

### **EZ-LIGHT**<sup>™</sup> – General-Purpose Indicators

DC-Operated LED Indicators with Two or Three Colors

Installation Guide

Additional information on this product is immediately available online at www.bannerengineering.com/121899

For further assistance, contact a Banner Engineering Applications Engineer at (763) 544-3164 or (888) 373-6767.



#### Models

| INIOUCIS       |    |              |  |   |   |            |                |  |
|----------------|----|--------------|--|---|---|------------|----------------|--|
|                |    |              |  | _   | LED Function –<br>Lights Independently Selected |            |                |  |
| Models         |    | Construction | Connector*   | Lights Inc  | ependently                                      | Selected   | Inputs         |  |
|                |    |              |  |   | Color 1   | Color 2    | Color 3        |  |
|                | •  | T8LGRXPQP    | Polycarbonate/ABS alloy housing, thermoplastic diffuser.  IP67                                     | 150 mm (6")<br>PVC pigtail with<br>4-pin Euro QD<br>connector | _   |            |                | PNP (Sourcing)   |
|                |    | T8LGRXNQP    |  |   | Green   | Red        | _              | NPN (Sinking)  |
|                |    | T8LGXYPQP    |  |   | Green   |            | \/ II          | PNP (Sourcing)   |
|                |    | T8LGXYNQP    |  |   |   | -          | Yellow         | NPN (Sinking)  |
|                |    | T8LXRYPQP    |  |   | -   | Red        | Yellow         | PNP (Sourcing)   |
|                |    | T8LXRYNQP    |  |   |   |            |                | NPN (Sinking)  |
|                |    | M18GRXPQ     | Nickel-plated brass housing,   |   | _   |            |                | PNP (Sourcing)   |
|                | 0  | M18GRXNQ     |  |   | Green   | Red        | _              | NPN (Sinking)  |
|                |    | M18GXYPQ     | thermoplastic diffuser.  |   | _   |            |                | PNP (Sourcing)   |
|                | VC | M18GXYNQ     | Fully encapsulated   |   | Green   | -          | Yellow         | NPN (Sinking)  |
|                |    | M18XRYPQ     | IP67   |   |   |            |                | PNP (Sourcing)   |
|                |    | M18XRYNQ     | 1 1507   |   | _   | Red        | Yellow         | NPN (Sinking)  |
|                |    | T18GRXPQ     |  |   | _   | _          |                |  |
|                |    | T18GRXNQ     |  |   | Green   | Red        | _              | PNP (Sourcing)  PNP (Sourcing)  NPN (Sinking)  PNP (Sourcing)  NPN (Sinking) |
|                |    | T18GXYPQ     |  |   |   |            |                |  |
|                |    | T18GXYNQ     |  |   | Green   | -          | Yellow         |  |
|                |    | T18XRYPQ     | Thermoplastic polyester  |   |   |            |                | \ 0,   |
|                |    | T18XRYNQ     | housing, thermoplastic diffuser.   |   | -   | Red        | Yellow         |  |
|                |    | T30GRXPQ     | Fully encapsulated IP67  |   |   |            |                |  |
|                |    | T30GRXNQ     |  | 4-pin Euro integral<br>QD connector                           | Green   | Red        | _              |  |
|                |    | T30GXYPQ     |  |   |   | _          |                |  |
|                |    | T30GXYNQ     |  |   | Green   |            | - Yellow       |  |
| S              |    | T30XRYPQ     |  |   |   | Red Yellow |                |  |
| Two LED Colors |    | T30XRYNQ     |  |   | -   |            | Yellow         |  |
| 8              |    | K30LGRXPQ    | 22 mm threaded polycarbonate base, translucent polycarbonate dome.  Fully encapsulated IP67, IP69K |   |   | Red -      |                | PNP (Sourcing)   |
| =              |    | K30LGRXNQ    |  |   | Green   |            | _              | NPN (Sinking)  |
| ž              |    | K30LGXYPQ    |  |   | Green –   |            | PNP (Sourcing) |  |
|                |    | K30LGXYNQ    |  |   |   | Yellow     | NPN (Sinking)  |  |
|                |    | K30LXRYPQ    |  |   |   |            | PNP (Sourcing) |  |
|                |    | K30LXRYNQ    |  |   | _   | Red        | Yellow         | NPN (Sinking)  |
|                |    | K50LGRXPQ    | 30 mm threaded polycarbonate base, translucent polycarbonate dome.                                 |   |   | Green Red  | _              | PNP (Sourcing)   |
|                |    | K50LGRXNQ    |  |   | Green   |            |                | NPN (Sinking)  |
|                |    | K50LGXYPQ    |  |   |   |            | \              | PNP (Sourcing)   |
|                |    | K50LGXYNQ    |  |   | Green   | – Yellow   | Yellow         | NPN (Sinking)  |
|                |    | K50LXRYPQ    | Fully encapsulated   |   |   | D. I       | V-P            | PNP (Sourcing)   |
|                |    | K50LXRYNQ    | IP67, IP69K  |   | _   | Red        | Yellow         | NPN (Sinking)  |
|                | Ç  | K50FLGRXPQ   | Polycarbonate base,<br>translucent polycarbonate<br>dome.<br>Fully encapsulated                    |   | 0   | B .        | PNP (Sourcing) |  |
|                |    | K50FLGRXNQ   |  |   | Green   | Red        | d –            | NPN (Sinking)  |
|                |    | K50FLGXYPQ   |  |   | Cross   | V          | Vallerii       | PNP (Sourcing)   |
|                |    | K50FLGXYNQ   |  |   | Green –   | Yellow     | NPN (Sinking)  |  |
|                |    | K50FLXRYPQ   |  |   | - Red   | Volland    | PNP (Sourcing) |  |
|                |    | K50FLXRYNQ   |  |   |   | Kea        | Yellow         | NPN (Sinking)  |
|                |    | K80LGRXPQ    | ABS and polycarbonate base, translucent polycarbonate  |   | Green Re  | Dod        | -              | PNP (Sourcing)   |
|                |    | K80LGRXNQ    |  |   |   | Kea        |                | NPN (Sinking)  |
|                |    | K80LGXYPQ    |  |   | Green   |            | Valla          | PNP (Sourcing)   |
|                |    | K80LGXYNQ    | dome.  |   |   | _          | Yellow         | NPN (Sinking)  |
|                |    | K80LXRYPQ    | Electronics fully encapsulated   |   |   |            |                | PNP (Sourcing)   |
|                |    | K80LXRYNQ    | IP67   |   | _   | Red        | Yellow         | NPN (Sinking)  |

Additional models shown on page 2.

## $\pmb{EZ\text{-}LIGHT}^{\mathsf{TM}} - \textbf{General-Purpose Indicators with Two or Three Colors}$

| Models           |          | Construction | Connector*  | LED Function –<br>Lights Independently Selected |         |            | Inputs         |                |                |
|------------------|----------|--------------|---|---|---------|------------|----------------|----------------|----------------|
|                  |          | 00110111011  |   | Color 1   | Color 2 | Color 3    | puto           |                |                |
|                  |          | M18GRYPQ     | Nickel-plated brass housing, thermoplastic diffuser.                        |   |         | Green Red  | Yellow         | PNP (Sourcing) |                |
|                  |          | M18GRYNQ     | Fully encapsulated<br>IP67  |   |         |            |                | NPN (Sinking)  |                |
|                  | <b>©</b> | T18GRYPQ     | Thermoplastic polyester housing, thermoplastic diffuser. Fully encapsulated | 4-pin Euro integral<br>QD connector             |         |            |                | PNP (Sourcing) |                |
|                  |          | T18GRYNQ     |   |   |         |            |                | NPN (Sinking)  |                |
|                  |          | T30GRYPQ     |   |   |         |            |                | PNP (Sourcing) |                |
|                  |          | T30GRYNQ     | IP67  |   |         |            |                | NPN (Sinking)  |                |
|                  |          | K30LGRYPQ    | 22 mm threaded polycarbonate base, translucent polycarbonate dome.          |   |         |            |                | PNP (Sourcing) |                |
| Three LED Colors |          | K30LGRYNQ    | Fully encapsulated IP67, IP69K  |   | Croon   |            |                | NPN (Sinking)  |                |
|                  |          | K50LGRYPQ    | 30 mm threaded polycarbonate base, translucent polycarbonate dome.          |   | Green   |            | Red            | reliow         | PNP (Sourcing) |
|                  |          | K50LGRYNQ    | Fully encapsulated IP67, IP69K  |   |         |            |                | NPN (Sinking)  |                |
|                  | Ç        | K50FLGRYPQ   | Polycarbonate base, translucent polycarbonate dome.                         |   |         |            |                | PNP (Sourcing) |                |
|                  |          | K50FLGRYNQ   | Fully encapsulated IP67, IP69K  |   |         |            |                | NPN (Sinking)  |                |
|                  |          | K80LGRYPQ    | ABS and polycarbonate base, translucent polycarbonate dome.                 |   |         |            |                | PNP (Sourcing) |                |
|                  |          | K80LGRYNQ    | Electronics fully encapsulated IP67   |   |         | it #5:: #0 | D" / 2 2 "TOLC | NPN (Sinking)  |                |

<sup>\*</sup> T8L Models: Standard pigtail QD models are listed (mating cable required; see page 3). For integral 4-wire 2 m (6.5') cable model, omit suffix "QP" (e.g., "T8LGRXP").

K80L Models: Standard 4-pin Euro integral QD connector models are listed (mating cable required; see page 3). For terminal-wired model, omit suffix "Q" (e.g., "K80LGRXP").

Other Models: Standard 4-pin Euro integral QD connector models are listed (mating cable required; see page 3). For 2 m (6.5') integral 4-wire cable model, omit suffix "Q" (e.g., "M18GRXP"). For 150 mm (6") PVC pigtail with 4-pin Euro connector, replace suffix "Q" with "QP" (e.g., "M18GRXPQP").

#### **Specifications**

#### Supply Voltage and Current

T8 Models: 10 to 30V dc @ 20 mA max. per LED color

K30L, T18 and M18 Models: 10 to 30V dc @ 25 mA max. per LED color

T30 Models: 10 to 30V dc @ 40 mA max. per LED color

K50L, K50FL and K80L Models: 18 to 30V dc @ 40 mA max. per LED color

#### Indicators

Entire translucent diffuser or dome provides indication.

LEDs are independently selected: Green, Red, Yellow; 1, 2, or 3 colors, depending on model. For other colors/combinations, contact Factory for availability.

#### **Environmental Rating**

IEC IP67

T8L not encapsulated; K80L has encapsulated electronics only; other models fully encapsulated.

**K50, K50L, and K50FL QD Models** meet IP69K per DIN 40050-9. Cabled models also meet IP69K if the cable and cable entrance are protected from high-pressure spray.

#### Connections

**K80L Models:** 4-pin Euro-style integral QD (Q) standard. Terminal-wired models available for use with bulk cable; compression fitting optional. Contact Factory for cable information.

**T8L Models:** 4-pin Euro-style, 6" pigtail QD (QP), or 4-wire, 2 m (6.5') integral cable, depending on model

Other Models: 4-pin Euro-style integral QD (Q), 6" pigtail QD (QP), or 4-wire, 2 m (6.5') integral cable, depending on model

#### **Operating Conditions**

**Temperature:**  $-40^{\circ}$  to  $+50^{\circ}$  C ( $-40^{\circ}$  to  $+122^{\circ}$  F)

<sup>\*\*</sup> Contact Factory for other colors/color combinations, including: blue, white, orange.

#### **Dimensions** T18 Models T30 Models **T8 Models −**−15. 8 mm (0.62") Ø 40.0 mm 8.8 mm (0.35") 63.7 mm (2.51") 53.6 mm M30 x 1.5 Thread 19.1 mm (0.75") 33.0 mm 45.0 mm ø16.3 mm (1.77") (0.64") Ø 15 mm . 150 mm (6") Euro-style PVC Pigtail M18 Models **K30L Models K50L Models** 50.0 mm (1.97") 30.0 mm (1.18") 36.8 mm (1.45")\* 58.0 mm (2.28") M30x1 (mounting nut included) 20.0 mm (0.79") 31.0 mm (1.22") max, torque 4.5 Nm (40 lbf in) 11.0 mm (0.43") max. torque 2.25 Nm (20 lbf in) M12 X 1 -16.0 mm (0.63") M12 X 1 1/2 -14 NPSM internal threads **K80L Models K50FL Models** 44.6 [1.76"] 109.5 mm (4.31") Ø50 [1.97"] [2.36"] 35.0 65.0 mm (2.56") [1.38"] 2x 5.0 [0.20"] Internal Threads ½ - 14 NPSM Max. Torque 2.25 Nm (20 in-lbf) 16.0 [0.63"] — 2x 5.5 [0.21"] 4X Ø 5.5 mm (Ø 0.22") Forque 1.12 Nm (10 in–lbf) with supplied screws 17.0 [0.67"] \_ 26.0 mm (1.02") 2x 5.0 [0.20"] 4X 8-32 UNC Max. Torque 1.12 Nm (10 in-lbf) Hookups

# **NPN Models PNP Models** Pin 1 ←

## **EZ-LIGHT**<sup>™</sup> – General-Purpose Indicators with Two or Three Colors

#### Quick-Disconnect (QD) Cordsets

| Style                              | Model                                  | Length                               | Dimensions   | Pinout                           |
|------------------------------------|--|--------------------------------------|--|----------------------------------|
| 4-pin<br>Euro-style<br>straight    | MQDC-406<br>MQDC-415<br>MQDC-430       | 2 m (6.5')<br>5 m (15')<br>9 m (30') | 44 mm max.<br>(1.7")   | White (wh) Wire  Brown (bn) Wire |
| 4-pin<br>Euro-style<br>right-angle | MQDC-406RA<br>MQDC-415RA<br>MQDC-430RA | 2 m (6.5')<br>5 m (15')<br>9 m (30') | 38 mm max.<br>(1.5")<br>38 mm max.<br>(1.5")<br>M12 x 1<br>ø 15 mm<br>(0.6") | (1) Black (bk) Wire (3)          |

Bulk cable for terminal-wired K80L models: Contact Factory.

#### **Accessory Mounting Brackets\***

| SMB18A  | For use with M18 and T18 models or base-mount T30 models     12-gauge, stainless steel, right-angle bracket, curved mounting slot for adjustable orientation     Clearance for M4 (#8) hardware | O CO |
|---|---|------|
| Other<br>available<br>18 mm dia.<br>brackets: | SMB1815SF SMB18Q<br>SMB18SF SMB312PD<br>SMBAMS18RA SMBAMS18P  |      |
| SMB22A  | For use with base-mount K30L models     12-gauge, stainless steel, right-angle bracket, curved mounting slot for adjustable orientation     Clearance for M4 (#8) hardware                      | -    |

| SMB30A                               | For use with T30 models or base-mount K50L models     30 mm 12-gauge, 304 stainless steel, right-angle mounting bracket, curved mounting slot for adjustable orientation     Clearance for M5 (#10) hardware |  |
|--------------------------------------|--|--|
| Other available 30 mm dia. brackets: | SMBAMS30RA SMBAMS30P<br>SMB30SC SMB30SC<br>SMB30MM SMB3018SC   |  |
| SMB8MM                               | <ul><li>For use with T8L models</li><li>Right-angle bracket</li><li>300 series stainless steel</li></ul>   |  |
| SMBDX80D                             | DIN-mount bracket for K80L models     Hardware included to mount to K80L housing     ABS   |  |

<sup>\*</sup> K50FL models include a 48 mm (1.9") circular velcro mounting kit for easy mounting with no additional hardware

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**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.