

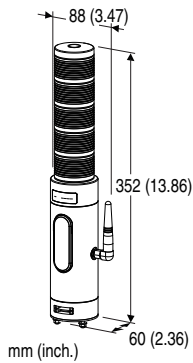
Tower Light Series

WIRELESS LAN TOWER LIGHT

(small size, 50 mm dia., Modbus/TCP, 1 - 5 layers, bridge)

Functions & Features

- Lighting, blinking and buzzing available with contact input or PC via Modbus/TCP.
- Contact input status acquisition available through wireless LAN.
- Connection to network with bridge function, in remote I/O Ethernet type via wireless LAN.
- Wireless LAN connection complied with IEEE802.11b/g/n
- Nondirectional antenna (360°horizontal)



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

MODEL: IT50SW1-[1][2][3][4][5][6]D2-R[7]

ORDERING INFORMATION

- Code number: IT50SW1-[1][2][3][4][5][6]D2-R[7]
- Specify a code from below for each of [1] through [7].
(e.g. IT50SW1-5RYGBWD2-R/Q)
- 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

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

N: None (not available when Lamp Layers selected are 5)

* The selection of the same color for more than one layer is not available.

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

MOUNTING

- D: Direct mounting

DESIGN TYPE

2: Type 2
(refer to outline dimensions)

POWER INPUT

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

COUNTRY

blank: Japan, EU

[7] 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

- LAN cable (model: ITCA)
 - Mounting Pole (model: ITPL)
 - Mounting Adapter (model: ITAD1)
 - PC configurator software (model: ITCFG)
- Functions are configurable using the PC Configurator Software.
Downloadable at M-System's web site.

GENERAL SPECIFICATIONS

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

Connection

Power: UL1007 AWG20
Input: UL1007 AWG22
Ethernet: RJ-45 Modular Jack

Housing material: Flame-resistant resin

Lens: Flame-resistant resin (transparent)

Isolation: Discrete input or power input to network

DIP SW Setting: Frequency of lamp blinking and buzzing discontinuance, buzzing volume level, output at connection failed and IP address (refer to the instruction manual)

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

Status indicator LEDs: Power, Run
(Refer to the instruction manual)

Buzzing: Approx. 3.3 kHz

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

COMMUNICATION

■ Common spec.

Modbus protocol
Protocol: Modbus/TCP
Data: RTU (Binary)
Port No.: 502

Max. number of socket connections: 10

IP address: 192.168.0.1 (factory setting);
Selectable with PC Configurator Software
(model: ITCFG)

■ Ethernet

Communication Standard: IEEE 802.3u
Transmission: 10BASE-T, 100BASE-TX
Baud rate: 10/100 Mbps (Auto Negotiation function)
Transmission media: 10BASE-T (STP, Category 5) 100BASE-TX (STP, Category 5e)

Max. length of fieldbus segment: 100 meters

IP address: 192.168.0.1 (factory setting);
Selectable with PC Configurator Software
Ethernet indicator LED: Link, Link100, COL

■ Wireless LAN

Communication Standard: IEEE 802.11b/g/n
Frequency range: 2400 - 2483.5 MHz (ch1 - ch13)
Max. transmission distance (optical): Approx. 50 m (depends on setting)
Access mode: infrastructure/ad hoc
Security: WEP 64bit/128bit, WPA (TKIP, AES), WPA2 (TKIP, AES)
Wireless LAN indicator: WLAN1

INPUT SPECIFICATIONS

■ **Discrete Input:** Dry contact, open collector NPN
Input resistance: Approx. 4.4 k Ω
Common: Negative common NPN
ON level: ≤ 5 V / ≥ 3.5 mA (Input - COM)
OFF level: ≥ 18 V DC / ≤ 1 mA (Input - COM)
Input current: ≤ 5.5 mA per point @ 24 V DC

INSTALLATION

Power consumption

•DC: Approx. 5.5 W
Operating temperature: -10 to +55°C (14 to 131°F)
Operating humidity: 30 to 85 %RH (non-condensing)
Atmosphere: No corrosive gas
Mounting: Direct mounting
Mounting direction: Vertical
Weight: 700 g (1.5 lb)

PERFORMANCE

Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC

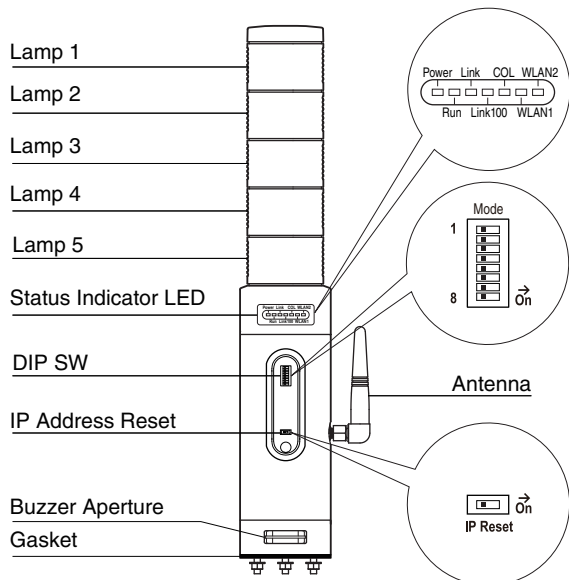
Dielectric strength: 1500 V AC @ 1 minute (discrete input or power to network)

STANDARDS & APPROVALS

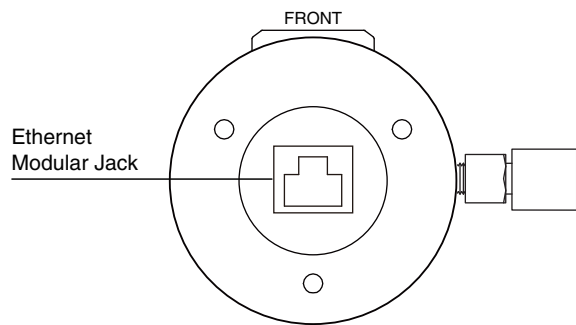
- Built-in module certified under Japanese Radio Law
- **EU conformity:**
 - RE Directive
 - EN 300 328 V2.2.2
 - RoHS Directive
 - EN 301 489-1 V1.9.2
 - EN 60950-1

EXTERNAL VIEW

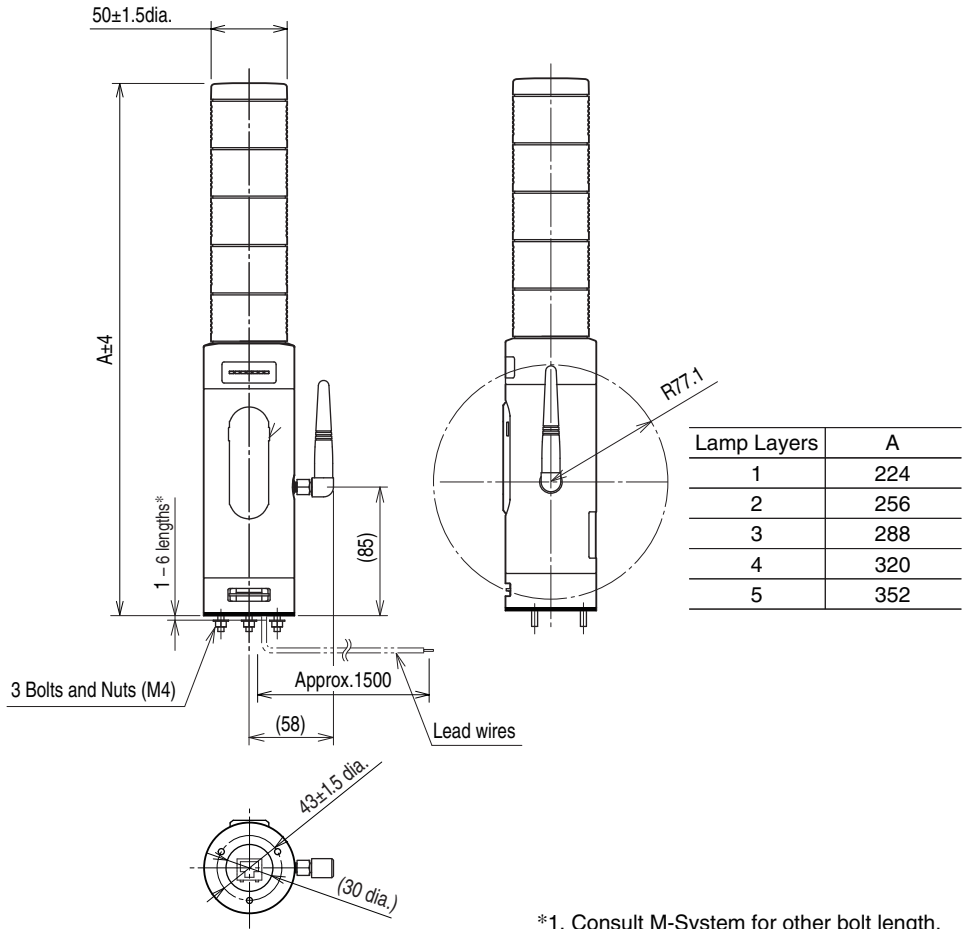
FRONT VIEW (with the cover open)



BOTTOM VIEW

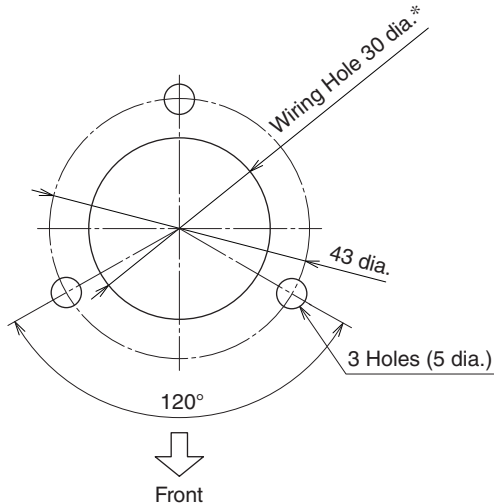


EXTERNAL DIMENSIONS unit: mm



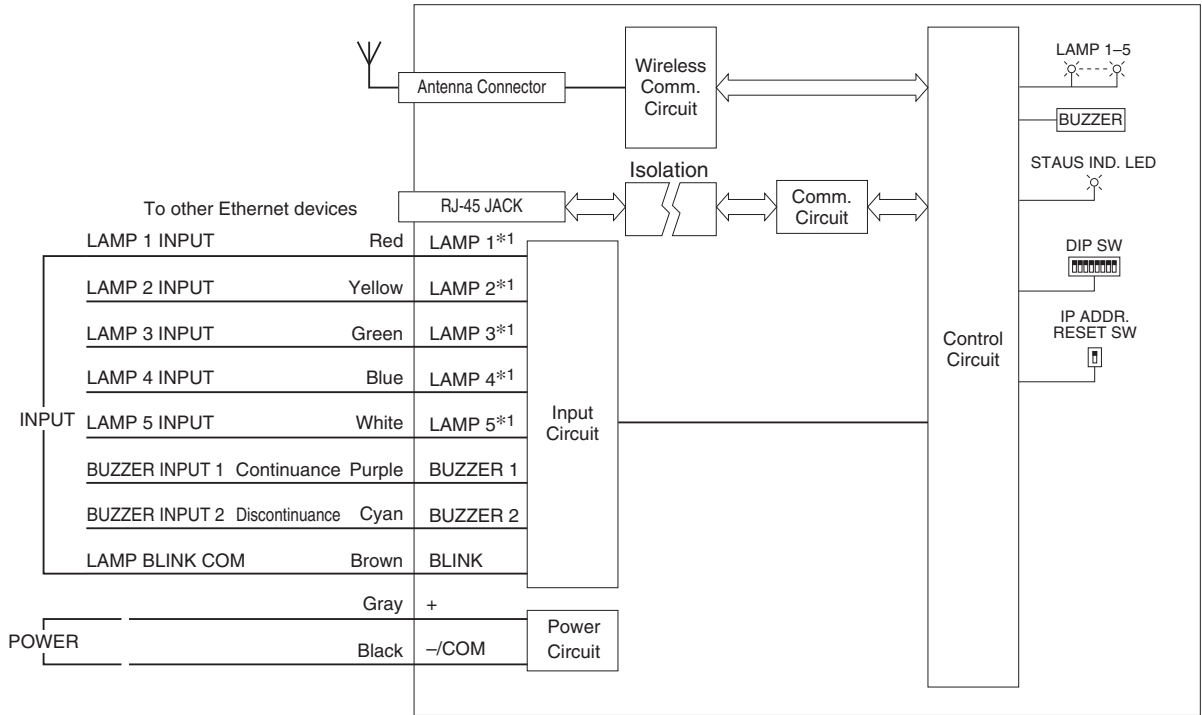
*1. Consult M-System for other bolt length.

MOUNTING REQUIREMENTS unit: mm



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

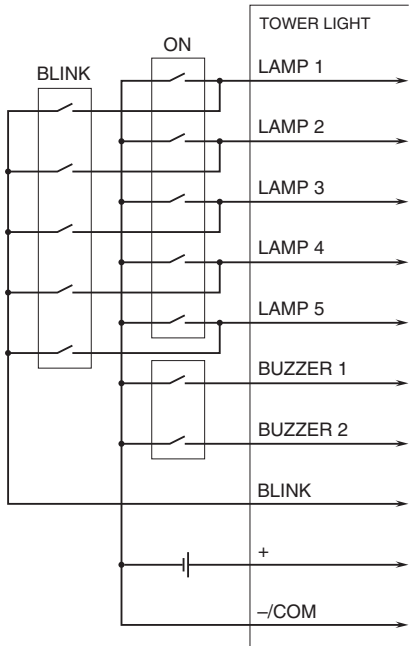
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



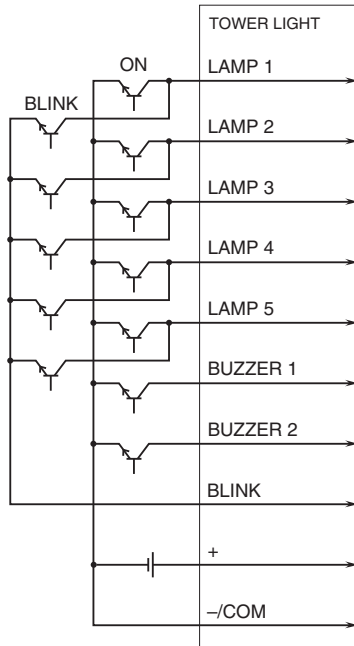
*1. Example of 5 layers in order: red, yellow, green, blue and white.
Lamp and wire color are the same.

■ **WIRING TO INPUT SIGNAL**

• Contact input e.g.



• NPN input e.g.

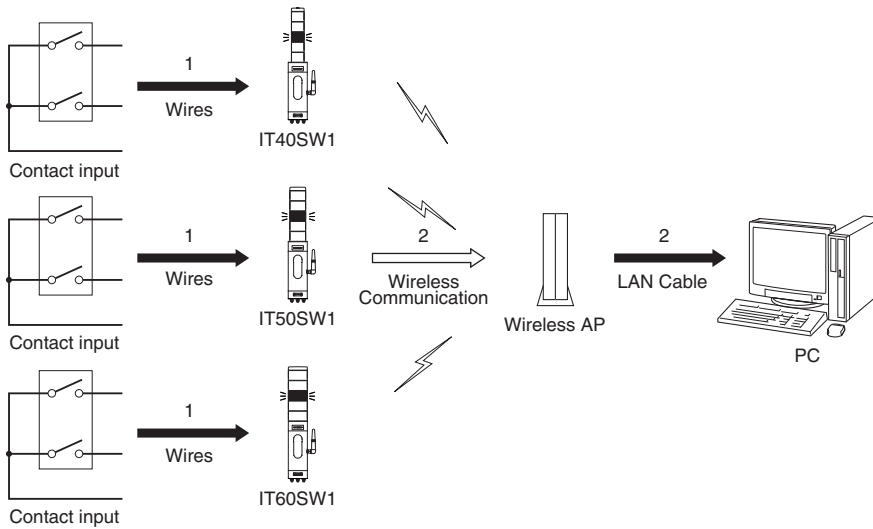


Note 1: If "On" (Continuous) and "Blink" (Intermittent) are set simultaneously for a single lamp (buzzer), "Blink" (Intermittent) is disabled.
The same procedure will be applied also for the others lamps.

SYSTEM CONFIGURATION EXAMPLES

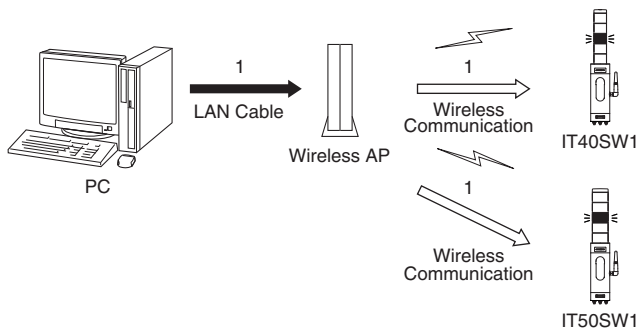
■ EXAMPLE 1: LEDs ON with discrete input. The status is obtained with the PC via wired and wireless communication.

1. Activate the tower light lamp and buzzer with contact input .
2. Acquire data of contact status of tower light lamp with PC.



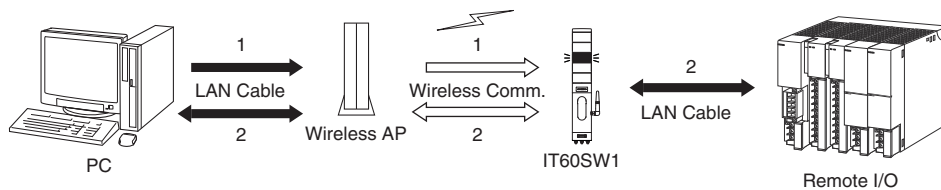
■ EXAMPLE 2: LEDs ON with the PC via wired and wireless communication.

1. Activate the tower light lamp and buzzer with PC.



■ EXAMPLE 3: The PC is connected to the remote I/O via wired and wireless (bridge) communication.

1. Activate the tower light lamp and buzzer with PC.
2. Interchange data between PC and Remote I/O.



Contact status of tower light described on example 1 is also available while interchanging data with PC.



Specifications are subject to change without notice.