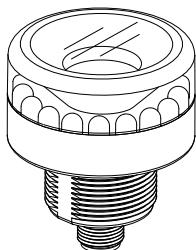


# K50 Pro Beacon with IO-Link Datasheet

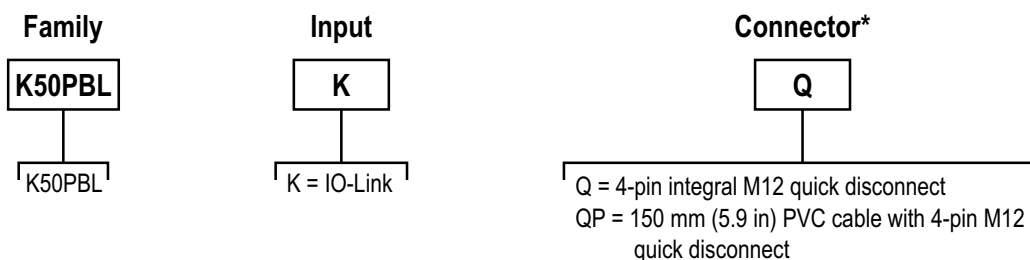
## Features

50 mm IO-Link controlled multicolor RGB indicator with Daylight-Visible indicator



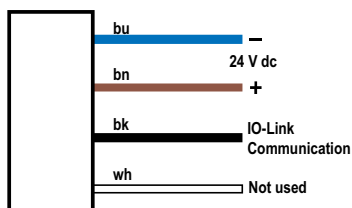
- Bright, uniform indicator light
- IO-Link control allows access to full color, flashing and dimming controls as well as advanced animations
- Millions of color possibilities
- 30 mm threaded polycarbonate base
- Rugged IP67, IP69K per DIN 40050-9, and UL Type 4X and UL Type 13 design
- Intense levels of light output for areas with high ambient light including outdoors
- Viewable around entire perimeter

## Models



\* Models with a quick disconnect require a mating cordset

## Wiring Diagram



## IO-Link® Process Out Data

IO-Link is a point-to-point communication link between a master device and a sensor and/or light. It can be used to automatically parameterize sensors or lights and to transmit and/or receive process data. For the latest IO-Link protocol and specifications, please visit [www.io-link.com](http://www.io-link.com). For the latest IODD files, please refer to the Banner Engineering Corp website at: [www.bannerengineering.com](http://www.bannerengineering.com).

Process Data is transmitted cyclically to the IO-Link device from the IO-Link master. These parameters are written to the K50 acyclically and are used to perform the following functions:

- Indicator light on and off
- Full color control of indicator light (defined colors and ability to create custom colors)
- Full flashing control of indicator light (defined flashing rates and ability to create custom rates)
- Full dimming control of indicator light (defined intensities and ability to create custom intensities)
- Various animation control and configurability
  - Flashing: flash light at defined flash rate (50/50 duty cycle)
  - Two-Color Flashing: flash two colors at defined flash rate, alternating (50/50 duty cycle)
  - Strobe: strobe light at defined flash rate (80/20 duty cycle)
  - Half/Half: show half one color and half another color
  - Half/Half Rotate: animation that shows half one color and half another color while rotating clockwise or counter-clockwise
  - Chase: animation that shows a single spot in one color against a background of another color while rotating clockwise or counter-clockwise
  - Demo Mode: cycles through defined colors and then through color spectrum

**NOTE:** Additional color shades can be made by adjusting intensity

## IO-Link Process Data Out for the K50

Name	Values
Color 1	Green, Red, Orange, Yellow, Lime Green, Spring Green, Cyan, Sky Blue, Blue, Violet, Magenta, Rose, White, 5 Custom Colors to define
Color 2	
Color Flash Rate (Hz)	0.5, 1.5, 3, 6, 9, 12, Custom Rate to define
Color 1 Intensity	High, Medium, Low, Custom Intensity to define
Color 2 Intensity	
Animation Mode	Steady, Flash, Two-Color Flash, Strobe, Half/Half, Half/Half Rotate, Chase, Demo Mode
Rotation Direction	Counter Clockwise, Clockwise

For more information see IO-Link Data Reference Guide: K50 Pro Indicator (p/n 200721).

## Specifications

### Supply Voltage and Current

24 V DC  $\pm$  25%  
 115 mA typical at 24 V DC  
 150 mA maximum at 18 V DC

### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

### Input Response Time

30 milliseconds maximum while active

### Connections

Integral 4-pin M12 male quick-disconnect connector, or 150 mm (6 in) PVC-jacketed cable with an M12 quick disconnect, depending on model  
 Models with a quick disconnect require a mating cordset

### Mounting

M30 by 1.5 threaded base, maximum torque 4.5 N·m (40 inch·lbf)  
 Mounting nut included

### Construction

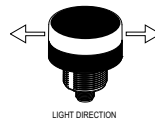
**Model Base, Dome, and Nut:** Polycarbonate

### Vibration and Mechanical Shock

Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 1.0 mm amplitude, 5 minutes sweep, 30 minutes dwell)  
 Meets IEC 60068-2-27 requirements (Shock: 30G 11 ms duration, half sine wave)

### Application Note

Light emits 360° from housing sides in K50BL models.



### Operating Conditions

-40 °C to +50 °C (-40 °F to +122 °F)  
 90% at +50 °C maximum relative humidity (non-condensing)  
 Storage Temperature: -40 °C to +70 °C (-40 °F to +158 °F)

### Environmental Rating

All Models: IP67, IP69K per DIN 40050-9, meets UL Type 4X and UL Type 13 when mounted in a UL Type 4X or Type 13 enclosure  
 All Cabled Models also meet IP69K per DIN 40050-9 if the cable and cable entrance are protected from high-pressure spray

### Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Color Coordinates <sup>a</sup>		Lumen Output (Typical at 25 °C)
		x	y	
Green	530 nm	0.153	0.697	15.3
Red	625 nm	0.691	0.307	6.8
Yellow	–	0.469	0.466	17.2
Blue	470 nm	0.14	0.05	3.3
Orange	–	0.534	0.410	12.6
White	5700 K	0.338	0.336	20.9
Cyan	–	0.159	0.337	17
Magenta	–	0.399	0.189	8.6
Lime Green	–	0.386	0.527	20.4
Spring Green	–	0.156	0.532	15.8
Sky Blue	–	0.147	0.248	17.9
Violet	–	0.230	0.098	6.7
Rose	–	0.531	0.239	7.7

a. Refer to CIE 1931 chromaticity diagram or color chart, to show equivalent color with indicated color coordinates.

### Required Overcurrent Protection

**WARNING:** Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.  
 Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.  
 For additional product support, go to [www.bannerengineering.com](http://www.bannerengineering.com).

Supply Wiring (AWG)	Required Overcurrent Protection (A)	Supply Wiring (AWG)	Required Overcurrent Protection (A)
20	5.0	26	1.0
22	3.0	28	0.8
24	1.0	30	0.5

**Certifications**



**FCC Part 15 Class B**

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. 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:

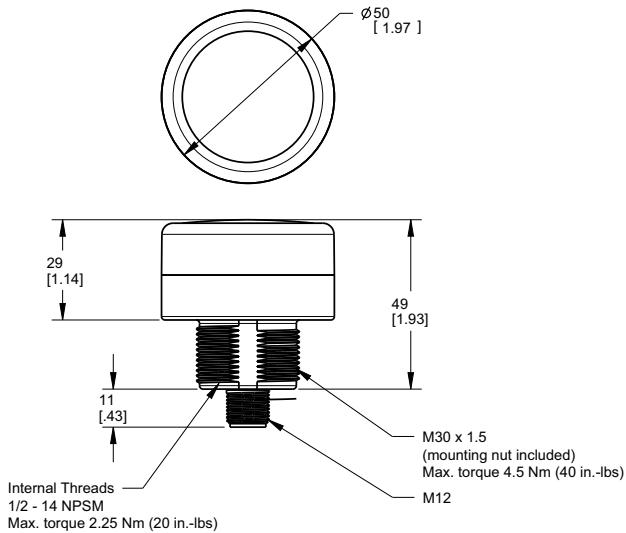
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Industry Canada**

This device complies with 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.

Cet appareil est conforme à la norme NMB-3(B). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.

**Dimensions**



# Accessories

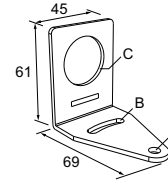
## Cordsets

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

## Brackets

### SMB30A

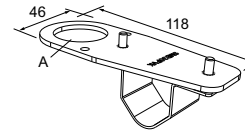
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (1/4 in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



Hole center spacing: A to B=40Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5

### SMB30FVK

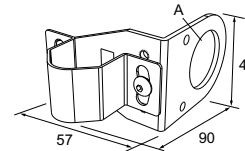
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors



Hole size: A = ø 31

### SMB30RAVK

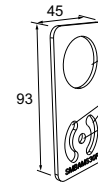
- V-clamp, right-angle bracket and fasteners for mounting sensors to pipe or extrusion
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors



Hole size: A = ø 30.5

**SMBAMS30P**

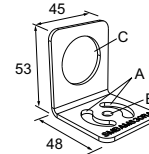
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel



Hole center spacing: A=26.0, A to B=13.0Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

**SMBAMS30RA**

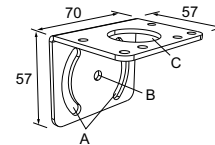
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. (2.6 mm) cold-rolled steel



Hole center spacing: A=26.0, A to B=13.0Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

**SMB30MM**

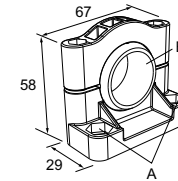
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



Hole center spacing: A = 51, A to B = 25.4Hole size: A = 42.6 x 7, B = ø 6.4, C = ø 30.1

**SMB30SC**

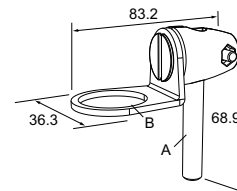
- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included



Hole center spacing: A=ø 50.8Hole size: A=ø 7.0, B=ø 30.0

**SMB30FA**

- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available

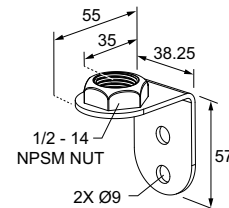


Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50Hole size: B= ø 30.1

**LMBE12RA35**

- Direct mounting of stand-off pipe, with common bracket type
- Zinc-plated steel
- 1/2-14 NPSM nut
- Mounting distance from the wall to the center of the 1/2-14 NPSM nut is 35 mm

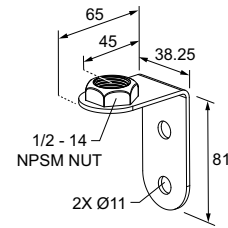
Hole center spacing: 20.0



**LMBE12RA45**

- Direct mounting of stand-off pipe, with common bracket type
- Zinc-plated steel
- 1/2-14 NPSM nut
- Mounting distance from the wall to the center of the 1/2-14 NPSM nut is 45 mm

Hole center spacing: 35.0



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

## Elevated Mount System

Model			Features	Components
<b>SA-M30TE12</b> - Black Acetal			<ul style="list-style-type: none"> <li>• Streamlined black acetal or white UHMW stand-off pipe adapter/cover</li> <li>• Connects between 30 mm light base and 1/2 in. NPSM/DN15 pipe</li> <li>• Mounting hardware included</li> </ul>	
<b>SA-M30TE12C</b> - White UHMW				
<b>Polished 304 Stainless Steel</b>	<b>Black Anodized Aluminum</b>	<b>Clear Anodized Aluminum</b>	<ul style="list-style-type: none"> <li>• Elevated-use stand-off pipe (1/2 in. NPSM/DN15)</li> <li>• Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface</li> <li>• 1/2 in. NPT thread at both ends</li> <li>• Compatible with most industrial environments</li> </ul>	
<b>SOP-E12-150SS</b> 150 mm (6 in) long	<b>SOP-E12-150A</b> 150 mm (6 in) long	<b>SOP-E12-150AC</b> 150 mm (6 in) long		
<b>SOP-E12-300SS</b> 300 mm (12 in) long	<b>SOP-E12-300A</b> 300 mm (12 in) long	<b>SOP-E12-300AC</b> 300 mm (12 in) long		
<b>SOP-E12-900SS</b> 900 mm (36 in) long	<b>SOP-E12-900A</b> 900 mm (36 in) long	<b>SOP-E12-900AC</b> 900 mm (36 in) long		
<b>SA-E12M30</b> - Black Acetal			<ul style="list-style-type: none"> <li>• Streamlined black acetal or white UHMW mounting base adapter/cover</li> <li>• Connects between 1/2 in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole</li> <li>• Mounting hardware included</li> </ul>	
<b>SA-E12M30C</b> - White UHMW				

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