

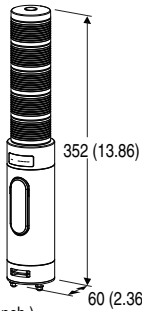
## Tower Light Series

### DISCRETE INPUT TOWER LIGHT

(small size, 50 mm dia., 1 - 5 layers)

#### Functions & Features

- Discrete input tower light
- Lighting, blinking and buzzing are controllable with PLC.
- Switchable between positive and negative common for input



Lamp Layers	A
1	224 (8.82)
2	256 (10.08)
3	288 (11.34)
4	320 (12.60)
5	352 (13.86)

**MODEL: IT50SA1-[1][2][3][4][5][6]D1-[7][8]**

#### ORDERING INFORMATION

- Code number: IT50SA1-[1][2][3][4][5][6]D1-[7][8]  
Specify a code from below for each of [1] through [8].  
(e.g. IT50SA1-5RYGBWD1-M2/Q)
- Use Ordering Information Sheet (No. ESU-2375) to select the same color for more than one layer.
- Specify the specification for option code /Q  
(e.g. /C01)

#### [1] LAMP LAYERS

- 1: 1 layer
- 2: 2 layers
- 3: 3 layers
- 4: 4 layers
- 5: 5 layers

#### [2] LAMP 1 COLOR

(1st layer from the top)

- R: Red
- Y: Amber
- G: Green
- B: Blue
- W: White

#### [3] LAMP 2 COLOR

(2nd layer from the top)

- R: Red
- Y: Amber
- G: Green
- B: Blue
- W: White
- N: None (not available when Lamp Layers selected are 2 - 5)

#### [4] LAMP 3 COLOR

(3rd layer from the top)

- R: Red
- Y: Amber
- G: Green
- B: Blue
- W: White
- N: None (not available when Lamp Layers selected are 3 - 5)

#### [5] LAMP 4 COLOR

(4th layer from the top)

- R: Red
- Y: Amber
- G: Green
- B: Blue
- W: White
- N: None (not available when Lamp Layers selected are 4 - 5)

#### [6] LAMP 5 COLOR

(5th layer from the top.)

- R: Red
- Y: Amber
- G: Green
- B: Blue
- W: White
- N: None (not available when Lamp Layers selected are 5)

\* Select "None" option for the layers other than the selected.

#### MOUNTING

- D: Direct mounting

## DESIGN TYPE

1: Type 1  
(refer to outline dimensions)

## [7] POWER INPUT

### AC Power

M2: 100 – 240 V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)

### DC Power

R: 24 V DC  
(Operational voltage range 24 V  $\pm$ 10 %, ripple 10 %p-p max.)

## [8] OPTIONS

blank: none  
/Q: With options (specify the specification)

## SPECIFICATIONS OF OPTION: Q

**COATING (For the detail, refer to M-System's web site.)**

/C01: Silicone coating  
/C02: Polyurethane coating  
/C03: Rubber coating

## RELATED PRODUCTS

- Mounting Pole (model: ITPL)
- Mounting Adapter (model: ITAD1)

## GENERAL SPECIFICATIONS

**Degree of protection:** IP 65, vertical mounting only (bottom excluded)

### Connection

**Power:** UL1007 AWG20

**Input:** UL1007 AWG22

**Housing material:** Flame-resistant resin

**Lens:** Flame-resistant resin (transparent)

**Isolation:** Input to power input to FE1 (Functional Earth) (M2 power input only)

**DIP SW Setting:** Refer to the instruction manual

- Buzzer volume level
- Buzzer intermittent frequency
- Lamp blinking frequency

**Lamp:** Red, amber, green, blue and white LEDs on/blinking (approx. 2 Hz, 10 Hz)

### Status indicator

**Power:** Green LED turns ON in normal operating conditions.

**Buzzing:** Approx. 3.3 kHz

**Interval:** continuous/intermittent (approx. 2 Hz, 10 Hz)

## INPUT SPECIFICATIONS

■ **Discrete Input:** Dry contact, open collector PNP or NPN

**Conformity contact:**

**Load voltage:**  $\geq$  35 V DC

**Load current:**  $\geq$  50 mA/point

**Residual voltage:**  $\leq$  0.5 V

**Leakage current:**  $\leq$  0.1 mA

PNP is not available for 100 – 240 V AC power.

## INSTALLATION

### Power consumption

• **AC:** Approx. 5 VA at 100 V

Approx. 7 VA at 200 V

Approx. 8 VA at 240 V

• **DC:** Approx. 2.5 W; approx. 100 mA

**Operating temperature:** -10 to +55°C (14 to 131°F)

**Operating humidity:** 30 to 90 %RH (non-condensing)

**Atmosphere:** No corrosive gas

**Mounting:** Direct mounting

**Mounting direction:** Vertical

**Weight:** 700 g (1.5 lb)

## PERFORMANCE

**Insulation resistance:**  $\geq$  100 M $\Omega$  with 500 V DC (M2 power only)

**Dielectric strength:** 1500 V AC @ 1 minute (input to power to FE1; M2 power only)

## STANDARDS & APPROVALS

### EU conformity:

EMC Directive

EN 60947-5-1

Low Voltage Directive

EN 60947-5-1

24 V DC power

Installation Category III

Pollution Degree 3

100 – 240 V AC power

Installation Category II

Pollution Degree 2

Input to power: Reinforced insulation (300 V)

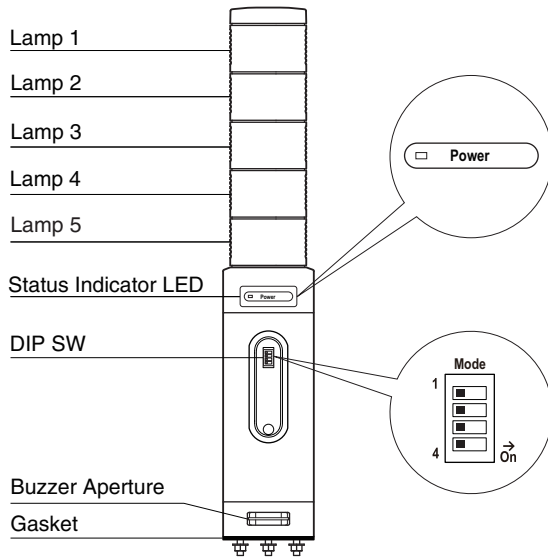
RoHS Directive

**Protection against access to the terminal blocks:**

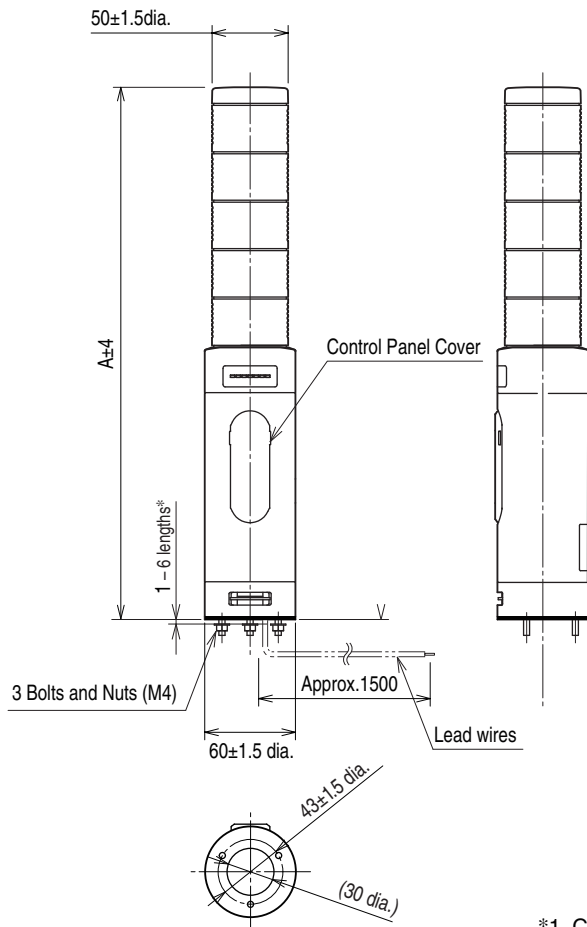
Finger protection (VDE 0660-514)

## EXTERNAL VIEW

### ■ FRONT VIEW (with the cover open)



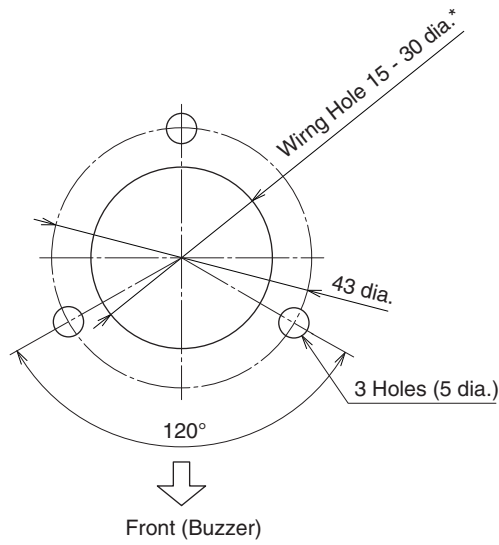
## EXTERNAL DIMENSIONS unit: mm



Lamp Layers	A
1	224
2	256
3	288
4	320
5	352

\*1. Consult M-System for other bolt length.

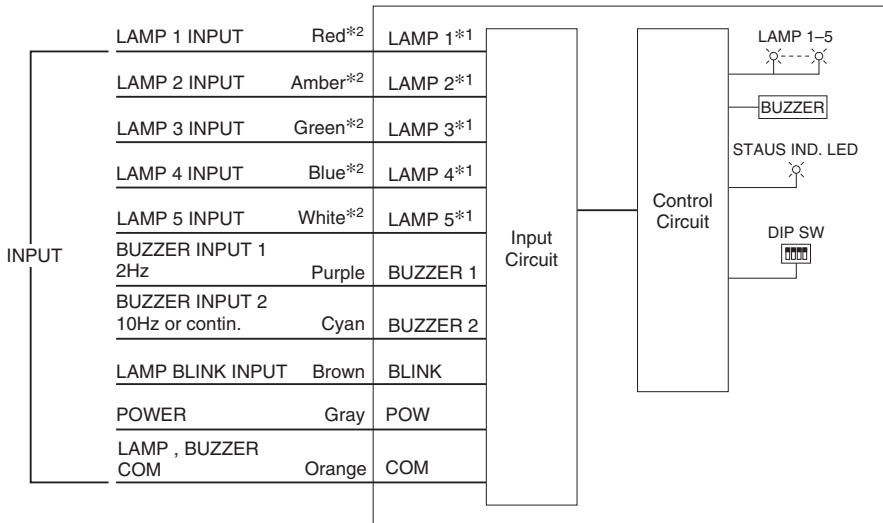
**MOUNTING REQUIREMENTS unit: mm**



\*Protect wires to prevent scratching them at the edge of the compartment.

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

### ■ DC POWER

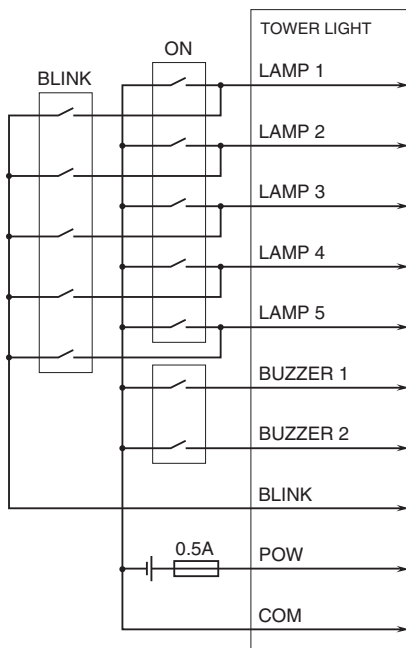


\*1. Example of 5 layers in order: red, amber, green, blue and white.  
Lamp and wire color are the same.

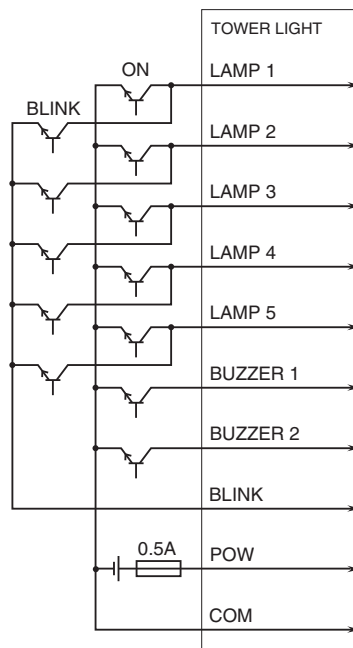
\*2. When selecting the same color for more than one layer, cable colors comply with ordering information sheet.

### ■ WIRING TO INPUT SIGNAL

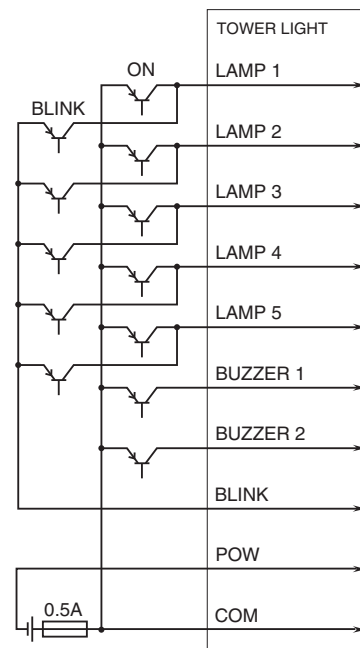
#### • Contact input e.g.



#### •NPN input e.g.

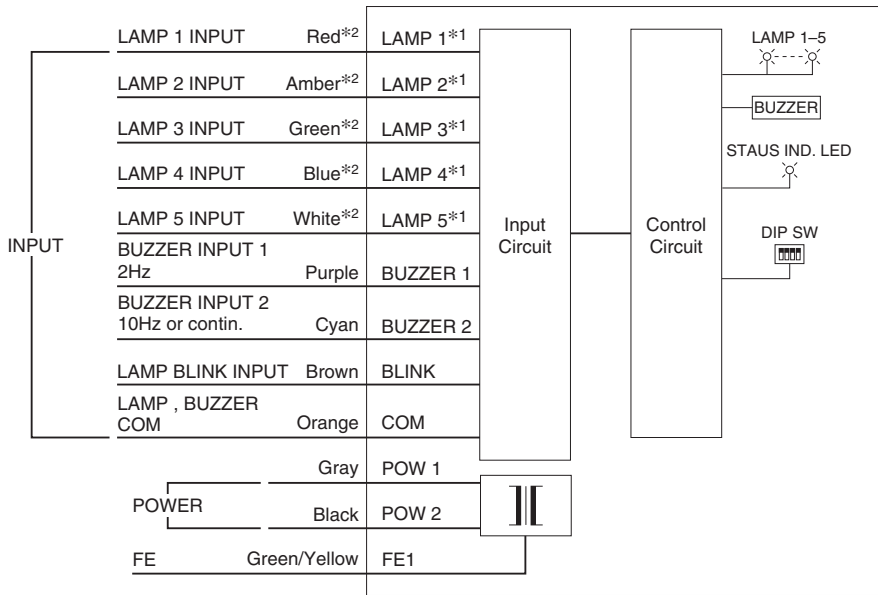


#### •PNP input e.g.



Note 1: Do not set lamp ON input to "On" and BLINK input to "Blink" at the same time whatsoever, it might result in shortcircuit.

## ■ AC POWER

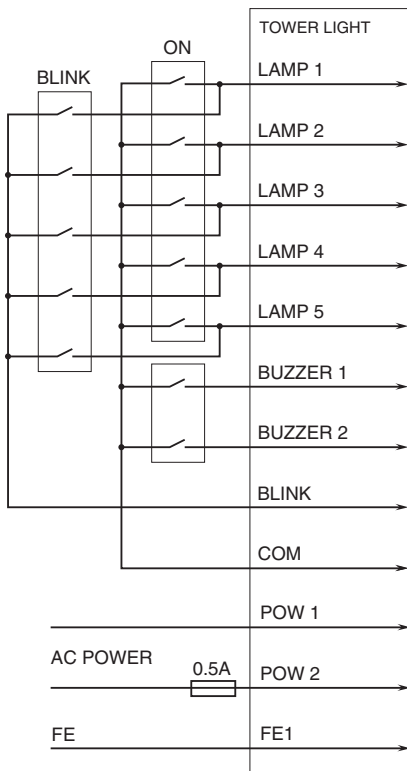


\*1. Example of 5 layers in order: red, amber, green, blue and white.  
Lamp and wire color are the same.

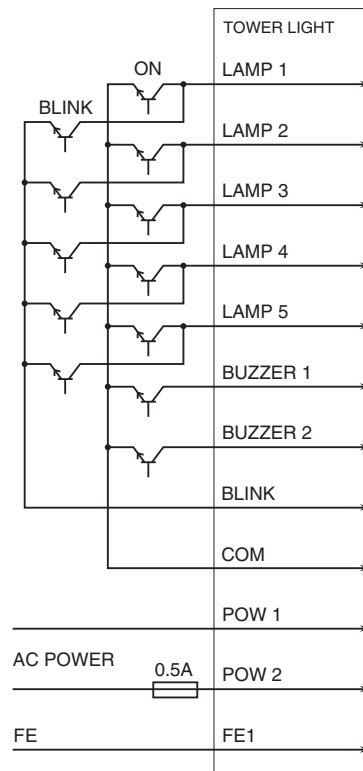
\*2. When selecting the same color for more than one layer, cable colors comply with ordering information sheet.

## ■ WIRING TO INPUT SIGNAL

• Contact input e.g.



•NPN input e.g.



Note 1: Do not set lamp ON input to "On" and BLINK input to "Blink" at the same time whatsoever, it might result in shortcircuit.

Note 2: In order to improve EMC performance, bond the FE1 terminal to ground.

Caution: FE1 terminal is NOT a protective conductor terminal.



Specifications are subject to change without notice.