# Features



Banner's TL70 Tower Light is a 70 mm, modular LED indicator with extremely bright and uniform light. The modularity gives the user flexibility to customize tower lights as needed and change positions in the field. The TL70 is also available preassembled for easy installation.

- 100 to 240 V AC operation
- Connection options include 1/2-20 quick disconnect and cabled versions
- Uses the same light and audible segments as the DC voltage powered TL70
- Light segments have user-selectable solid ON or flashing
- Up to six colors, or five colors plus audible, in one device
- Rugged, water-resistant IP65 housing with UV-stabilized material
- Bright, uniform indicator segments appear gray when off to eliminate false indications from ambient light

# Models

*TL70 Base - Model Key*

| Housing | Power | — | Connection[1] | Housing Color |
|---|---|---|---|---|
| **B-TL70** | **Z** | **—** | **Q5** | |
| Base segment | Z = AC | | 5 = 2 m (6.5 ft) unterminated 5-wire PVC-jacketed cable (1-4 modules)<br>7 = 2 m (6.5 ft) unterminated 7-wire PVC-jacketed cable (5-6 modules)<br>Q5 = Integral 5-pin 1/2 in. 20UNF male quick-disconnect connector (1-4 modules) | Blank = Black<br>C = Gray |

*TL70 Segments - Model Key*

| Housing | — | Color/Alarm | Housing Color |
|---|---|---|---|
| **SG-TL70** | **—** | **R** | |
| TL70 Segment | | G = Green<br>Y = Yellow<br>R = Red<br>B = Blue<br>W = White<br>O = Orange<br>A = Standard Audible<br>AL = Loud Audible<br>ALM = Loud Multi-Tone Audible<br>AP = Programmable Audible | Blank = Black<br>C = Gray |

Select the 5-pin/wire base for tower light configurations of up to 4 modules. Select the 7-wire base for tower light configurations of up to 6 modules.

- Example base model number: B-TL70Z-Q5
- Example light segment model number: SG-TL70-G
- Example audible segment model number: SG-TL70-A

*TL70 Pre-Assembled Models - Model Key*

| Housing | Color/Position | | | | | | Audible Alarm[2] | Housing Color | Connection[1] |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | | | |
| **TL70Z** | **W** | **B** | **G** | **Y** | **R** | | | | **Q** |

Continued on page 2

[1] Quick-disconnect connector models require a mating cordset.
[2] Not available with six module lights.

Original Instructions
28-Aug-25

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191349
p/n: 191349 Rev. E

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Continued from page 1

| Housing | Color/Position | | | | | | Audible Alarm | Housing Color | Connection[1] |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | | | |
| | Blank = None<br>G = Green<br>Y = Yellow<br>R = Red<br>B = Blue<br>W = White<br>O = Orange | | | | | | Blank = None<br>A = Standard Audible<br>AL = Loud Audible<br>AP = Programmable Audible | Blank = Black<br>C = Gray | Blank = 2 m (6.5 ft) integral PVC-jacketed cable<br>Q = Integral 5-pin 1/2 in. 20UNF male quick-disconnect connector[3] |

- Example pre-assembled model number: TL70ZGYRAQ.

Use a 5-pin cordset for 1 to 4 modules.

**WARNING:**
- **Risk of hearing loss**
- All effective warning horns produce loud sounds that could cause, in certain situations, permanent hearing loss.
- Install the device far enough away from potential listeners to limit their exposure while still maintaining its effectiveness. Reference OSHA Code of Federal Regulations 1910.95 Noise Standard for guidelines about permissible noise exposure levels.

For more information regarding other TL70 Audible models, refer to the following documents:

- TL70 Loud Multi-Tone Audible Tower Light Module datasheet (p/n 195189)
- TL70 Programmable Audible Tower Light Module datasheet (p/n 196627)

# Configuring the Modules




Turn on the appropriate DIP switch to set the order of the components, counting up from the tower light's base.

[3] Limited to four module lights.


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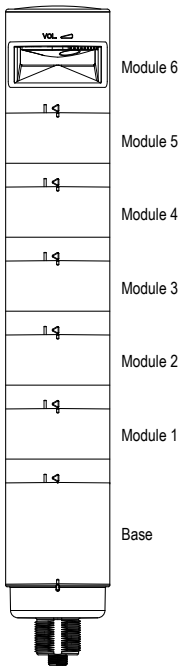
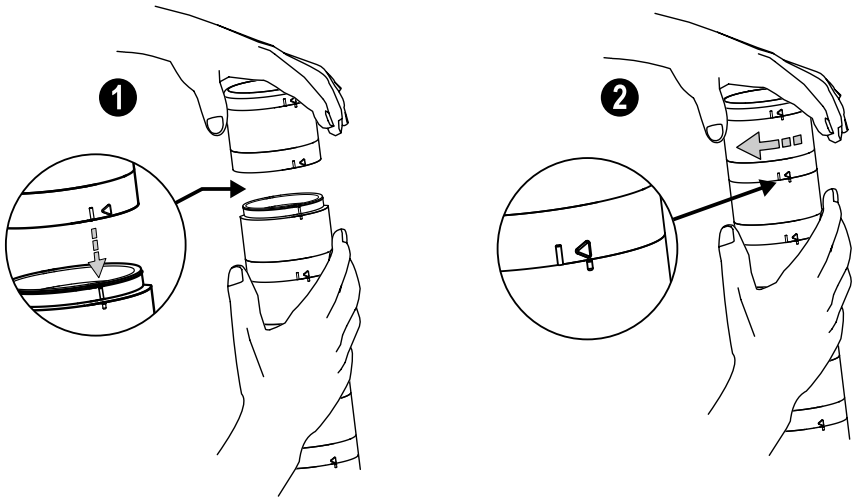



| Assembly Options | | DIP Switches | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Light and Standard Audible Components | Module 1 | ON | | | | | | | |
| | Module 2 | | ON | | | | | | |
| | Module 3 | | | ON | | | | | |
| | Module 4 | | | | ON | | | | |
| | Module 5 | | | | | ON | | | |
| | Module 6 | | | | | | ON | | |
| Light and Module Flash Rate | 3 Hz | | | | | | | ON | OF |
| | 1.5 Hz | | | | | | | ON | ON |
| | Solid On* | | | | | | | OFF | OFF |
| Standard Audible Module Settings | Pulse 1.5 Hz | | | | | | | ON | OFF |
| | Chirp Alarm | | | | | | | ON | ON |
| | Siren Alarm | | | | | | | OFF | ON |
| | Continuous Alarm* | | | | | | | OFF | OFF |

| Assembly Options | | DIP Switches | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Loud Audible Module Settings | Pulse 1.5 Hz | | | | | | | ON | OFF | | |
| | Chirp Alarm | | | | | | | ON | ON | | |
| | Siren Alarm | | | | | | | OFF | ON | | |
| | Continuous Alarm* | | | | | | | OFF | OFF | | |
| | Low Intensity* | | | | | | | | | OFF | OFF |
| | Med. Intensity | | | | | | | | | ON | OFF |
| | Med./Loud Intensity | | | | | | | | | OFF | ON |
| | Loud Intensity | | | | | | | | | ON | ON |

* Factory default setting

# Assembling the Modules





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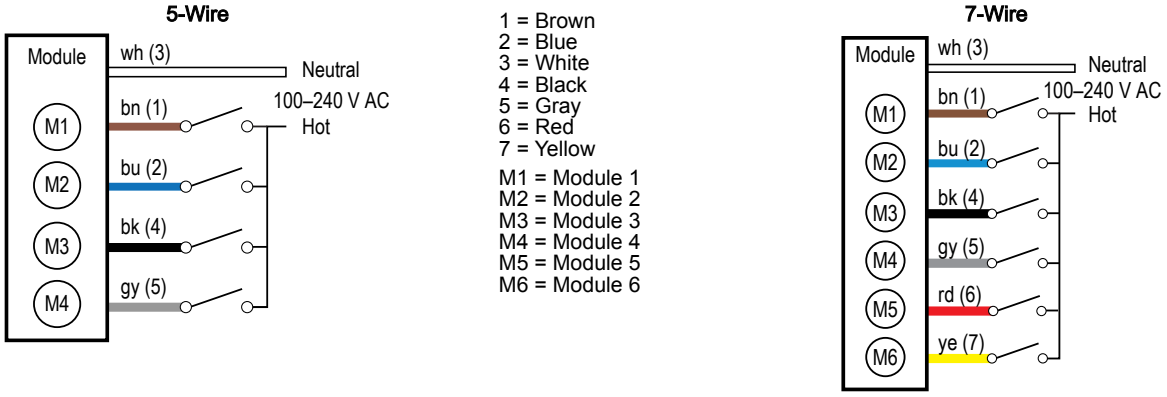
To assemble the modules:

1. Align the notches on each module and press together.
2. Rotate the top module clockwise to lock into place (notches shown in the locked position).

**NOTE:** DIP switches should remain in the default off position.

## Wiring




## Specifications

### Supply Voltage and Current

100 V AC to 240 V AC; 50 Hz to 60 Hz

Maximum current per color or audible module:

70 mA at 120 V AC and 60 Hz
50 mA at 230 V AC and 50 Hz

### Supply Protection Circuitry

Protected against transient voltages

### Leakage Current Immunity

500 µA

Application Note: The use of relay output PLC is recommended since there is no leakage current. Solid state output PLCs often have leakage current above 1 mA and, therefore, turn the light on in the off state. To counteract the leakage current, a shunt resistor must be used. A resistor must be applied from the neutral wire of the device to the hot wire of each channel of the device.

### Indicators

1 to 6 colors depending on model: Green, Red, Yellow, Blue, White, and Orange

Flash rates: 1.5 Hz ±10% and 3 Hz ±10%

LEDs are independently selected

### Indicator Response Time

Off Response: 20 ms (maximum)

On Response: 240 ms (maximum)

### Indicator Characteristics

| Color | Dominant Wavelength (nm) or Color Temperature (CCT) | Color Coordinates[4] | | Lumen Output (Typical at 25 °C) |
|---|---|---|---|---|
| | | x | y | |
| Green | 525 nm | – | – | 92 |
| Red | 625 nm | – | – | 40 |
| Yellow | 590 nm | – | – | 22 |
| Blue | 470 nm | – | – | 32 |
| White | 5000 K | – | – | 125 |
| Orange | – | 0.66 | 0.33 | 33 |

### Audible Alarm

**Standard Audible Alarm:** 2.6 kHz ± 250 Hz oscillation frequency; maximum intensity (typical) 92 dB at 1 m (3.3 ft)

**Loud Audible Alarm:** 2.6 kHz ± 250 Hz oscillation frequency; maximum intensity (typical) at 1 m (3.3 ft) (see table)

| DIP Switches | | Max Intensity (Loud Audible) |
|---|---|---|
| 9 | 10 | |
| ON | ON | Intensity 4: 101 dB |
| OFF | ON | Intensity 3: 99 dB |
| ON | OFF | Intensity 2: 92 dB |
| OFF | OFF | Intensity 1: 85 dB |

[4] Refer to CIE 1931 chromaticity diagram or color chart, to show equivalent color with indicated color coordinates.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**Audible Adjustment**

**Standard Audible Alarm:** Mechanical adjustment: Rotate the cover until the desired volume is reached

**Loud Audible Alarm:** Electronic adjustment: Select the desired volume using DIP switches 9 and 10

**Typical Reduction in Sound Intensity with Audible Adjustment (maximum to minimum):**

- **Standard Audible:** 8 dB
- **Loud Audible:** 16 dB

**Construction**

Bases, segments, covers: polycarbonate

**Connections**

Integral 5-pin 1/2 in. 20UNF male quick-disconnect connector, 2 m (6.5 ft) unterminated 5-wire PVC-jacketed cable, or 2 m (6.5 ft) unterminated 7-wire PVC-jacketed cable, depending on model

**Vibration and Mechanical Shock**

Vibration: 10 Hz to 55 Hz, 0.5 mm peak-to-peak amplitude per IEC 60068-2-6

Shock: 15G 11 ms duration, half sine wave per IEC 60068-2-27

**Operating Conditions**

–40 °C to +50 °C (–40 °F to +122 °F)

95% at +50 °C maximum relative humidity (non-condensing)

**Environmental Rating**

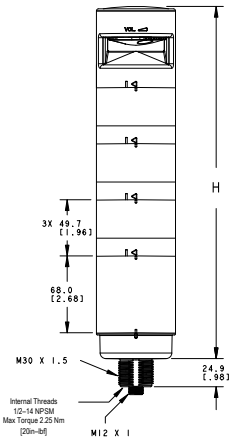
IP65

**Certifications**

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

# Dimensions

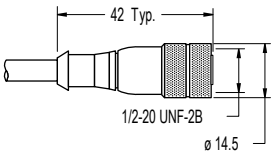
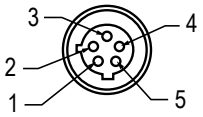
All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

| Image | Model | Height (H) |
|---|---|---|
|  | 1 light module | 155.6 mm (6.13 in) |
| | 1 light module, 1 audible module | 212.3 mm (8.36 in) |
| | 2 light modules | 205.3 mm (8.08 in) |
| | 2 light modules, 1 audible module | 262 mm (10.31 in) |
| | 3 light modules | 255 mm (10.04 in) |
| | 3 light modules, 1 audible module | 311.7 mm (12.27 in) |
| | 4 light modules | 304.7 mm (12 in) |
| | 4 light modules, 1 audible module | 361.4 mm (14.23 in) |
| | 5 light modules | 354.4 mm (13.95 in) |
| | 5 light modules, 1 audible module | 411.1 mm (16.19 in) |
| | 6 light modules | 404.1 mm (15.91 in) |

# Accessories

## Cordsets

All measurements are listed in millimeters, unless noted otherwise. The measurements provided are subject to change.

| 5-Pin Single-Ended 1/2-in Dual Key Female Cordsets | | | | |
|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout (Female)** |
| **MQAC2-506** | 2 m (6.56 ft) | Straight |  |  1 = Brown<br>2 = Blue<br>3 = White<br>4 = Black<br>5 = Gray |
| **MQAC2-515** | 5 m (16.4 ft) | | | |
| **MQAC2-530** | 9.14 m (30 ft) | | | |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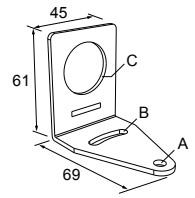
# Mounting Brackets

All measurements are listed in millimeters, unless noted otherwise. The measurements provided are subject to change.

**SMB30A**

- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-gauge stainless steel

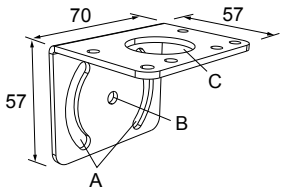
**Hole center spacing:** A to B=40
**Hole size:** A=ø 6.3, B= 27.1 × 6.3, C=ø 30.5




**SMB30MM**

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

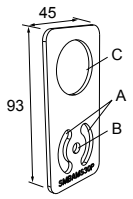
**Hole center spacing:** A = 51, A to B = 25.4
**Hole size:** A = 42.6 × 7, B = ø 6.4, C = ø 30.1




**SMBAMS30P**

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

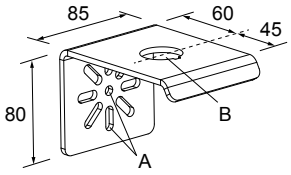
**Hole center spacing:** A=26.0, A to B=13.0
**Hole size:** A=26.8 × 7.0, B=ø 6.5, C=ø 31.0




**SSA-MBK-EEC1**

- Single 30 mm hole
- 8 gauge steel, black finish (powder coat)
- Front surface for customer-applied labels

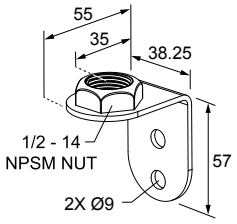
**Hole size:** A = ø 7 , B = ø 30




**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

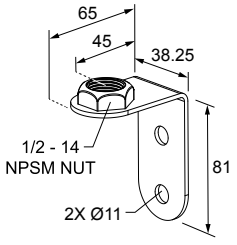
**Hole center spacing:** 20.0




**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





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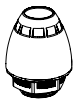
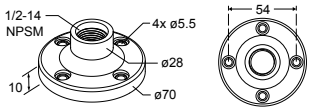
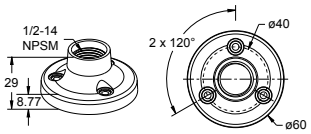
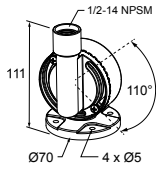
# Elevated Mount System

| Model | | | Description | Components |
|---|---|---|---|---|
| **SA-M30** - Black Polycarbonate | | | • Streamlined black PC or Gray PC thread cover<br>• Covers the outer M30 threads on the light's base<br>• Mounting hardware included |  |
| **SA-M30C** - Gray Polycarbonate | | | | |
| **Polished 304 Stainless Steel** | **Black Anodized Aluminum** | **Clear Anodized Aluminum** | • Elevated-use stand-off pipe (½ in. NPSM/DN15)<br>• Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface<br>• ½ in. NPT thread at both ends: one end screws into the internal threads of the light's base, and one end screws into the mounting base adapter/cover<br>• Compatible with most industrial environments |  |
| **SOP-E12-150SS**<br>150 mm (6 in) long | **SOP-E12-150A**<br>150 mm (6 in) long | **SOP-E12-150AC**<br>150 mm (6 in) long | | |
| **SOP-E12-300SS**<br>300 mm (12 in) long | **SOP-E12-300A**<br>300 mm (12 in) long | **SOP-E12-300AC**<br>300 mm (12 in) long | | |
| **SOP-E12-900SS**<br>900 mm (36 in) long | **SOP-E12-900A**<br>900 mm (36 in) long | **SOP-E12-900AC**<br>900 mm (36 in) long | | |
| **SA-E12M30** - Black Acetal | | | • Streamlined black acetal or white UHMW mounting base adapter/cover<br>• Connects between ½ in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole<br>• Mounting hardware included |  |
| **SA-E12M30C** - White UHMW | | | | |

| **Pipe Mounting Flange** | | | |
|---|---|---|---|
| **Model** | **Description** | **Construction** | |
| **SA-F12** | • Elevated-use stand-off pipes (½ in, NPSM/DN15)<br>• M5 mounting hardware and nitrile gasket included | Die-cast zinc base with black paint |  |
| **SA-F12-3** | • Elevated-use stand-off pipes (½ in, NPSM/DN15)<br>• M4 mounting hardware and nitrile blend gasket included | Black Polycarbonate |  |

| **Foldable Mounting Brackets** | | | |
|---|---|---|---|
| **Model** | **Description** | **Construction** | |
| **SA-FFB12** | • For use with 1/2 inch stand-off pipes<br>• Stainless steel hardware | Black polycarbonate |  |
| **SA-FFB12C** | | Gray polycarbonate | |

# LMB Sealed Right-Angle Bracket

| Model | Description | |
|---|---|---|
| **LMB30RA** - Black polycarbonate<br>**LMB30RAC** - Gray polycarbonate | • **Direct-Mount Models**<br>• Bracket kit with base, 30 mm adapter, set screw, fasteners, O-rings, and gaskets. |  |

Continued on page 8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Continued from page 7

| Model | Description | |
|---|---|---|
| **LMBE12RA** - Black polycarbonate<br>**LMBE12RAC** - Gray polycarbonate | • **Pipe-Mount Models**<br>• Bracket kit with base, ½-14 pipe adapter, set screw, fasteners, O-rings, and gaskets<br>• For use with stand-off pipe (listed and sold separately) |  |

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