

EZ-LIGHT™ K80L Segmented Indicator

Segmented One, Two, Three or Four-Color Point-of-Use Indicator



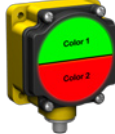



Features

- Individual color segments can be lighted separately or in combination
- For error-proofing and “Andon”* applications
- Provides operator guidance, even for those with limited color recognition ability
- PNP (sourcing) or NPN (sinking) input type, depending on model
- Optional labels for enhanced segment identification

* **Andon** lights on machines or production lines indicate operation status. They are often located overhead for workers or a supervisor to view them.

Models

| Model | Construction | Connection* | LED Colors** | Inputs |
|---|---------------------------------|---------------|---|--------|
|  K80L4GRYB1PQ K80L4GRYB1NQ | Flat or DIN-mount polycarbonate | 5-pin Euro QD | Color 1: Green Color 2: Red Color 3: Yellow Color 4: Blue | PNP |
| | | | | NPN |
|  K80L3THGRYX1PQ K80L3THGRYX1NQ | | | Color 1: Green Color 2: Red Color 3: Yellow | PNP |
| | | | | NPN |
|  K80L2HGRXX1PQ K80L2HGRXX1NQ | | | Color 1: Green Color 2: Red | PNP |
| | | | | NPN |
|  K80L1WXXX1PQ K80L1YXXX1PQ K80L1RXXX1PQ K80L1GXXX1PQ K80L1BXXX1PQ | | | Color 1: White Color 1: Yellow Color 1: Red Color 1: Green Color 1: Blue | PNP |

* Integral QD models are listed. For 150 mm PVC pigtail with QD, replace **Q** with **QP** in model number (example, “K80L4GRYB1QP”). For terminal-wired models, omit suffix **Q** from model number (example, “K80L4GRYB1P”). For 150 mm (6”) PUR pigtail cable with 5-Pin threaded Euro-Style QD, add suffix “QPMA” to the model number (e.g., “K80L4GRYB1QPMA”). A model with a QD requires a mating cable (see page 4).

** Contact factory for other colors and segment combinations

WARNING . . . Not To Be Used for Personnel Protection

Never use these products as sensing devices for personnel protection. Doing so could lead to serious injury or death.

These sensors do NOT include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition. Consult your current Banner Safety Products catalog for safety products which meet OSHA, ANSI and IEC standards for personnel protection.



EZ-LIGHT™ K80L Segmented Indicator

Overview

The EZ-LIGHT™ K80L Segmented Indicator is a color point-of-use indicator which can be used to send nonlingual messages to an operator or to monitor multiple locations.

Up to four independently selected colors provide the ability to communicate up to four messages, or more if they are used in combination. For example, a green sector could be lit to communicate “all systems OK,” and blue could represent “service needed soon” or a “shoplifter is on the floor.” Green plus red ON together could mean something different from either color ON individually. See hookups for color selection information.

Indicator colors are fixed in a standardized location, which is helpful for people who have limited color recognition capability (see Figure 1).

The K80L Segmented mounts easily on a flat surface, but can also be placed on various types of pipe for elevated use. In addition to customer-supplied pipe and conduit, Banner offers stainless steel pipe and other mounting accessories.

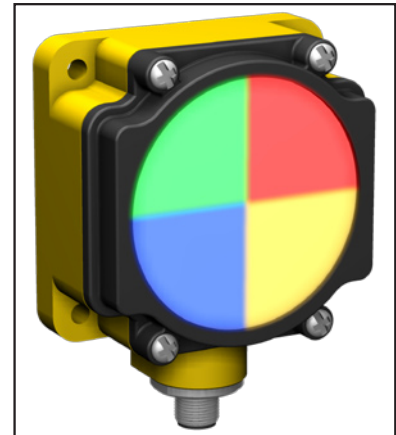


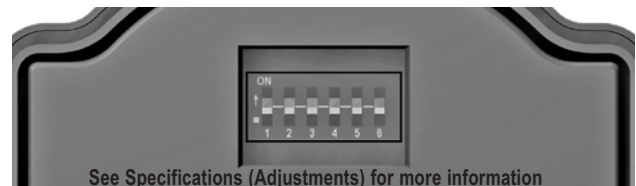
Figure 1. Features

Specifications

| | |
|---------------------------------------|---|
| Supply Voltage and Current | 18 to 30V dc; K80L4: @ 35 mA max. per LED color, @ 90 mA max. with all LEDs ON; K80L3: @ 50 mA max. with color 1 ON, @ 35 mA max. with colors 2 or 3 ON, @ 90 mA max. with all LEDs ON; K80L2: @ 50 mA max. with colors 1 or 2 ON, @ 90 mA max. with all LEDs ON; K80L1: @ 90 mA max. |
| Supply Protection Circuitry | Protected against reverse polarity and transient voltages |
| Indicators | LEDs are independently selected: Green, Red, Yellow, Blue or White; 1 to 4 colors, depending on model |
| Input Response | Indicator ON: Initial light—250 millisecond maximum Additional lights—10 millisecond maximum Indicator OFF: 10 millisecond maximum |
| Adjustments | The K80L Segmented features a 6-position Program DIP switch on the back of the indicator cover. For normal operation, no adjustment should be necessary; these switches should remain all in the down position, as shown in Figure 3. For Demo mode (2,3, and 4-Color models only): remove the four screws to remove the cover; change the switch 1 position to ON. The individual sectors will light depending on the input power as follows. Black wire input: Colors 1 and 2 alternate Brown wire input: Colors light simultaneously White wire input: Colors light in rotation (3 and 4-Color models only) One color models feature flash functionality. See Figure 2 for configuration information. |
| Construction | Base: ABS/polycarbonate Translucent face: acrylic |
| Connections | 5-pin Euro-style integral QD connector, 150 mm (6") PVC pigtail with 5-pin Euro-style QD connector, or terminal-wired, depending on model |
| Operating Conditions | Temperature: -40° to +50° C (-40° to +122° F) Max. Relative Humidity: 90% @ 55° C (non-condensing) |
| Environmental Rating | IEC IP67 (NEMA 6) |
| Vibration and Mechanical Shock | All models meet Mil. Std. 202F requirements method 201A (vibration: 10 to 60 Hz max., double amplitude 0.06", maximum acceleration 10G). Also meets IEC 947-5-2; 30G 11 ms duration, half sine wave. |

| DIP Switch Positions | | | | | | LED Function |
|----------------------|-----|-----|-----|-----|-----|--|
| SW1 | SW2 | SW3 | SW4 | SW5 | SW6 | |
| OFF | OFF | OFF | OFF | OFF | OFF | Color 1 ON solid |
| ON | OFF | OFF | OFF | OFF | OFF | Color 1 Flashes – 50% duty cycle; 2 Hz rate |
| OFF | ON | OFF | OFF | OFF | OFF | Color 1 Flashes – 50% duty cycle; 1 Hz rate |
| OFF | OFF | ON | OFF | OFF | OFF | Color 1 Flashes – 50% duty cycle; 0.5 Hz rate |
| OFF | OFF | OFF | ON | OFF | OFF | Color 1 Flashes – 25% duty cycle; 1 Hz rate |
| OFF | OFF | OFF | OFF | ON | OFF | Color 1 Flashes – 25% duty cycle; 0.5 Hz rate |
| OFF | OFF | OFF | OFF | OFF | ON | Color 1 Flashes – 25% duty cycle; 0.25 Hz rate |

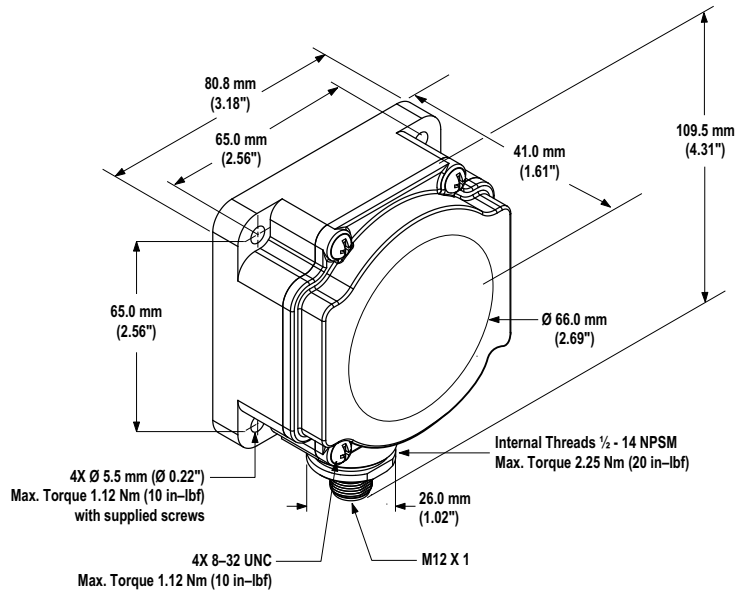
Figure 2. DIP Switch Positions to Configure Flash Function (1-Color models only)



See Specifications (Adjustments) for more information
Figure 3. Program DIP switch located on the inside of the K80L cover

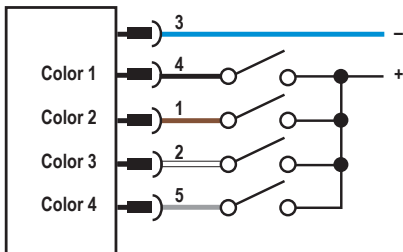
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Dimensions



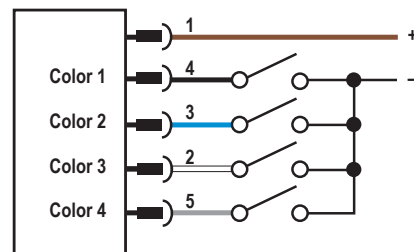
Hookups

PNP (Sourcing)



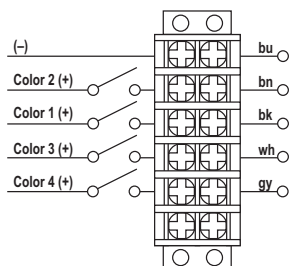
Wiring Key:
 1 = Brown
 2 = White
 3 = Blue
 4 = Black
 5 = Gray

NPN (Sinking)

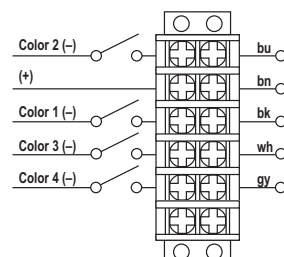


Hookup is for 4 color segmented models. Depending on the model and number of segments, pins 5, 3, 2 and 1 may not be used.

PNP Internal Terminal Blocks



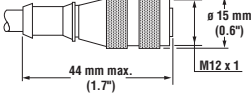
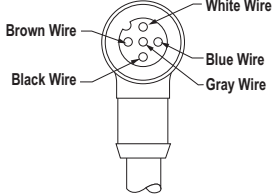
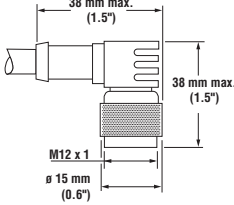
NPN Internal Terminal Blocks



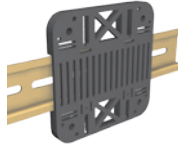


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Accessories

Quick-Disconnect Cables

| Style | Model | Length | Dimensions | Pinout |
|------------------------|---|--------------------------------------|--|---|
| 5-Pin Euro Straight | MQDC1-506 MQDC1-515 MQDC1-530 | 2 m (6.5') 5 m (15') 9 m (30') |  |  |
| 5-Pin Euro Right-Angle | MQDC1-506RA MQDC1-515RA MQDC1-530RA | 2 m (6.5') 5 m (15') 9 m (30') |  | |

Mounting Brackets

| Model | Description | Length | |
|---------------|---|--------------|---|
| SMBDX80D | <ul style="list-style-type: none"> DIN-mount bracket for K80L models Hardware included to mount to K80L housing ABS | N/A |  |
| SOP-E12-150SS | <ul style="list-style-type: none"> Stainless steel elevated-use stand-off pipe (1/2" NPSM/DN15) Polished 304 stainless steel surface 1/2 NPT thread at both ends Compatible with most industrial environments | 150 mm (6") |  |
| SOP-E12-300SS | | 300 mm (12") | |
| SA-E12M30 | <ul style="list-style-type: none"> Streamlined acetal mounting base adapter/cover Connects between 1/2" NPSM/DN15 pipe and 30 mm (1-3/16") drilled hole Mounting hardware included | N/A |  |

Accessory Quadrant Labels

Transparent self-adhesive cover labels for printing in a standard laser printer; print your own labels to easily identify each quadrant. Clear protective labels provide additional protection for laser print work in many industrial environments. Six labels per sheet; 5 sheets per package.

| Model | Description | Size |
|--------------|---|------------|
| SALK-K80L4 | Standard 4-quadrant transparent laser label (includes 30 labels and 1 protective cover label) | 8.5" x 11" |
| SALK-K80L4-0 | 1-quadrant transparent laser label (includes 30 labels) | |



WARRANTY: Banner Engineering Corp. warrants its products to be free from defects for one year. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.