect models available
- 56 mm diameter with flat profile and 30 mm mounting base
- Rugged sealed housing rated to IP69K
- Available in a chemically resistant 316 stainless steel housing for use in harsh environments

#### Black Anodized Aluminum Models



#### Stainless Steel Models





Supply Voltage

Lumens

Construction

Housing: Black anodized aluminum or Stainless Steel with FDA-grade silicone gasket and Viton® o-ring seal

Window: Polycarbonate or glass window

Connector: Nickel-plated QD connector or PVC-jacketed cable Mounting Nut: Black zinc-plated steel or Stainless Steel mounting nut

**Operating Conditions** −20 to +50 °C

12 to 30 V DC

100-295\*

**Environmental Rating** 

Certifications

IEC IP67, IP69K per DIN 40050

\*Depending on lens angle and color

SMBAMS30P

#### Brackets





SMB30SC









FLX18 Flex Arm Mounts See page 28 for more information

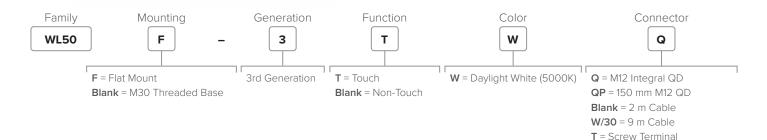


Note: Not all models are shown. Visit bannerengineering.com for other available models.

# WL50-3

#### LED Work Lights

- Designed for desk, work station, enclosure, and small area lighting with optional flex arm mount for adjustable, industrial task lighting
- · Standard or touch models available
- Touch models can be actuated with bare hands or gloves via the integrated capacitive switch on the face of the model
- Flat-mount or 30 mm base-mount models available
- Cabled, guick-disconnect, and terminal connection models available
- High lumen output and low power consumption at less than 3 watts





12 to 30 V DC Housing: Polycarbonate Connector: Nickel-plated QD or PVC-jacketed cable −40 to +50 °C IP65, IP67, and IP69K per DIN 40050-9



(base mount option only)





27



# Flex Arm Lights

#### Bright LED Task Lights

- Designed for desk, work station, enclosure, and small area lighting
- Excellent, even light distribution for close range lighting applications
- WL50 models offer touch and PWM control for on/off and dimming functions
- Touch models can be actuated with bare hands or gloves via the integrated capacitive switch on the face of the light
- Plug and play with 300 mm M12 cable connection directly into PSW-24-1 or other power supply (sold separately)
- 457 mm (18 in) long, vinyl coated flexible arm



Supply Voltage

12 to 30 V DC

Lumens

300

Construction

Certifications

Housing: Polycarbonate Flex Arm: Vinyl Coated Material

Operating Conditions

−40 to +50 °C

**Environmental Rating** 

The illuminated side of the terminal models meets IP65, IP67, and IP69K per DIN 40050-9 when installed in an enclosure. Terminal connection points meet IEC IP00.









Supply Voltage

9 to 30 V DC

20

Lumens

Construction

Housing: Polycarbonate Flex Arm: Vinyl Coated Material

**Operating Conditions** 

−40 to +60 °C

**Environmental Rating** 

Indicator side of the terminal models meet IP67 and IP69K per DIN 40050-9 when installed in an enclosure. Screw connection points meet IEC IP00.

Certifications





Brackets





SMBFLXCLAMPD



SMBFLXMAGR protective magnet cover

Light	Base Connection or Bracket		Control	Models
	<b>1</b>	Magnet	Touch	K-FLX18-50TWDMAGDQP
			No Button	K-FLX18-50WDMAGDQP
			Touch	K-FLX18-50TW12XQP
		1/2-14 NPSM	No Button	K-FLX18-50W12XQP
WL50	1	2 × 1/4-20W 1.375 spacing	Touch	K-FLX18-50TWDXQP
WLSU	94		No Button	K-FLX18-50WDXQP
		Flange	Touch	K-FLX18-50TW12FQP
			No Button	K-FLX18-50W12FQP
		Quick Connect	Touch	K-FLX18-50TWQCXQP
			No Button	K-FLX18-50WQCXQP
	1	Magnet		K-FLX18-18WDMAGDQP

S18	<b></b>	Magnet	No Button	K-FLX18-18WDMAGDQP
		1/2-14 NPSM		K-FLX18-18W12XQP
	الج الج	2 × 1/4-20W 1.375 spacing		K-FLX18-18WDXQP
		Flange		K-FLX18-18W12FQP
		Quick Connect		K-FLX18-18WQCXQP



#### WLC90

#### Heavy-Duty LED Lights

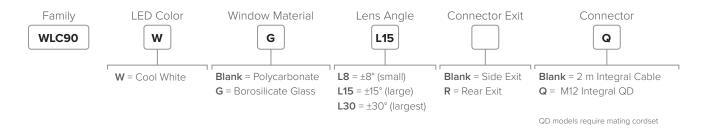
- Oil, chemical and water resistant with IP67, IP68G and IP69K ratings
- · Vast operating temperature range internal monitoring circuit dims the LEDs to a safe level at extreme temperatures
- Three lens choices to suit many application needs
- Pan-and-tilt brackets for versatile mounting to direct the light in any direction
- · Models have three discrete intensity level settings



# WLA-2

#### LED Area Lights

- · High power solid state LED array with cool white, warm white, red, green, blue or yellow light
- Illuminates a large area with an even pattern of light and no shadows
- Designed for area and machine lighting
- Rugged thermoplastic housing rated to IP69K
- Lensed models provide a concentrated, intense light beam
- Cabled and Quick Disconnect models available



Dimmable Accessories page 84



Supply Voltage

Lumens

Construction

Housing: Nickel-plate Aluminum Window: Polycarbonate or

**Operating Conditions** 

**Environmental Rating** 

Certifications

12 to 30 V DC

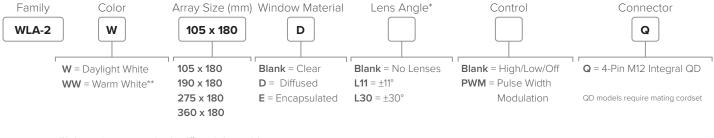
625

Borosilicate Glass

–40 to +70 °C

IP68, IP68G, IP69K per DIN 40050





\*No lens option on encapsulated or diffuse window models  $\,$ \*\*No warm white option on encapsulated models

Dimmable Accessories page 84



12 to 30 V DC

95-2200\*

Housing: PBT

Window: Polycarbonate Nickel or Polyurethane Connector: Nickel-plated Brass

Clear and Diffuse: -40 to +70 °C Encapsulated: -20 to +50 °C

Clear and Diffuse: IP67 and IP69K per DIN 40050-9 Encapsulated: IP67, IP68, and IP69K per DIN 40050-9



Brackets







Magnetic Mount (SMBWLAMAGR Protective cover for magnet sold separately)









LMBWLC90PT Side-Exit Models

SMBAMS70AS

Note: Not all models are shown. Visit bannerengineering.com for other available models.



# Tower Lights Selection Guide

Page	pg. 34	pg. 35	pg. 36	pg. 37	pg. 38
Family Name	TL15	WLS27	TL30	CL50 Pro	TL50 Pro
Segment Diameter (mm)	15	27	30	50	50
Mounting Hole Diameter (mm)	-	-	30	30	30
AC/DC	DC	DC	DC	AC or DC	AC or DC
IP Rating	IP66, IP67, IP68	IP66, IP67, IP69K	IP65	IP67	IP67
Programmable		<b>(⊚PRO ⊗ IO-Link®</b> (see pg. 53)		<b>(⊚PRO</b> <b>⊗ IO</b> -Link®	<b>⟨©PRO ⊗ IO</b> -Link®
Multicolor Options	✓	✓		✓	✓
Audible	✓		✓	✓	✓
Daylight Visible					✓
Wireless					
Modular Construction	✓				







#### **TL15**

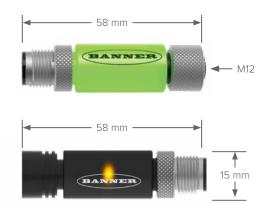
#### In-Line Tower Light Indicators

- Modular 15 mm diameter indicator
- Multiple device kits can be connected together to form a tower light
- Over-molded design for use in harsh environments
- Green, yellow, red, and blue models, each with a specific activation pin
- All signals pass through M12 in-line connection, simplifying installation without
- TL15A offers additional audible capability so users can receive color status and audio alerts locally

#### TL15 In-Line Tower Light Models

Color (Input Active Pin)	Models
Green (Pin 4)	TL15G4Q
Yellow (Pin 1)	TL15Y1Q
Red (Pin 2)	TL15R2Q
Blue (Pin 4)	TL15B4Q
Green (Pin 1)	TL15G1Q
Yellow (Pin 2)	TL15Y2Q
Red (Pin 5)	TL15R5Q

Color (Input Active Pin)	Models
Red (Pin 1)	TL15R1Q
Red (Pin 4)	TL15R4Q
Green (Pin 4), Yellow (Pin 1), Red (Pin 2)	TL15GYRQ
Blue (Pin 4), Green (Pin 1), Yellow (Pin 2), Red (Pin 5)	TL15BGYRQ
Audible, No color (Pin 5)	TL15A5Q
Audible, No color (Pin 1)	TL15A1Q
Audible, No color (Pin 2)	TL15A2Q



Supply Voltage **Bimodal Inputs** 

Vibration and

Mechanical Shock

**Operating Conditions Environmental Rating** 

Certifications

12 or 24 V DC

PNP/NPN

Meets IEC 60068-2-6 requirements Vibration: 10 to 55 Hz, 0.5 mm amplitude, 5 minutes sweep, 30 minutes dwell Meets IEC 60068-2-27 requirements

Shock: 15G 11 ms duration, half sine wave

-40 to +50 °C

IP66, IP67, IP68, NEMA/UL Type 1





#### Brackets



LMBM12MAG Attaches to M12 cordset end



LMBM12SP Attaches to M12 cordset end



LMBS15MAG



LMBS15SP

#### WLS27

#### Segmented LED Strip Lights

- Ultra-bright, multi-segment indicator
- Models with two or three segments available in two different segment sizes
- Rugged, water-resistant IP69K per DIN 40050-9 rating
- Daisy chain power to multiple lights
- Heavy diffused housing option provides softer, more uniform light





#### Brackets



of Cascade

LMBWLS27H

Stainless Steel

Cascade End Light

LMBWLS27T

Stainless Steel



LMBWLS27U

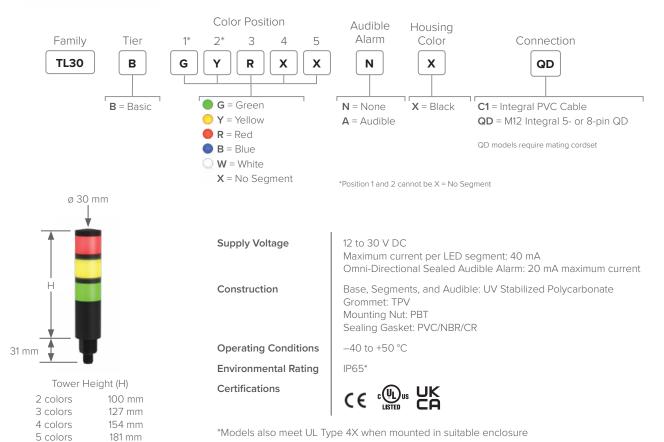
LMBWLS27SP



#### TL30

#### 30 mm Multicolor General Purpose or Audible Tower Lights

- Slim design, affordable, and easy-to-install multi-segment tower lights
- Illuminated segments provide easy-to-see operator guidance and indication of equipment status
- Devices are completely self-contained; no controller needed
- No assembly required; mounting nut and gasket supplied

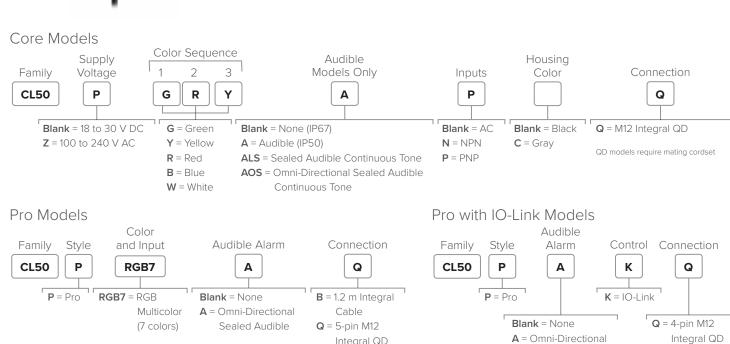




#### CL50 Pro

#### 50 mm Multicolor Column Lights

- Rugged, versatile, and easy-to-install multicolor indicators
- Bright, easy-to-see operator guidance and indication of equipment status
- Programmable using Pro Editor software or dynamically controlled with IO-Link
- Customized indication possibilities, including color, flash patterns, and light intensity
- · Audible models available with sealed, omni-directional audible element









SA-FFB12

Flush Foldable

Bracket





LMB30RA LMBE12RA Sealed Right-Angle Sealed Right-Angle Brackets Brackets (Tube adapter and standoff pipe required)

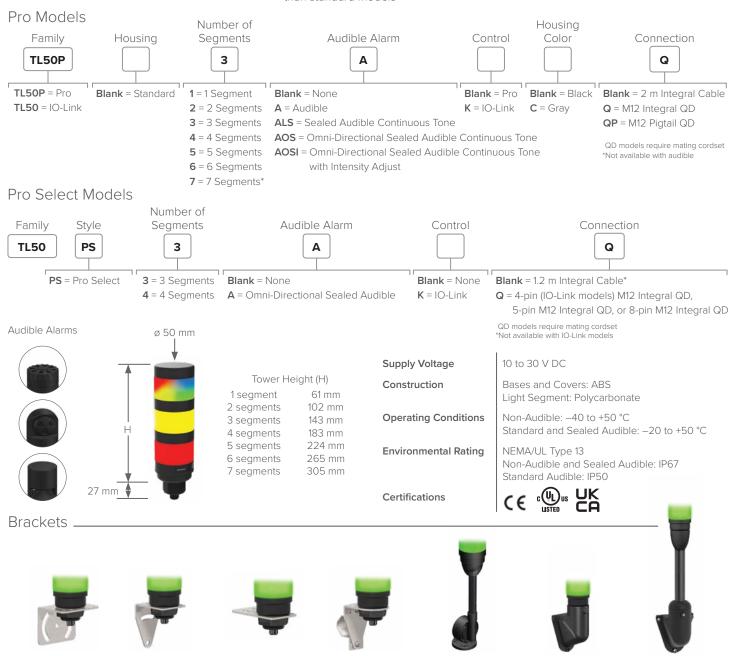
37



#### TL50 Pro

#### 50 mm Programmable Tower Lights

- Up to ten segments (depending on model) for advanced status signaling and high-resolution process details
- · Advanced animations like level, timer, counter, and action mode provide dynamic visual response
- · Parameter and process data options on IO-Link models enable fast and complete control of functionality
- Discrete models are programmable using Banner's Pro Editor software and Pro Converter Cable
- · Audible models available with standard, sealed, or omni-directional audible element
- · Compact and beacon models are shorter and have a more intense display than standard models

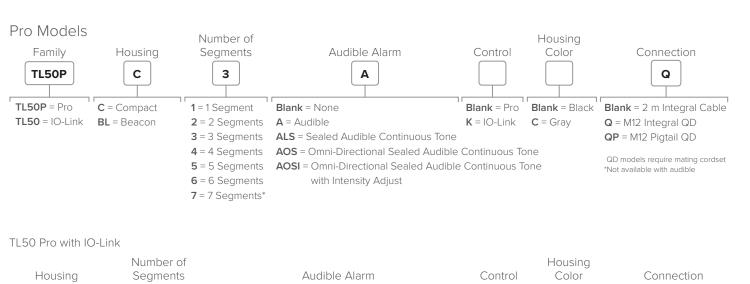


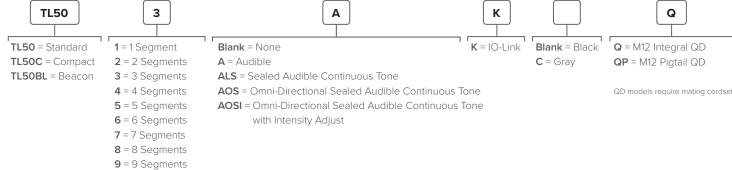


#### TL50C and TL50BL Pro

#### 50 mm Programmable Compact and Beacon Tower Lights

- Up to ten segments (depending on model) for advanced status signaling and high-resolution process details
- · Advanced animations like level, timer, counter, and action mode provide dynamic
- Parameter and process data options on IO-Link models enable fast and complete control of functionality
- Audible models available with standard, sealed, or omni-directional audible element
- Compact and beacon models are shorter and have a more intense display than standard models









Q

SMB30A

SMB30MM

SMB30RAVK

SA-FFB12

Flush Foldable

Bracket

LMB30RA

Sealed Right-Angle

Brackets

LMBE12RA

Sealed Right-Angle Brackets

(Tube adapter and standoff pipe required)

SMBAMS30P



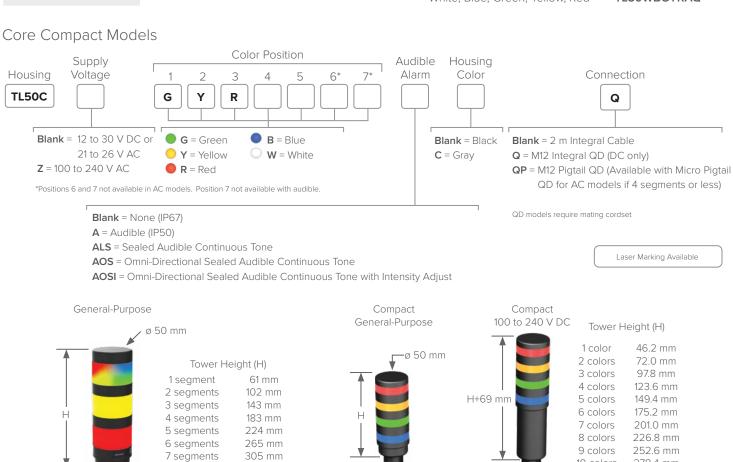
#### TL50 and TL50C Core

50 mm General Purpose and Compact Tower Lights

- Bright, uniform lighted segments with 10 color choices available
- · Available with standard, sealed, or omni-directional audible
- Compact tower lights are half the height of standard TL50 models
- DC models work down to 12 volts, allowing for use in battery-powered mobile equipment

#### Core Models

Inputs	Audible	Connection	LED Colors	Models
			Red	TL50RQ
		4-pin M12 Integral QD	Green, Red	TL50GRQ
	None		Green, Yellow, Red	TL50GYRQ
		5-pin M12 Integral QD	Blue, Green, Yellow, Red	TL50BGYRQ
Discooled (NIDNLex DNID)		8-pin M12 Integral QD	White, Blue, Green, Yellow, Red	TL50WBGYRQ
Bimodal (NPN or PNP)	Standard	4-pin M12 Integral QD	Red	TL50RAQ
			Green, Red	TL50GRAQ
		5-pin M12 Integral QD	Green, Yellow, Red	TL50GYRAQ
		O nin M12 Into aval OD	Blue, Green, Yellow, Red	TL50BGYRAQ
		8-pin M12 Integral QD	White, Blue, Green, Yellow, Red	TL50WBGYRAQ



10 colors

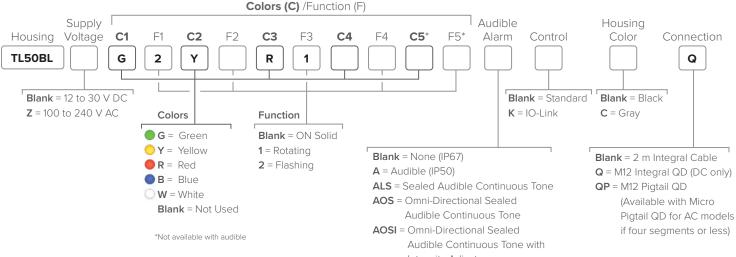
278.4 mm

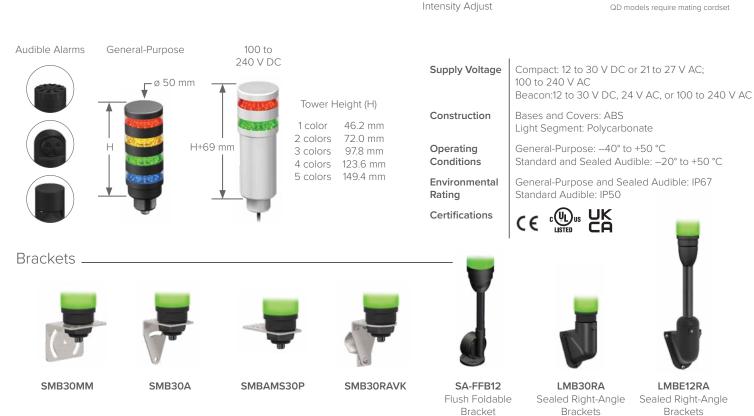


#### TL50BL Core

#### 50 mm Beacon Tower Lights

- Housing is UV stabilized, making it suitable for use in outdoor environments
- Highly visible indication for indoor or outdoor applications
- Compact, stylish design with rotating and flashing options
- · Audible alert: continuous, pulsed, and staccato models available
- Omni-directional audible models provide clear annunciation in the noisiest environments
- Models available with rugged, water-resistant IP67 housing





(Tube adapter and standoff pipe required)

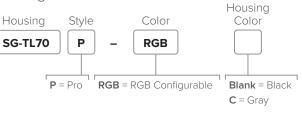


#### TL70 Pro

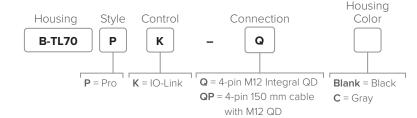
#### 70 mm Programmable Tower Lights

- · Bright, colored LEDs for long-range visibility
- · Light segments appear gray when off to eliminate false indication from ambient light
- Modular design and simple wiring for fast field configuration; preassembled models also available
- Top-mounted audible modules from 75 to 101 dB, including multi-tone and programmable audible models, allow for custom alerts or announcements; all work with the same standard bases
- · Wireless base and segment models quickly enable remote monitoring and control of status lights; unleash IIoT capability
- Match your machine with a choice of black or gray housing

# Pro Segment Models



#### Pro with IO-Link Base Models



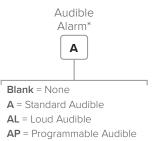
#### Preassembled Pro with IO-Link Models

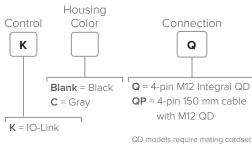


4 = 4 Segments **3** = 3 Segments **6** = 6 Segments

SMBAMS30P

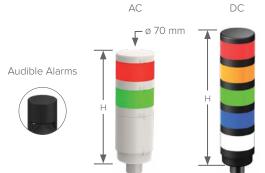
Number of





QD models require mating cordset

\*Not available with six-light models



AC DC 155.6 mm 87.6 mm 1 color 2 colors 205.3 mm 137.3 mm 255.0 mm 187.0 mm 3 colors 236.7 mm 4 colors 304.7 mm 354.4 mm 286.4 mm 5 colors 404.1 mm 336.1 mm 6 colors

Tower Height (H)

Supply Voltage

Construction **Operating Conditions Environmental Rating** 

Polycarbonate −40 to +50 °C IP65 Certifications

CE LISTED CA

12 to 30 V DC or

100 to 240 V AC





Brackets



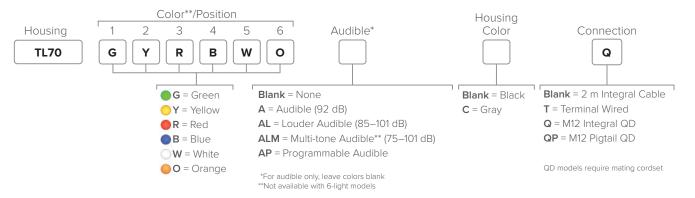
standoff pipe required)

## TL70 Core

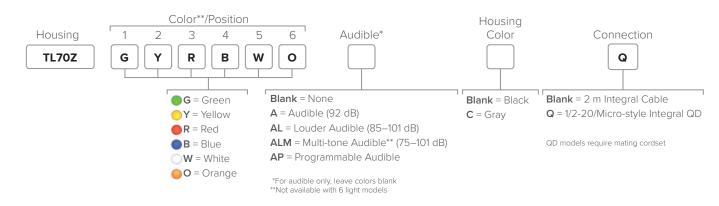
#### 70 mm General Purpose Tower Lights

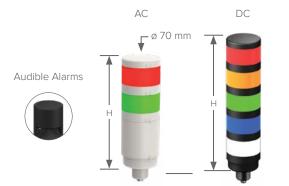
- · Bright, colored LEDs for long-range visibility
- Light segments appear gray when off to eliminate false indication from ambient light
- Modular design and simple wiring for fast field configuration; preassembled models also available
- Top-mounted audible modules from 75 to 101 dB, including multi-tone and programmable audible models, allow for custom alerts or announcements; all work with the same standard bases
- · Wireless base and segment models quickly enable remote monitoring and control of status lights; unleash IIoT capability
- Match your machine with a choice of black or gray housing

#### Preassembled Core Models



#### Preassembled Core AC Models





Tower Height (H) DC AC 155.6 mm 87.6 mm 1 color 2 colors 205.3 mm 137.3 mm 255.0 mm 1870 mm 3 colors 304.7 mm 236.7 mm 4 colors 5 colors 354.4 mm 286.4 mm 4041 mm 3361 mm 6 colors

Supply Voltage

Construction **Operating Conditions** 

Certifications

**Environmental Rating** 

12 to 30 V DC or 100 to 240 V AC Polycarbonate

-40 to +50 °C

IP65







Brackets

SMB30MM

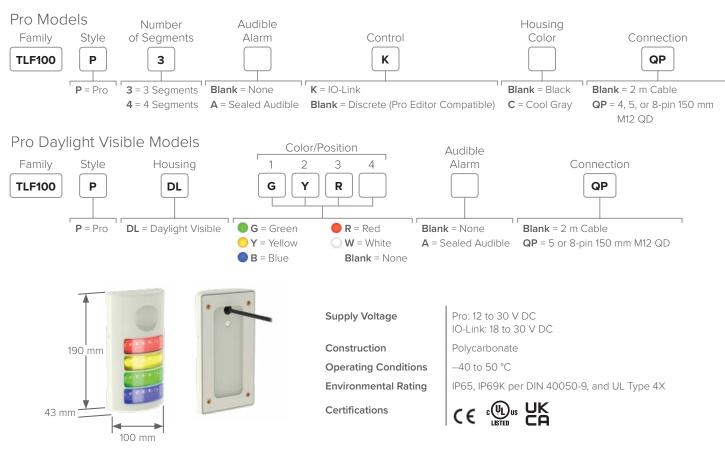
SMB30A



#### TLF100 Pro

#### Flush Mount Tower Lights

- Rugged, versatile, and easy-to-install three and four-segment tower lights
- Flush mounting allows for easy integration to machines and equipment
- Illuminated segments provide easy-to-see operator guidance and indication of equipment status
- Audible models available with sealed audible element, 14 selectable audible tones, and audible intensity control
- IO-Link gives full access to color, flashing, and dimming settings, as well as advanced animations like run and level modes, which provide dynamic response to changing machine conditions
- Bright, single-color LEDs provide highly visible indication for indoor or outdoor applications



Brackets .



SMBTLF100F Mounted Vertically



SMBTLF100F Mounted Horizontally











# Indicators Selection Guide









#### S15L

#### In-Line Sensor Status Indicators

- Two-color indicators available with green to show power and yellow or red to mimic the output status
- Mount directly on a sensor for 360-degree visibility of power and status
- Highly visible body allows workers to identify and troubleshoot problems faster
- Over-molded design is reliable and rugged to withstand harsh industrial environments
- Models available with PNP or NPN inputs

Power ON (Color 1)	Input Active (Color 2)	Input Type	Connection	Model
	Green	PNP	4-pin Male/Female M12 quick disconnect	S15LGYPQ
Croon		NPN		S15LGYNQ
Green		PNP		S15LGRPQ
F		NPN		S15LGRNQ
Red		PNP		S15LRGPQ
Yellow		PINP		S15LYGPQ



Supply Voltage **Bimodal Inputs** Vibration and

Mechanical Shock

**Operating Conditions Environmental Rating** Certifications

10 to 30 V DC

PNP/NPN

Meets IEC 60068-2-6 requirements Vibration: 10 to 55 Hz, 0.5 mm amplitude, 5 minutes sweep, 30 minutes dwell Meets IEC 60068-2-27 requirements Shock: 15G 11 ms duration, half sine wave

-40 to +50 °C

IP66, IP67, IP68, NEMA/UL Type 1





Brackets



LMBM12MAG Attaches to M12 cordset end



LMBM12SP Attaches to M12 cordset end



LMBS15MAG



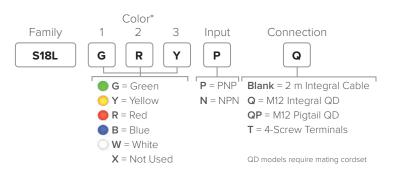
LMBS15SP

#### S18L

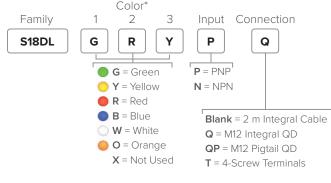
#### Barrel-Mount Indicators

- Gasketed face flange for sealing to enclosures
- Daylight visible models are also available for areas with high levels of ambient light
- M12 connector models available for plug-and-play indication
- 10 to 30 V DC operating range allows for use in battery-powered mobile
- Terminal-wired models available to simplify panel wiring
- Up to three independent colors in one unit
- Translucent face appears gray when off to avoid false indication
- Multiple colors available, including green, red, yellow, blue, white, orange

#### Standard Models



#### Daylight Visible Models



\*Single-color models are available and should be ordered as PNP, but can be wired for either PNP or NPN input

Laser Marking Available General Purpose: 10 to 30 V DC



Supply Voltage Construction

**Operating Conditions** 

**Environmental Rating** Certifications

High-Intensity: 9 to 30 V DC

QD models require mating cordset

Housing: UV stabilized polycarbonate Mounting Nut: PBT Sealing Washer: Nitrile

General Purpose: -40 to +50 °C Other: -40 to +60 °C

IP67, IP69K, per DIN 40050













SMBC18 Use with S18L on 28 mm Pipe



Use with S18L





SMBAMS18RA Use with S18L





#### S22L

#### **Barrel Indicators**

- Gasketed face flange for sealing to enclosures
- Daylight visible models are also available for areas with high levels of ambient light
- M12 connector models available for plug-and-play indication
- 10 to 30 V DC operating range allows for use in battery-powered mobile
- Terminal-wired models available to simplify panel wiring
- · Up to three independent colors in one unit
- Translucent face appears gray when off to avoid false indication
- Multiple colors available, including green, red, yellow, blue, white, orange

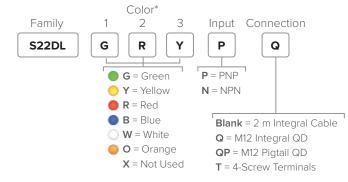
#### Standard Models

#### Family Input Connection 3 G Υ Р Q **S22L** R **G** = Green $\mathbf{P} = PNP$ Blank = 2 m Integral Cable OY = Yellow N = NPN Q = M12 Integral QD R = Red QP = M12 Pigtail QD **B** = Blue T = 4-Screw Terminals ○ W = White X = Not Used QD models require mating cordset

\*Single-color models are available and should be ordered as PNP, but can be wired for either PNP or NPN input

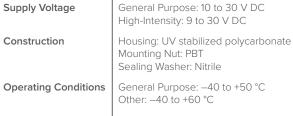


#### Daylight Visible Models



QD models require mating cordset

Laser Marking Available



**Environmental Rating** Certifications

IP67, IP69K, per DIN 40050

#### Brackets



# S22 Pro

#### Flush Mount Programmable Indicators

- Bright, even indication in up to fourteen colors
- Programmable using Banner Pro Editor software and Pro Converter Cable
- Seven color models have flashing input control
- Models constructed from FDA-grade materials available for use in food and beverage applications
- Terminal connector options for fast, economical installation in panels
- Flush design matches S22 Touch buttons, see page 66



\*7 colors = Green, Yellow, Red, Blue, White, Cyan, Magenta with flash input

14 colors = Above colors, plus, Orange, Sky Blue, Violet and Rose

Laser Marking Available



Supply Voltage

Certifications

Construction

Housing: Polycarbonate or FDA grade plastic, depending on model Translucent dome: Polycarbonate or FDA grade plastic, depending on model Mounting Nut: PBT or FDA food grade plastic

−40 to +50 °C

10 to 30 V DC

Standard: UL Type 4x, 13 FDA Grade: UL Type 4x Cable, Pigtail, QD models: IP66, IP67, IP69K per DIN 40050-9

Terminal: IP66, IP69K per DIN 40050-9 on front only







Brackets

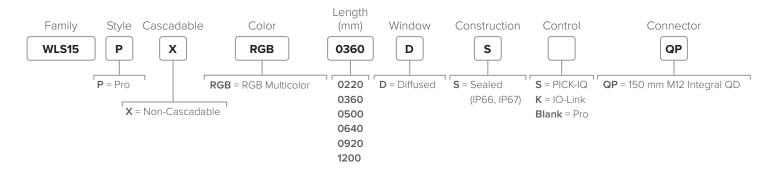


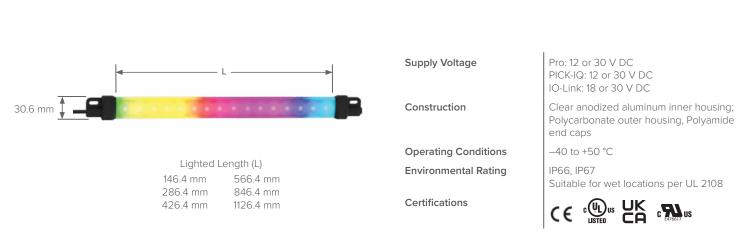


#### WLS15 Pro

#### LED Strip Lights with Pro Editor, IO-Link, or PICK-IQ

- Configurable, dynamic indication in a slim, sealed LED strip light
- 19 color options plus animations and direct sensor interface give limitless options to convey status, resulting in clear communication and improved productivity
- Available in six lengths: 220, 360, 500, 640, 920, 1200 mm
- Provide operator guidance for assembly and manufacturing processes
- Pro Editor compatibility allows for field configuration of modes, colors, animations, and more on discrete (controlled) models
- IO-Link and serial (RS-485) PICK-IQ Models are available with even more capabilities such as individual LED control and the ability to divide the light into 10 total segments





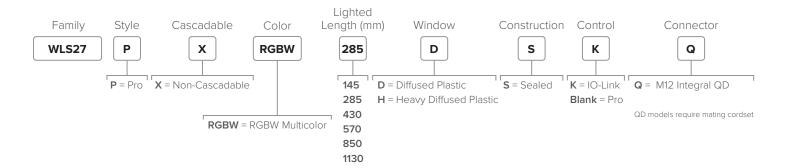
Brackets \_

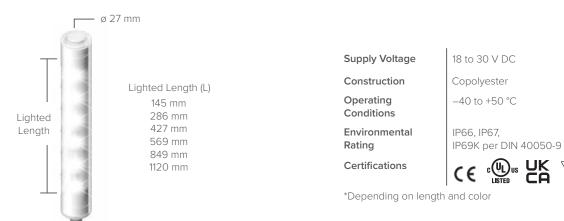


#### WLS27 Pro

#### Programmable LED Strip Lights

- Programmable models with RGBW LEDs for use in indication, illumination and inspection applications
- Banner's Pro Editor software allows users to program device status, colors, and animations for control via three discrete outputs
- IO-Link helps reduce costs, increase process efficiency, and improves machine availability
- Offers illumination and multiple indication capabilities in a single device with EZ-STATUS
- Use its bright light for illumination or colors for broad status information
- Bright white light for efficiency, quality, and safety during normal operation
- Heavy diffuse window for smooth glow and close-range indication

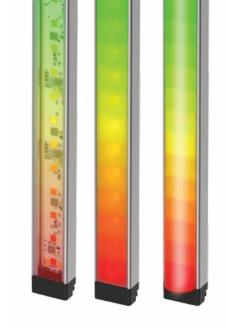




Brackets



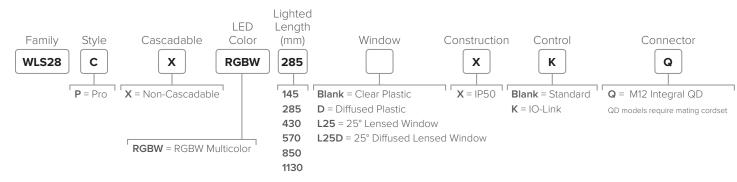
LMBWLS27SP

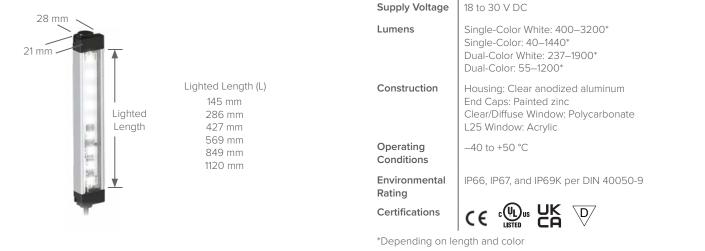


#### WLS28 Pro

#### Programmable LED Strip Lights

- 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
- IO-Link gives full access to individual LED control, color, flashing, intensity, and animation settings, as well as advanced operating modes for displaying distance, count, time, and position
- Lensed models or choice of clear or diffuse window
- Banner's Pro Editor software allows users to program device status, colors, and animations for control via three discrete outputs
- Offers illumination and multiple indication capabilities in a single device with  $\ensuremath{\mathsf{EZ}\text{-}\mathsf{STATUS}}$





Brackets



SMBWLS28RA
Top Mount
(included)



SMBWLS28SM Side Mount



SMBWLSMAG
Magnetic Mount
Protective cover for magnet sold
separately (SMBWLSMAGR).



SMBWLS28SP Snap Mount











### K30 Pro

#### 30 mm Programmable Multicolor Indicators

- Bright, even indication in 7 standard colors, with additional color and animation options available with the Pro Editor
- Polycarbonate housing protects against impact and withstands high-pressure, high-temperature washdown to ensure reliable performance in challenging environments
- Simple wiring plan enables quick installation and allows users to consolidate controller outputs
- K30 Pro devices with PICK-IQ® and IO-Link give full access to color, flashing, rotating, and dimming settings as well as advanced animations such as dynamic sequence mode and LED control
- PICK-IQ brings faster response speed and simplified programming to Modbus RTU communication

#### Pro Models



QD models require mating cordset



Supply Voltage Construction Operating Conditions **Environmental Rating** Certifications

10 to 30 V DC Polycarbonate -40 to +50 °C IP66, IP67, IP69K

Brackets





SMB22FVK



SMB22RAVK



SMBAMS22P





LMB22LPC

#### Pro with PICK-IQ or IO-Link Models



QD models require mating cordset

#### Core Models

Number of Colors	Colors	Input	Connection	Models
	Green			K30LGXXPQ
1	Red	PNP		K30LXRXPQ
	Yellow			K30LXXYPQ
	Crear Dad	PNP		K30LGRXPQ
	Green, Red	NPN	4-pin M12 Integral QD	K30LGRXNQ
2	Green, Yellow	PNP		K30LGXYPQ
2		NPN		K30LGXYNQ
	Dad Vallau	PNP		K30LXRYPQ
	Red, Yellow	NPN		K30LXRYNQ
2	Croon Rad Vallayy	PNP		K30LGRYPQ
3	Green, Red Yellow	NPN		K30LGRYNQ

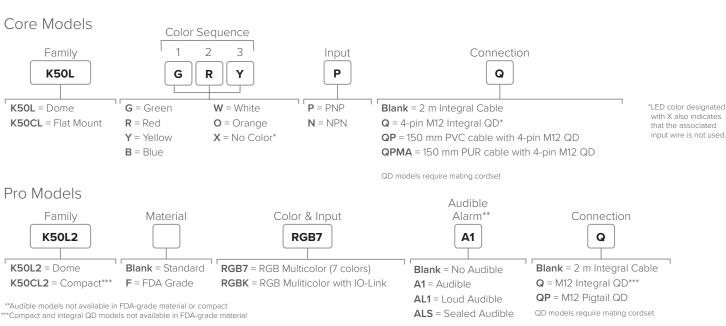
bannerengineering.com



#### K50 Pro

#### 50 mm Programmable Multicolor Indicators

- Bright, uniform indicator light
- Seven default colors in one device (Green, Red, Yellow, Blue, White, Cyan, Magenta)
- Programmable using Banner's Pro Editor software and Pro Converter Cable
- Compact models available for lower profile applications
- · Bimodal inputs (PNP/NPN), depending on source wiring
- · Models with integrated audible alarm available
- Variety of connector options
- Models constructed from FDA-grade materials available





Brackets



















SMB30SC

SMB30FA LMBE12RA35 LMBE12RA45

#### K50 Pro Beacon

#### 50 mm Programmable Multicolor Indicators

- Bright indicator with individually visible LEDs
- Intense levels of light output for areas with high ambient light including outdoor environments
- Viewable around entire perimeter
- Seven default colors in one device (Green, Red, Yellow, Blue, White, Cyan, Magenta)
- Programmable using Banner's Pro Editor software and Pro Converter Cable
- Bimodal inputs (PNP/NPN), depending on source wiring
- IO-Link control allows access to full color, flashing, and dimming controls as well as advanced animations for millions of color possibilities
- PICK-IQ® models provide faster response speed and simplified programming to Modbus RTU communication
- · Variety of connector options

#### Pro Models



QD models require mating cordset

#### Pro with PICK-IQ Models





Supply Voltage Construction

Operating Conditions Environmental Rating

RGB7: 10 to 30 V DC RGBK: 24 V DC ±25% Polycarbonate

-40 to +50 °C

IP67, IP69K per DIN 40050-9\*

\*Models also meet UL Type 4X and UL Type 13 when mounted in suitable enclosure. Cabled models also meet IP69K per DIN 40050-9 if the cable and cable entrance are protected from high-pressure spray.

Brackets















SMB30FA





SMB30A

SMB30FVK SMB30RAVK SMBAMS30P SMBAMS30RA SMB30MM

SMB30SC

LMBE12RA35 LMBE12RA45



#### K70 Core

#### 70 mm General Purpose Indicators

- Bright, uniform indicator light
- All models have flashing input control
- Models are available with up to five colors in one device

Number of Colors	Colors	Input	Connection	Models
	Green			K70LGPQ
	Red			K70LRPQ
	Yellow	PNP		K70LYPQ
	Blue			K70LBPQ
1	White			K70LWPQ
I	Green			K70LGNQ
	Red		Fig. M12 late aval OD	K70LRNQ
	Yellow	NPN	5-pin M12 Integral QD	K70LYNQ
	Blue			K70LBNQ
	White			K70LWNQ
2	Croon Dod	PNP		K70LGRPQ
Ζ	Green, Red	NPN		K70LGRNQ
3	Croon Dod Vollow	PNP		K70LGYRPQ
3	Green, Red, Yellow	NPN		K70LGYRNQ
4	Plus Croon Vollow Pod	PNP		K70LBGYRPQ
4	Blue, Green, Yellow, Red	NPN	- 9 nin M12 Intogral OD	K70LBGYRNQ
E	White Plue Cross Vollow Pad	PNP	8-pin M12 Integral QD	K70LWBGYRPQ
5	White, Blue, Green, Yellow, Red	NPN		K70LWBGYRNQ



Supply Voltage Construction **Operating Conditions Environmental Rating** Certifications

12 to 30 V DC Polycarbonate –40 to +50 °C

CE LISTED CA

Brackets



SMB30A





SMB30FVK SMB30RAVK SMBAMS30P SMBAMS30RA SMB30MM

















#### K90 Pro

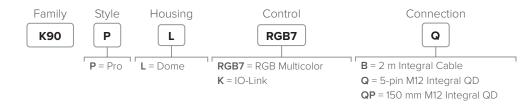
#### 90 mm Programmable Multicolor Indicators

- Large, bright, uniform indicator light
- Seven default colors in one device (Green, Red, Yellow, Blue, White, Cyan, Magenta)
- Programmable using Banner's Pro Editor software and Pro Converter Cable
- Bimodal inputs (PNP/NPN), depending on source wiring
- IO-Link models provide access to full color, flashing, and dimming controls as well as advanced animations for millions of color possibilities
- Translucent polycarbonate dome
- Variety of connector options

#### Core Models

Number of Colors	Colors	Input	Connection	Models
	Green, Red	PNP		K90LGRPQ
Ζ		NPN	E nin M12 Intogral OD	K90LGRNQ
2	Green, Red, Yellow	PNP	5-pin M12 Integral QD	K90LGYRPQ
3		NPN		K90LGYRNQ
5	White, Blue, Green, Yellow, Red	PNP	8-pin M12 Integral QD	K90LWBGYRPQ
		NPN		K90LWBGYRNQ

#### Pro Models





Core: 12 to 30 V DC Supply Voltage Pro: 10 to 30 V DC IO-Link: 18 to 30 V DC Polycarbonate –40 to +50 °C IP67, UL Type 4X, UL Type 13 CE CULUS UK

Brackets



















SMB30A

SMB30FVK SMB30RAVK SMBAMS30P SMBAMS30RA SMB30MM



SMB30SC

SMB30FA LMBE12RA35 LMBE12RA45

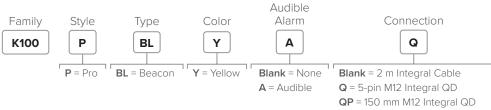


## K100 Pro Daylight Visible Beacon

#### High Daylight Visibility, Programmable Multicolor Beacons

- Industrial beacon delivers bright, configurable indication for OEMs and users that need visible status information
- Daylight Visible models provide bright light, even in direct sunlight
- Rugged construction provides years of uninterrupted operation
- Multiple colors in one device
- Programmable using Banner's Pro Editor software and Pro Converter Cable (DC models)
- Rugged UV-stabilized polycarbonate base and window
- Excellent for indoor and outdoor applications

#### Pro Daylight Visible Single Color Models





Brackets



LMB36RA

#### con

# KIGO

#### K100 Pro Indicator Beacon

#### Programmable Multicolor Indicators

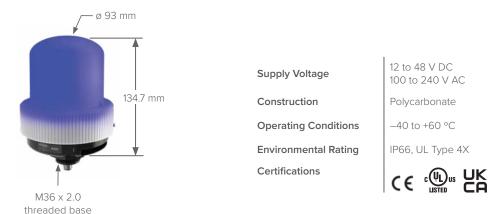
- Industrial beacon delivers bright, configurable indication for OEMs and users that need visible status information
- Rugged construction provides years of uninterrupted operation
- Multiple colors in one device
- Offers fourteen colors and is programmable using Banner's Pro Editor software and Pro Converter Cable (DC models)

QD models require mating cordset

- Rugged UV-stabilized polycarbonate base and window
- Excellent for indoor applications

#### Pro Multicolor Models





#### Brackets



LMB36RA



M36 x 2.0 threaded base

# Touch Button and Pick-to-Light Selection Guide

Page	pg. 66	pg. 68	pg. 69
Family Name	S22 Pro Touch	K30 Pro Touch	K50 Pro Optical
Indicator Diameter (mm)	22	30	50
Mounting Hole Diameter (mm)	22	30	30
AC/DC	DC	DC	DC
IP Rating	IP69	IP67, IP69K	IP67, IP69K
Programmable	(©PRO	<b>⟨©PRO ② IO-Link® ③</b> PICK- <b>IQ®</b>	<b>(©PRO ● IO-Link® ●</b> PICK-IQ®
Multicolor Options	✓	✓	✓
Audible			







#### S22 Pro Touch

#### Programmable Flush Mount Touch Button Indicators

- Programmable using Banner Pro Editor software and Pro Converter Cable
- · Resistance to false triggering by water spray, detergents, oils, and other foreign materials
- Rugged, cost effective, and easy to install
- Up to 7 independent colors in one unit
- · Ergonomically designed to eliminate hand, wrist, and arm stresses associated with repeated switch operation; require no physical force to operate
- Can be actuated with bare hands or gloves
- Terminal connection models available for panel wiring applications
- · Bimodal inputs and outputs (PNP/NPN), depending on source wiring







Supply Voltage 10 to 30 V DC

Construction

Standard: Polycarbonate FDA: FDA-grade Copolyester

**Operating Conditions** 

−40 to +50 °C

Environmental Rating

Standard: IP66, IP67, IP69K per DIN 40050-9\* Terminal: Screw connection points meet IP00 FDA: IP66, IP67, IP69K per DIN 40050-9

Certifications





\*Indicator side of terminal models also meet IP69K per DIN 40050-9 when mounted in suitable enclosure. Cabled Models also meet IP69K per DIN 40050-9 if the cable and cable entrance are protected from high-pressure spray.

Brackets

SMB22A





SMB22FVK





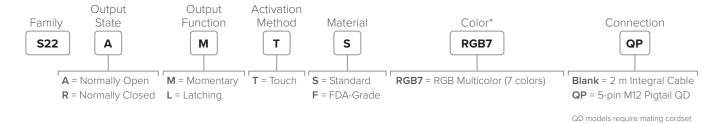
SMBAMS22P





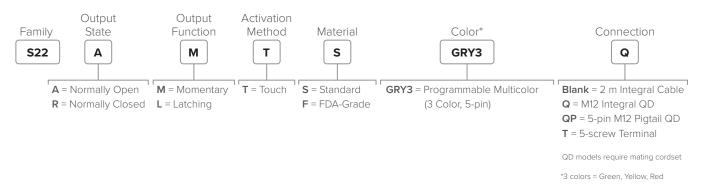
LMB22LPC

#### **RGB7** Multicolor Models

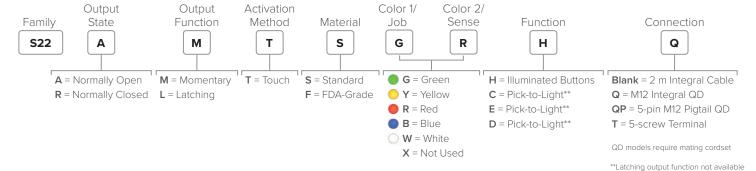


\*7 colors = Green, Yellow, Red, Blue, White. Cyan, Magenta

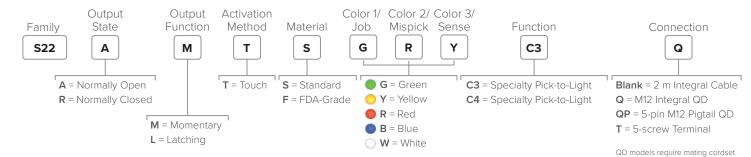
#### **GRY3 Multicolor Models**



#### One- or Two-Color/Function Models



#### One-, Two-, or Three-Color/Function Models



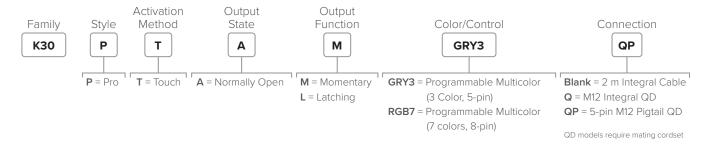


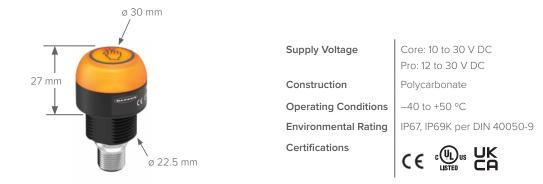
#### K30 Pro Touch

#### 30 mm Programmable Multicolor Touch Button Indicators

- Excellent immunity to false triggering by water spray, detergents, oils, and other foreign materials
- Programmable using Banner's Pro Editor software and Pro Converter Cable
- Up to 7 colors in one unit
- Devices are completely self-contained—no controller needed
- Ergonomically designed to eliminate hand, wrist, and arm stresses associated with repeated switch operation; no physical force required to operate
- Can be actuated with bare hands or gloves; adjustable sensitivity using Pro Editor software

#### Pro Touch Models

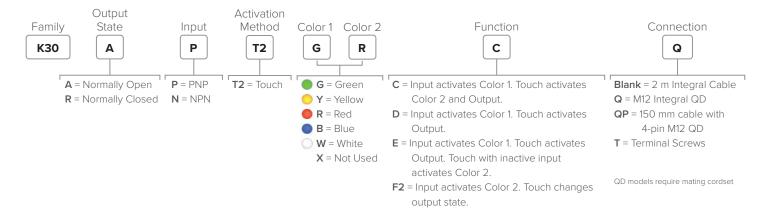




#### Brackets



#### Core Touch Models



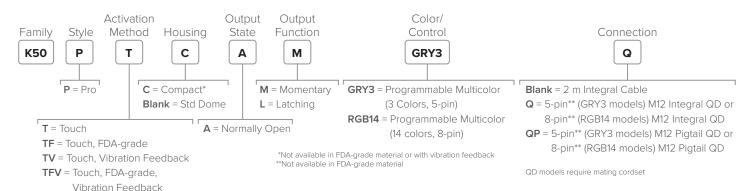


#### K50 Pro Touch

#### 50 mm Programmable Multicolor Touch Button Indicators

- Bright LED indicators combined with touch-activated switching capabilities
- Advanced touch technology allows for high immunity to water while still working with gloves
- Models made with FDA-approved materials are available for use in the food and beverage industries
- Up to fourteen color variations in one device (Green, Red, Yellow, Blue, White, Cyan, Magenta, Orange, Amber, Lime Green, Spring Green, Sky Blue, Violet, and Rose)
- Mechanical button models available for classic, tactile feedback

#### Pro Touch Models





\*Cabled models also meet DIN IP69K if the cable and cable entrance are protected from high-pressure spray

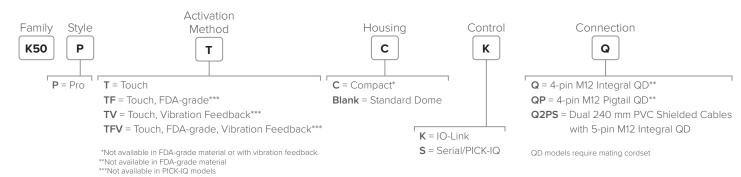
#### Brackets



#### Core Touch Models

Colors	Function	Output	Connection	Models
Green	Input activates Color 1. Touch activates Output.			K50APT2GXDQ
Green, Red	Input activates Color 1. Touch activates Color 2 and Output.	PNP, N.O.	4-pin M12 Integral QD	K50APT2GRCQ
	Input activates Color 1. Touch activates Output. Touch with inactive input activates Color 2.			K50APT2GREQ
	Power activates Color 1. Touch changes bipolar output state and activates Color 2. Latch and momentary options.	PNP & NPN	5-pin M12 Integral QD	K50ALBT2GRHQ
Green, Red, Yellow	Three inputs activate three colors. Color 3 overrides Colors 1 and 2, and Color 2 overrides Color 1. Touch changes output state.	PNP, N.O.	8-pin M12 Integral QD	K50APT2GRYF2Q

#### Pro Touch with IO-Link or PICK-IQ Models



#### Core Optical Models

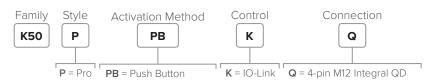
Colors	Function	Sensing Mode/LED	Range	Output	Connection	Models
Green	Input activates Color 1. Presence of hand activates output.		50 mm cutoff		4-pin M12 Integral QD	K50APFF50GXDQ
	Input activates Color 1. Presence of hand activates output and overrides job light.	Fixed field, infrared, 880 nm		PNP, N.O.		K50APFF100GRCQ
Green, Red	Input activates Color 1. Presence of hand activates output. Presence of hand while input is inactive causes unit to light red.	000 11111	100 mm cutoff		integral QD	K50APFF100GREQ

#### Pro Optical Models



\*Cutoff distance will vary from specified range based on target and tolerances.

#### Pro Push Button with IO-Link Models



QD models require mating cordset

BANNER

QD models require mating cordset

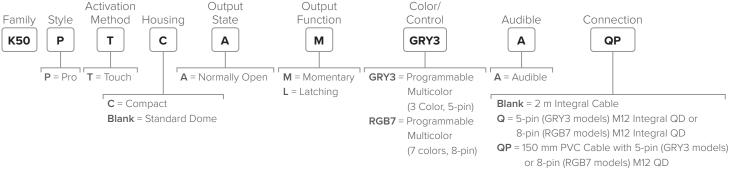


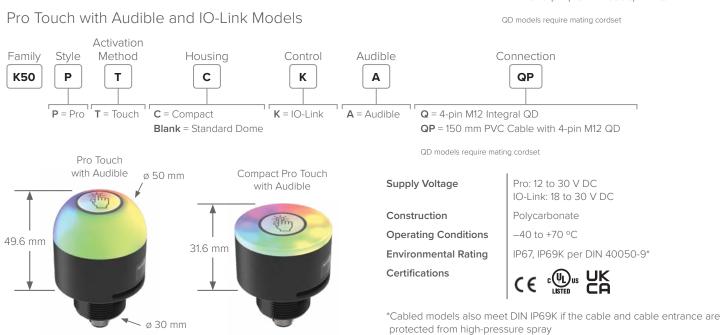
#### K50 Pro Touch with Audible

#### 50 mm Programmable Multicolor Touch Button Indicators

- Integral audible alarm has fourteen tones with customization and intensity control
- Excellent immunity to false triggering by water spray, detergents, oils, and other foreign materials
- Integral audible can be used as standalone indicator or as an input to touch conditions
- 14 different tones available including intensity and input control
- Can be actuated with bare hands or gloves
- Compact models available for lower profile applications
- Configurable input/output with Pro Editor software

#### Pro Touch with Audible Models





Brackets



















SMB30A SMB30FVK SMB30RAVK SMBAMS30P SMBAMS30RA SMB30MM

SMB30SC

SMB30FA

LMBE12RA35 LMBE12RA45

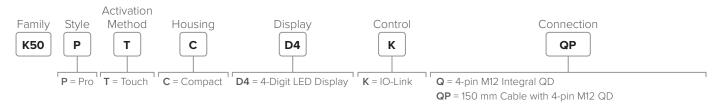


#### K50 Pro Touch with Display

#### 50 mm Advanced Programmable Touch Button Indicators

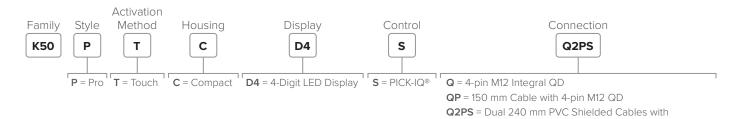
- 4-digit, 7-segment LED display
- Two independent touch areas
- Clearly communicate status and receive feedback, improving throughput and productivity
- Ideal interface device for pick-to-light, condition monitoring, and general operator interaction in industrial environments
- Excellent immunity to false triggering by water spray, oils, and other foreign materials
- Can be actuated with bare hands or gloves

#### **IO-Link Models**



QD models require mating cordset

#### PICK-IQ Models



QD models require mating cordset



Supply Voltage

Construction

Operating Conditions
Environmental Rating

Certifications

Pro: 10 to 30 V DC IO-Link: 18 to 30 V DC

5-pin M12 Integral QDs

Polycarbonate

-40 to +50 °C IP67, IP69K per DIN 40050-9\*

CE CULUS UK

 $^*\mbox{Cabled}$  models also meet DIN IP69K if the cable and cable entrance are protected from high-pressure spray

#### Brackets



















SMB30A SMB30FVK SMB30RAVK SMBAMS30P SMBAMS30RA SMB30MM SMB30SC SMB30FA LMBE12RA35 LMBE12RA45



72



#### K70 Pro Touch with Audible

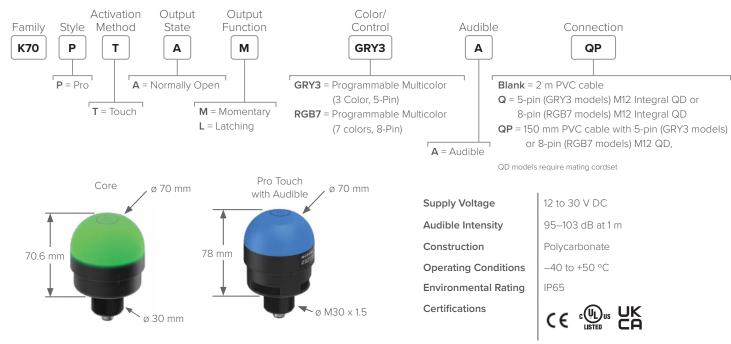
#### 70 mm Programmable Multicolor Touch Button Indicators

- Integrated audible alarm provides additional indication and feedback for enhanced operator experience and improved productivity
- Integral audible alarm can be toggled on and off discretely and as a function of touch logic
- 12 different tones available, including intensity and input control
- Programmable using Banner's Pro Editor software and Pro Converter Cable
- · Capacitive touch technology requires no physical force to operate
- Excellent immunity to false triggering by water spray, detergents, oils, and other foreign materials

#### Core Touch Models

Colors	Function	Output	Connection	Models
Green (Activated)	Momentary	PNP & NPN		K70ABT2XGHQ
Green	Job light is on while input is active. Touch activates output.			K70APT2GXDQ
Croop Dod	Joh light is groon while ish input is active. Touch activates output		4-pin M12 Integral QD	K70APT2GRCQ
Green, Red	Job light is green while job input is active. Touch activates output.	PNP		K70APT2GREQ
	Multipurpose			K70APT2GRYF2Q
Green, Red, Yellow	Job light always on with job input until touched. Touch activates output and overrides job light with sense light. Touch with inactive job input activates mispick light and activates output.			K70APT2GRYC3Q

#### Pro Touch Models



#### Brackets



SMB30LP



SMB30A



SMB30FVK



SMB30RAVK



SMBAMS30P



SMB30MM



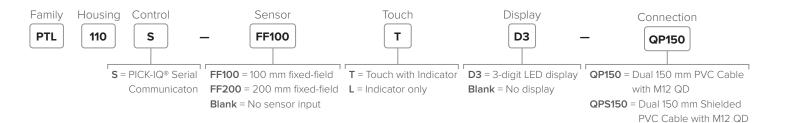
SSA-MBK-EEC1

PTL110

#### Scalable, Versatile Pick-To-Light Devices



- Translucent face appears gray when off to avoid false indication
- M12 connector models for plug and play indication
- Wide 180° field of view
- 3-digit, 7-segment LED display
- · Photoelectric and touch sensing options
- RS-485 Modbus communication featuring PICK-IQ® technology for faster response speed





Supply Voltage 10 to 30 V DC; 1.65 Watts max. power draw

Communication

PICK-IQ® is compatible with Modbus RS-485

DXM700 converts Modbus RTU to Modbus TCP/IP or Ethernet/IP

**Connected Devices** 

64 or more under standard usage with a single power supply >200 possible depending on power supply, cable length and

device usage

Construction Housing: ABS

Indicator: Polycarbonate
Display Lens: Acrylic (if present)

Operating Conditions
Environmental Rating

Certifications

IP54

−40 to +50 °C



Brackets



LMBPTL110C For 28 mm Tubular Racking



LMBPTL110F
For Slotted Extrusion
and Flat Rail Mounting



LMBPTL110A45
For Slotted Extrusion
and Flat Rail Mounting



# Connectivity

# Accessories

#### 4-Pin M12 (Voltage: 250 V DC/AC, Current: 4 A)

	Length Strain		Straight	Right-Angle	P	inout
		1 m	MQDC-403	_		
		2 m	MQDC-406	MQDC-406RA		
ĺ		3 m	MQDC-410	_	Female	
	45: 5 1 05	5 m	MQDC-415	MQDC-415RA	1- (2)-2	1 = Brown 2 = White
	4-Pin Female QD to Flying Leads	9 m	MQDC-430	MQDC-430RA	4 600	2 = White 3 = Blue
	to riying Ledds	15 m	MQDC-450	MQDC-450RA	4-	4 = Black
		18 m	MQDC-460	MQDC-460RA	Co.	. Block
		21 m	MQDC-470	MQDC-470RA		
		30 m	MQDC-4100	MQDC-4100RA	22 AWG	Cable ø – 5.2 mm
		Length	Straight/Straight (female/male)	Straight/Right-Angle (female/male)	Р	rinout
		0.3 m	MQDEC-401SS	MQDEC-401RS	Female	
		0.6 m	MQDEC-402SS	_	1-20-2	
		0.9 m	MQDEC-403SS	MQDEC-403RS	4-03-3	
		0.9 m 1.8 m	MQDEC-403SS MQDEC-406SS	MQDEC-403RS MQDEC-406RS	4-09-3	1= Brown
	48: 8 11 5 1 1				4	1 = Brown 2 = White
	4-Pin Double-Ended	1.8 m	MQDEC-406SS		Male	
	4-Pin Double-Ended	1.8 m	MQDEC-406SS MQDEC-410SS	MQDEC-406RS		2 = White
	4-Pin Double-Ended	1.8 m 3.0 m 3.6 m	MQDEC-406SS MQDEC-410SS MQDEC-412SS	MQDEC-406RS	Male	2 = White 3 = Blue
	4-Pin Double-Ended	1.8 m 3.0 m 3.6 m 4.5 m	MQDEC-406SS MQDEC-410SS MQDEC-412SS MQDEC-415SS	MQDEC-406RS  — MQDEC-412RS —	Male	2 = White 3 = Blue

#### 5-Pin M12 Waltaga: 60 V DC/AC Current: 4 AV

5-PIN WI12 (Voltage: 60 V DC/AC, Current: 4 A)							
	Length	Straight	Right-Angle	P	inout		
	0.9 m	MQDC1-503	_				
	2 m	MQDC1-506	MQDC1-506RA	Female 2	1 = Brown 2 = White		
5-Pin Female QD to Flying Leads	5 m	MQDC1-515	MQDC1-515RA	1 (600) 3	2 – Wille 3 = Blue		
	9 m	MQDC1-530	MQDC1-530RA	4 5	4 = Black		
	18 m	MQDC1-560	-	W	5 = Gray		
	30 m	MQDC1-5100	_	22 AWG	Cable ø – 5.6 mm		
	Length	Straight/Straight (female/male)	Straight/Right-Angle	Pi	inout		
	0.3 m	MQDEC-501SS	_	Female 2			
	1 m	MQDEC-503SS	_	4 3	1 = Brown		
5-Pin Double-Ended	2 m	MQDEC-506SS	-		2 = White 3 = Blue		
3 Till Bodbie Elided	5 m	MQDEC-515SS	_	Male 2	4 = Black 5 = Gray		
	9 m	MQDEC-530SS	-	4 5	0 0.0,		
	15 m	MQDEC-550SS	_	22 AWG	Cable ø – 5.6 mm		

#### 8-Pin M12 (Voltage: 30 V DC/AC, Current: 2 A)

	Length	Straight	Right-Angle	Pir	nout
	2 m	MQDC2S-806	MQDC2S-806RA		
8-Pin Female QD to Flying Leads Open Shield with Drain Wire	5 m	MQDC2S-815	MQDC2S-815RA	Female  2  3  1  6  3  4  7  6  8	1 = White 2 = Brown 3 = Green
	10 m	MQDC2S-830	MQDC2S-830RA		4 = Yellow 5 = Gray
	16 m	MQDC2S-850	MQDC2S-850RA		6 = Pink 7 = Blue 8 = Red
	31 m	MQDC2S-8100	_	24 AWG	Cable ø – 5.6 mm

#### 4-Pin M12 PUR (Voltage: 250 V DC/AC, Current: 4 A)

		Length	Straight	Right-Angle	Pi	nout
		2 m	MQDC-406-PUR	MQDC-406RA-PUR	Female	
	4-Pin Female QD to Flying Leads	5 m	MQDC-415-PUR	MQDC-415RA-PUR	1 00 2	1 = Brown 2 = White 3 = Blue 4 = Black
		10 m	MQDC-430-PUR	MQDC-430RA-PUR	22 AWG	Cable ø – 4.1 mm
		Length	Straight/Straight (female/male)	Right-Angle/Straight (female/male)	Pi	nout
		0.3 m	MQDEC-401SS-PUR	MQDEC-401SR-PUR	Female	
		0.6 m	MQDEC-402SS-PUR	MQDEC-402SR-PUR		
ł t		1 m	MQDEC-403SS-PUR	MQDEC-403SR-PUR		1 = Brown
Ĵ	4-Pin Double-Ended	2 m	MQDEC-406SS-PUR	MQDEC-406SR-PUR		2 = White 3 = Blue
		3 m	MQDEC-409SS-PUR	MQDEC-409SR-PUR	Male 2	4 = Black
8 2		5 m	MQDEC-415SS-PUR	MQDEC-415SR-PUR	3-4-4	
		10 m	MQDEC-430SS-PUR	MQDEC-430SR-PUR	22 AWG	Cable ø – 4.1 mm



#### 4-Pin M12 Lighted (Voltage: 10 to 30 V DC at 15 mA max)

	Length	Straight	Right-Angle	Pinout		
	2 m	MQDC-406-GYP	MQDC-406-GYPRA	Female		
4-Pin PNP	5 m	MQDC-415-GYP	MQDC-415-GYPRA	1 (60) 2	1 = Brown 2 = White 3 = Blue 4 = Black (ouput LED)	
	9 m	MQDC-430-GYP	MQDC-430-GYPRA	22 AWG	Cable ø – 5.2 mm	
4-Pin NPN	2 m	MQDC-406-GYN	MQDC-406-GYNRA	Famala		
	5 m	MQDC-415-GYN	MQDC-415-GYNRA	Female	1 = Brown 2 = White 3 = Blue 4 = Black (ouput LED)	
	9 m	MQDC-430-GYN	MQDC-430-GYNRA	22 AWG	Cable ø – 5.2 mm	

#### 5-Pin M12 Lighted (Voltage: 10 to 30 V DC at 15 mA max)

		Length	Straight	Right-Angle	Pi	nout
		2 m	MQDC-506-GYP	MQDC-506-GYPRA	Female	1 = Brown
	5-Pin PNP	5 m	MQDC-515-GYP	MQDC-515-GYPRA	1 2 3 4 5	2 = White 3 = Blue 4 = Black (ouput LED) 5 = Gray
1		9 m	MQDC-530-GYP	MQDC-530-GYPRA	22 AWG	Cable ø – 5.6 mm
		2 m	MQDC-506-GYN	MQDC-506-GYNRA	Female	1 = Brown
	5-Pin NPN	5 m	MQDC-515-GYN	MQDC-515-GYNRA	1 000 3	2 = White 3 = Blue 4 = Black (ouput LED) 5 = Gray
		9 m	MQDC-530-GYN	MQDC-530-GYNRA	22 AWG	Cable ø – 5.6 mm

#### 4-Pin M12 Washdown (Voltage: 250 V DC/AC, Current: 4 A)

	Length	Straight	Pino	ut
	2 m	MQDC-WDSS-0406		1 = Brown
4-Pin	5 m	MQDC-WDSS-0415	Female	2 = White 3 = Blue 4 = Black
	9 m	MQDC-WDSS-0430	22 AWG	Cable ø – 4.8 mm
	Length	Straight/Straight	Pino	ut
	0.31 m	MQDEC-WDSS-401SS	Female	
A Pin Poulds Forded	0.91 m	MQDEC-WDSS-403SS	4 00 3	1 = Brown 2 = White
4-Pin Double-Ended	1.83 m	MQDEC-WDSS-406SS	Male 3	3 = Blue 4 = Black
	3.7 m	MQDEC-WDSS-412SS	22 AWG	Cable ø – 4.8 mm

#### 5-Pin M12 Washdown (Voltage: 60 V DC/AC, Current: 4 A)

	Length	Straight	Pino	out
	2 m	MQDC-WDSS-0506	Female	1 = Brown
5-Pin	5 m	MQDC-WDSS-0515	1 2 0000 3 4 5	2 = White 3 = Blue 4 = Black 5 = Gray
	9 m	MQDC-WDSS-0530	22 AWG	Cable ø – 5.2 mm
	Length	Straight/Straight	Pino	out
	1.5 m	MQDEC-WDSS-505SS	Female	1 = Brown
5-Pin Double-Ended	3 m	MQDEC-WDSS-510SS	Male	2 = White 3 = Blue 4 = Black
	4.57 m	MQDEC-WDSS-515SS	4 1 5 22 AWG	5 = Gray  Cable ø – 4.8 mm

#### 4-Pin M12 Splitters (Voltage: 250 V DC/AC, Current: 4 A)

	Models	Cable I	engths	Pinout	
	Wodels	Trunk (Male)	Branches (Female)	PII	nout
	CSB-M1240M1241	No Trunk/Integral QD	2 x 0.3 m	Female	
	CSB-M1241M1241	0.3 m	2 x 0.3 m	4 2 3	1= Brown 2 = White
4 Dis	CSB-M1243M1243	1 m	2 x 1 m		
4-Pin	CSB-M1248M1241	2.4 m	2 x 0.3 m	Male 3	3 = Blue 4 = Black
	CSB-M12415M1241	4.6 m	2 x 0.3 m	4	
	CSB-UNT425M1241	7.6 m Unterminated	2 x 0.3 m	22 AWG	Cable ø – 6.0 mm

#### 5-Pin M12 Splitters (Voltage: 30 V DC/AC, Current: 2 A)

	Madala	Cable Lengths		Pinout	
	Models	Trunk	Branches	Pinout	
5 Div	CSB-M1251M1251B	0.3 m (Male)	2 x 0.3 m (Female)	Female  1	
5-Pin	CSB-M1251FM1251M	0.3 m (Female)	2 x 0.3 m (Male)	Male 3 = Blue 4 = Black 5 = Gray  22 AWG Cable Ø – 5.9 mm	

#### Wall Plug Cordsets

	Plug Type	Length	Countries	Models
	Flying Leads			LQMAC-306
٨	NEMA 5-15 grounded (IEC Type B)	1.8 m	United States, Canada, Japan, Puerto Rico, Taiwan	LQMAC-306B
	BS 546 (IEC Type D)		India	LQMAC-306D
	CEE 7/7 (IEC Type E or F)		Germany, France, South Korea, The Netherlands, Poland, Spain, Turkey	LQMAC-306EF
	BS 1363 (IEC Type G)		United Kingdom, Ireland, Singapore, Vietnam	LQMAC-306G
	AS/NZS 3112 (IEC Type I)		China, Australia, New Zealand	LQMAC-306I
	NBR 14136 (IEC Type N)		Brazil	LQMAC-306N
	NEMA 5-15 grounded (IEC Type B)	3 m	United States, Canada, Japan, Puerto Rico, Taiwan	LQMAC-310B

#### **Cascade Cordsets**

	Length	Models
	0.15 m	LQMAEC-3005SS
	0.31 m	LQMAEC-301SS
	0.91 m	LQMAEC-303SS
Male Straight/Male Straight	1.83 m	LQMAEC-306SS
	3.66 m	LQMAEC-312SS
	6.1 m	LQMAEC-320SS
	9.14 m	LQMAEC-330SS

#### 2-Pin Single Color Only Cordsets

2-Pin Single Color Only Cordsets				
	Length	Models		
	1.83 m	DTMC-206		
2-Pin Straight	4.57 m	DTMC-215		
	9.15 m	DTMC-230		
	0.16 m	DTMEC-2005		
	0.31 m	DTMEC-201		
	0.91 m	DTMEC-203		
2-Pin Double-Ended	1.83 m	DTMEC-206		
	3.66 m	DTMEC-212		
	6.1 m	DTMEC-220		
	9.15 m	DTMEC-230		

# Accessories



#### Pro Editor Cable Accessory Kit



To Eartor Cable Accessory Kit					
Description	Length	Connections	Model		
Pro Editor Software Adapter	1.83 m	USB and 5-pin M12 QD			
Power Supply	2 m	5-pin M12 QD	PRO-KIT		
5-pin M12 Splitter	Female Trunk: 0.3 m Male Branches: 2 x 0.3 m	5-pin M12 QD			

#### Pro Editor Converter Cable

Description	Length	Connections	Model
Pro Editor Software Adapter	1.83 m	USB and 5-pin M12 QD	MQDC-506-USB





Description	Length	Connections	Model
Mating accessory for cabled and terminal models, Includes: Cable and 5 Lever Wire Nuts	150 mm (6 in)	5-pin M12 QD	ACC-PRO-CABLE5

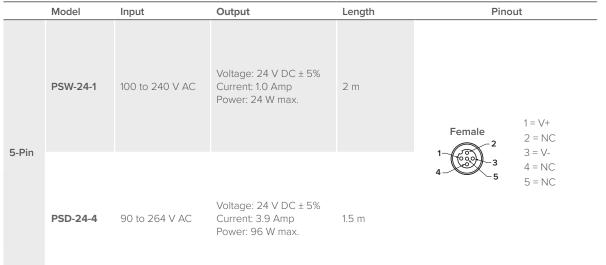


#### **Pro Cordset**

Description	Length	Connections	Model
A-Code M12 to A-Code M12 Double Ended	0.30 m	8-pin Straight Female, 5-pin Straight Male	MQDC-801-5M-PRO

#### 5-Pin Power Supply





#### Inline AC/DC Power Converter\*



AC Output	DC Output	Connector	DC Device Remote Input Type and Pin Assignment	Model
Normally Open, E/M Relay	PNP	150 mm PVC cable with an M12 QD	PNP on Pin 2	SPS30PAR2PQ5
			PNP on Pin 5	SPS30PAR5PQ5
			NPN on Pin 5	SPS30PAR5NQ5
	NPN			SPS30NAR5NQ5
	PNP	150 mm PVC cable with an M8 QD	NPN on Pin 2	SPS30PAR2NQ3

<sup>\*</sup>For use with actuator products

# Switches and Dimming Accessories

#### WLS28 In-Line Switches

Description	Used With	Models
2 position In-line switch	2-Wire DC LED lights	WLS28PBQ
3 position In-line switch	WLS28-2 and WLS28-2 Dual Color	WLS28-2PBQ
In-line motion detector switch	2-Wire DC LED lights	WLS28-2MQ

#### LC15T In-Line Touch Switch

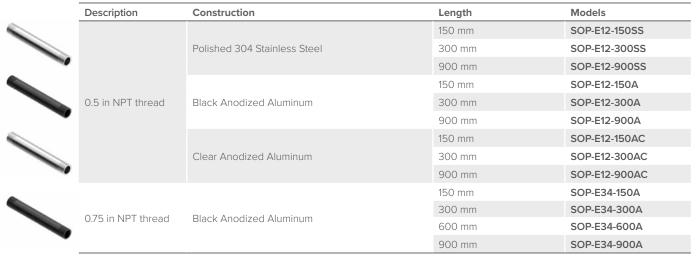
Model Function	Power Applied to LC15T	10%-90% PWM Output*	LC15T Output On 100%	Used With	Models
On/Off	Red	N/A	Green	2-Wire DC Devices	LC15T-127AL2RGQP
3-Wire PWM Control		Blue		3-Wire PWM Controlled Devices	LC15T-127AP1RBGQP
2-Wire PWM Control		Blue		2-Wire PWM Controlled Devices	LC15T-127AP2RBGQP

#### LC65 LED Dimmer Module

Connection	Pulse Width Modulation Type	Models
erminal block	3-Wire	LC65P1T
Terrillia block	2-Wire	LC65P2T
1 - 150 mm 5-pin M12 PVC cable with a female, stainless steel QD	3-Wire	LC65P1Q5
1 - 150 mm 4-pin M12 PVC cable with a female, stainless steel QD	2-Wire	LC65P2Q5

# Standoff Pipe Accessories

#### **Stand-Off Pipes**



#### Adaptors and Covers

	Adapters and Covers			
,	Description	Construction	Models	
	M36 thread to 12-14 NPSM thread base	Black plastic	SA-M36E12	
	M36 thread with clearance for 0.75 in pipe	Black plastic	SA-M36SOP	
0	30 mm light base to 0.5 in pipe (mounting hardware included)	Black ABS	SA-M30TE12 SA-E12M30	
		White UHMW	SA-M30TE12C SA-E12M30C	
	M30 x 1.5 thread (for use with K70 and K90 EZ-Light)	Black polycarbonate	SA-M30	
		Gray polycarbonate	SA-M30C	
	22 mm light base to 0.5 in pipe	Black polycarbonate	SA-M22E12	

#### **Pipe Mounting Flange**

	Description	Construction	Models
0	0.5 in NPSM/DN15 Elevated-use stand-off pipe (M5 mounting hardware and nitrile gasket	Die-cast zinc base with black paint	SA-F12
	included)	Black polycarbonate	SA-F12-3

# Audible Indication

# Hazardous Location



#### **K50 Pro Compact Audible**

K50 Pro Compact Audible Indicators are a bright, sealed, indicator, designed with an integrated audible alarm. It offers 14 different tones that can be customized and adjusted to different intensity levels. All K50 models are programmable using Banner's Pro Editor software or IO-Link. It offers seven default colors in one multicolor RGB device and is available without indication.



#### **TL50** Audible

TL50 Pro Audible Indicators are rugged and easy-to-install. They are programmable using Banner's Pro Editor software and Pro Converter Cable or via IO-Link communication.



#### TL70 Audible

TL70 Tower Lights feature adjustable audible modules for tremendous flexibility and can be customized as needed.



#### TL15 Audible

TL15A Tower Lights are bright, ultra-small indicators that offer additional audible capability so users can receive color status and audio alerts locally.



#### **HLS27 Bright LED Strip Lights**

HLS27 LED Strip Lights for Hazardous Locations have a sturdy aluminum housing and are encased in a shatterproof, UV-stabilized, polycarbonate shell, making them ideal for harsh indoor and outdoor applications. The option of having two colors in one device makes this ideal for mobile vehicle, machine status, and vision lighting applications.



#### **HLS28 Low-Profile LED Strip Lights**

HLS28 Hazardous Location LED Strip Lights have a sturdy aluminum housing, shatterproof windows, and a low-profile, space-saving design for use in certified enclosures in hazardous locations. The light is available with integrated motion sensor for auto-on when the enclosure door is opened, or anytime motion is detected.



#### K30L 30 mm Multicolor Indicators

Rugged, cost-effective multicolor indicator light made for use in hazardous areas. It is ATEX, CSA c/us, and IECEx certified; fully sealed; and rated to IP67/IP69K for harsh environments.



#### K50L 50 mm Multicolor Indicators

K50L indicators feature an illuminated dome for easy-to-see operator guidance and indication of equipment status. Ideal for use in hazardous areas, it is rated IP67/IP69K for washdown and has certifications in ATEX, CSA c/us, and IECEx.

# Heavy Duty and Washdown





#### **WLS27 LED Strip Lights**

Banner's WLS27 LED Strip Lights have sturdy internal aluminum structure, encased in shatterproof, UV-stabilized, copolyester shells, making them ideal for harsh indoor and outdoor applications.



#### WLC60 Heavy Duty LED Strip Lights

Designed to operate in harsh environments, the WLC60 can withstand high pressure washdown and exposure to coolants and detergents.



#### WLH60 High Temperature LED Lights

Banner's WLH60 is a heavy-duty LED light fixture offering best-in-class brightness to illuminate applications in high-temperature environments. Its rugged, heat-resistant design enables installation in or near high-temperature areas that challenge other lighting solutions.



# WLC90 Heavy Duty LED Work Lights for High Temperatures

Designed to operate in harsh environments, the WLC90 can withstand high pressure washdown and exposure to coolants and detergents



# WLA LED Area Lights for Industrial Work Cells

Developed for lighting industrial work cells including areas with exposure to liquids such as food and beverage processing applications.



#### **Linear Array Lights**

Linear Array Lights provide maintenance-free LED illumination of large objects from far away.



#### **Linear Array Backlights**

Linear Array Lights provide maintenance-free LED illumination of large objects from far away.



#### **Area Lights**

Area Lights create shadows to detect changes in depth, illuminate specific surface angles, and avoid glare of reflective surfaces when directed at an angle away from the lens.



#### Backlights

Backlights offer a highly diffused surface and uniform brightness, with a lower intensity than other lights.



#### **Ring Lights**

Ring Lights brightly illuminate small objects and reduce shadows on images with protrusions.



#### **Low-Angle Ring Lights**

Low-Angle Ring Lights illuminate from an angle nearly perpendicular to object to emphasize surface irregularities such as dust, dents, scratches and other surface defects.



#### **Spot Lights**

Spot Lights provide extremely bright, even light with a single high-power LED.



#### **On-Axis Lights**

On-Axis Lights evenly illuminate flat reflective surfaces and deliver collimated illumination in the same optical path as camera.



#### Structured Lights

A laser line generator is an example of a structured lighting scheme. This technique uses a high quality, uniform laser line to infer the presence of a difficult to see target.





Banner Engineering designs and manufactures industrial automation products including sensors, smart IIoT and industrial wireless technologies, LED lights and indicators, measurement devices, machine safety equipment, as well as barcode scanners and machine vision. These solutions help make many of the things we use every day, from food and medicine to cars and electronics. A high-quality, reliable Banner product is installed somewhere around the world every 2 seconds. Headquartered in Minneapolis since 1966, Banner is an industry leader with more than 10,000 products, operations on five continents, and a world-wide team of more than 5,500 employees and partners. Our dedication to innovation and personable service makes Banner a trusted source of smart automation technologies to customers around the globe.





