

TL70 Modular Tower Light



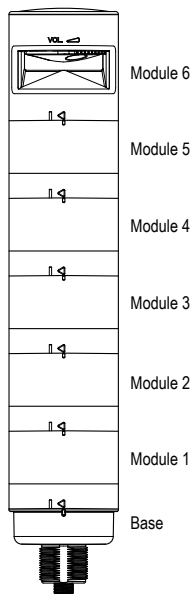
Quick Start Guide

This guide is designed to help you set up and install the TL70 Modular Tower Light. For complete information on programming, performance, troubleshooting, dimensions, and accessories, please refer to the Instruction Manual at www.bannerengineering.com. Search for p/n 182214 to view the Instruction Manual. Use of this document assumes familiarity with pertinent industry standards and practices.

Configuring the Modules



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



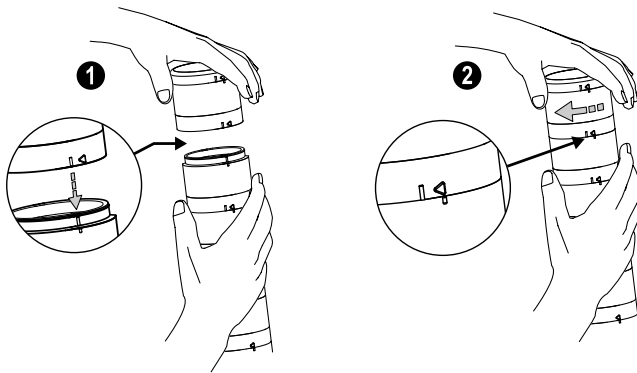
| Assembly Options | | DIP Switches | | | | | | | |
|---------------------------------------|-------------------|--------------|----|----|----|----|----|-----|-----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Light and Standard Audible Components | Module 1 | ON | | | | | | | |
| | Module 2 | | ON | | | | | | |
| | Module 3 | | | ON | | | | | |
| | Module 4 | | | | ON | | | | |
| | Module 5 | | | | | ON | | | |
| | Module 6 | | | | | | ON | | |
| Light Module Flash Rate | 3 Hz | | | | | | | ON | OFF |
| | 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

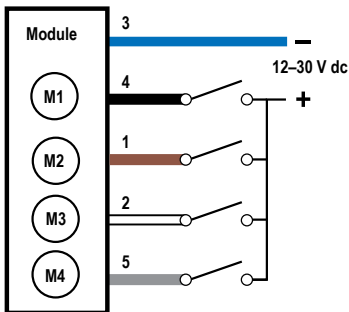


To assemble the modules:

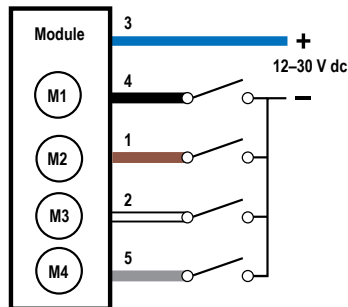
1. Align the notches on each module and press together.
2. Rotate the top module clockwise to lock into place (notches shown in the locked position).

Wiring Diagrams

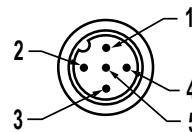
PNP Input



NPN Input



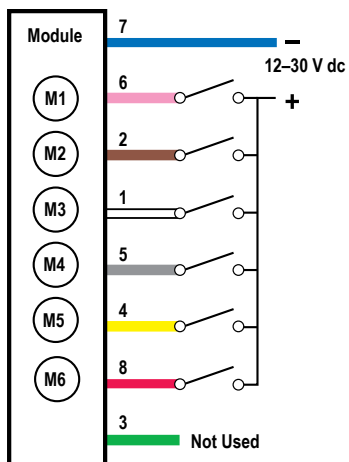
Euro-style Male Pinouts



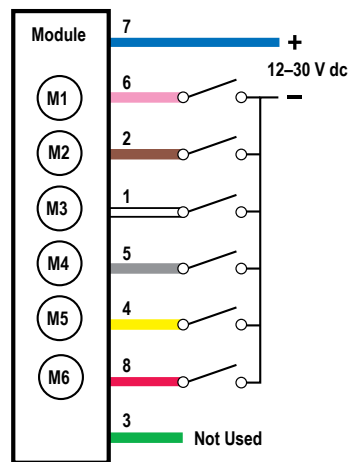
Key

- 1 = brown
- 2 = white
- 3 = blue
- 4 = black
- 5 = gray
- M1 = Module 1
- M2 = Module 2
- M3 = Module 3
- M4 = Module 4

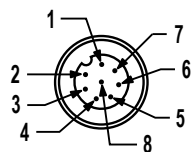
PNP Input



NPN Input



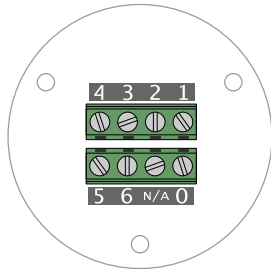
Euro-style Male Pinouts



Key

- 1 = white
- 2 = brown
- 3 = green
- 4 = yellow
- 5 = gray
- 6 = pink
- 7 = blue
- 8 = red
- M1 = Module 1
- M2 = Module 2
- M3 = Module 3
- M4 = Module 4
- M5 = Module 5
- M6 = Module 6

Wiring Terminal Block



Terminal Block Key

- 0 = dc common
- 1 = Module 1
- 2 = Module 2
- 3 = Module 3
- 4 = Module 4
- 5 = Module 5
- 6 = Module 6

Specifications

Supply Voltage and Current 12 V dc to 30 V dc

| Indicator Color or Audible Model | Maximum Current (mA) | |
|----------------------------------|----------------------|------------|
| | at 12 V dc | at 30 V dc |
| Blue, Green, White | 420 | 150 |
| Red, Yellow, Orange | 285 | 120 |
| Standard Audible | 30 | 30 |
| Loud Audible (Intensity 1) | 30 | 25 |
| Loud Audible (Intensity 2) | 50 | 40 |
| Loud Audible (Intensity 3) | 165 | 75 |
| Loud Audible (Intensity 4) | 350 | 120 |

Supply **Protection** Circuitry Protected against transient voltages

Indicators
1 to 6 colors depending on model (Green, Red, Yellow, Blue, White, and Orange)
LEDs are independently selected
Flash Rates: 1.5 Hz \pm 10% and 3 Hz \pm 10%

Indicator Response Time
Off Response: 150 μ s (maximum) at 12 to 30 V dc
On Response: 180 ms (maximum) at 12 V dc; 50 ms (maximum) at 30 V dc

Audible Alarm

Standard Audible: 2.6 kHz \pm 250 Hz oscillation frequency; maximum intensity (typical) 92 dB at 1 m (3.3 ft)
Loud Audible: 2.6 kHz \pm 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 |

Audible Adjustment

Standard Audible: Rotate the cover until the desired volume is reached
Loud Audible Alarm: 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

Indicator Characteristics

| Color | Dominant Wavelength (nm) or Color Temperature (CCT) | Color Coordinates ¹ | | 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 |

Connections

5-pin M12/Euro-style quick disconnect connector, 8-pin M12/Euro-style quick disconnect connector, 150 mm (5.9 in) PVC cable with an M12/Euro-style quick disconnect connector, terminal block, or 2 m (6.5 ft) unterminated cable, depending on model

Terminal Block Models
14 to 28 AWG wire

Operating Conditions

-40 °C to +50 °C (-40 °F to +122 °F)
95% at +50 °C maximum relative humidity (non-condensing)

Environmental Rating

IEC IP65

Certifications



Vibration and Mechanical Shock

Vibration 10 Hz to 55 Hz 0.5 mm p-p amplitude per IEC 60068-2-6
Shock 15G 11 ms duration, half sine wave per IEC 60068-2-27

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.

| Supply Wiring (AWG) | Required Overcurrent Protection (Amps) |
|---------------------|--|
| 20 | 5.0 |
| 22 | 3.0 |
| 24 | 2.0 |
| 26 | 1.0 |
| 28 | 0.8 |
| 30 | 0.5 |

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¹ Refer to CIE 1931 chromaticity diagram or color chart, to show equivalent color with indicated color coordinates.