

CC-Link TOWER LIGHT
(small size, 50 mm dia., 1 - 5 layers)

MODEL **IT50SRC**

BEFORE USE

Thank you for choosing M-System. Before use, please check contents of the package you received as outlined below.

If you have any problems or questions with the product, please contact M-System's Sales Office or representatives.

■ PACKAGE INCLUDES:

Tower Light(1)

■ MODEL NO.

Confirm Model No. marking on the product to be exactly what you ordered.

■ INSTRUCTION MANUAL

This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.

POINTS OF CAUTION

■ CONFORMITY WITH EU DIRECTIVES

- This equipment is suitable for Pollution Degree 3 and Installation Category III (24V DC power model), or Pollution Degree 2 and Installation Category II (100 – 240V AC power model). Reinforced insulation (network to power: 300V) is maintained. Prior to installation, check that the insulation class of this unit satisfies the system requirements.
- Altitude up to 2000 meters.
- The equipment must be installed such that appropriate clearance and creepage distances are maintained to conform to CE requirements. Failure to observe these requirements may invalidate the CE conformance.
- The actual installation environments such as panel configurations, connected devices, connected wires, may affect the protection level of this unit when it is integrated in a panel system. The user may have to review the CE requirements in regard to the whole system and employ additional protective measures to ensure the CE conformity.
- The equipment is intended to be installed in an industrial environment defined by EN 60947-5-1.

■ POWER INPUT RATING & OPERATIONAL RANGE

- Locate the power input rating marked on the product and confirm its operational range as indicated below:
 - 100 – 240V AC rating: 85 – 264V, 47 – 66 Hz
 - approx. 5.5VA at 100V AC
 - approx. 7VA at 200V AC
 - approx. 8VA at 240V AC
 - 24V DC rating: 24V ±10%, approx. 3W

■ GENERAL PRECAUTIONS

- Before you remove the unit or mount it, turn off the power supply for safety.
- The unit must not be subjected to external force.
- Do not rub the unit with organic solvent like paint thinner.

■ ENVIRONMENT

- Indoor use.
- Do not install the unit where it is subjected to continuous vibration. Do not subject the unit to physical impact.
- Environmental temperature must be within -10 to +55°C (14 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.
- Mount the unit on a flat and robust plate.
- Lamps are omnidirectional.
- The buzzer sound is directional in front of the unit.

■ INGRESS PROTECTION (IP65)

- The IP code is conformable when the unit is mounted vertically, and the control panel cover is locked. The compartment, where connectors are located, is not protected.
- When opening the control panel cover, avoid humidity and dust penetration. Dry and clean it if condensation is formed, and close the cover locking tightly.
- In order to protect ingress of water or dust into the bottom compartment, mount the unit on the flat plane, and be sure that the gasket does not roll back or dust is not on the gasket.

■ WIRING

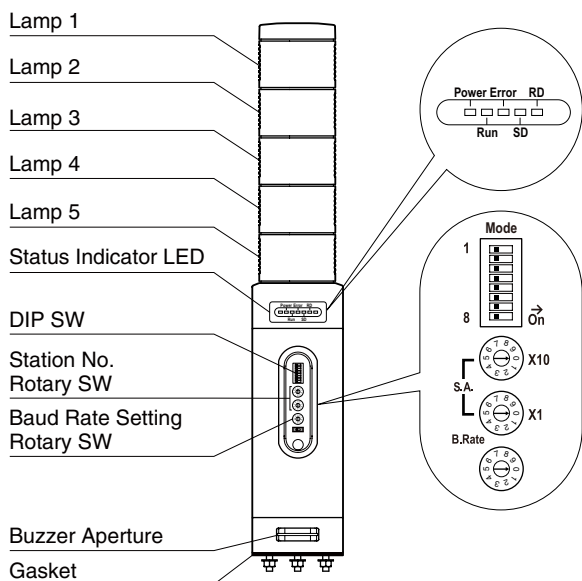
- Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

■ AND

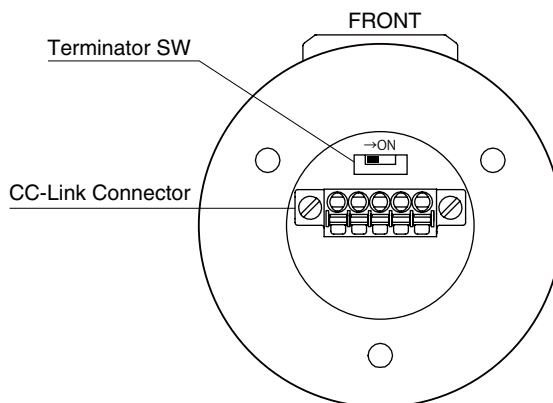
- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

COMPONENT IDENTIFICATION

FRONT VIEW (with the cover open)

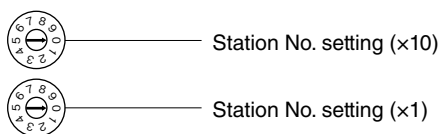


BOTTOM VIEW



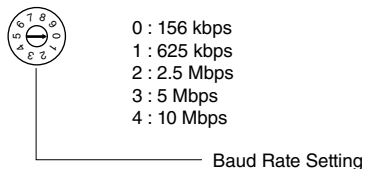
STATION NO.

Station No. is selected between 1 and 64 in decimal. The left switch determines the tenth place digit, while the right switch does the ones place digit of the address.

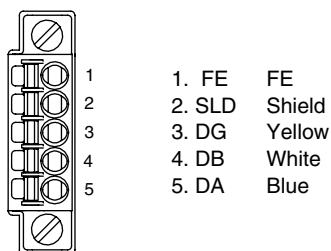


BAUD RATE

Baud Rate is selected with the rotary switch.



CC-Link CONNECTOR



OPERATING MODE

(*) Factory setting

Lamp blinking frequency

Mode-1	LAMP BLINKING FREQUENCY
OFF	Approx. 2 Hz (*)
ON	Approx. 10 Hz

Buzzer intermittent frequency

Mode-2	BUZZER INTERMITTENT FREQUENCY
OFF	Approx. 2 Hz (*)
ON	Approx. 10 Hz

Buzzer volume

Mode-3	Mode-4	BUZZER VOLUME
OFF	OFF	Quiet (*)
OFF	ON	Middle
ON	OFF	Loud
ON	ON	Maximum

Output at the loss of communication

Mode-6	OUTPUT AT THE LOSS OF COMMUNICATION
OFF	Reset the output (turned off) (*)
ON	Hold the output (maintains the last data received normally)

Note 1: Blinking of lamps and buzzer intermittences are not synchronized.

Note 2: Be sure to set unused Mode-5, -7 and -8 to OFF.

TERMINATING RESISTOR

To use the terminating resistor, turn the switch ON, and OFF to invalidate. (Factory setting OFF)

INDICATORS

■ STATUS INDICATOR

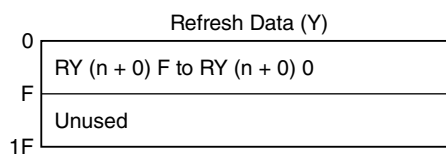
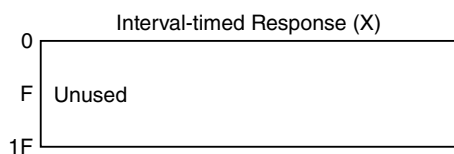
Power	Run	Error	SD*1	RD	STATUS*2
ON	ON	BL	BL	ON	Communicates normally with occasional CRC errors due to noise interference.
ON	ON	BL	BL	ON	Communicates normally but the Baud Rate and/or Station Address switches failed. Error indicator blinks approximately in 0.5 seconds intervals.
ON	ON	BL	BL	OFF	----
ON	ON	BL	OFF	ON	CRC error found in the received data. Unable to respond.
ON	ON	BL	OFF	OFF	----
ON	ON	OFF	BL	ON	Normal communication
ON	ON	OFF	BL	OFF	----
ON	ON	OFF	OFF	ON	Unable to receive data addressed to the station.
ON	ON	OFF	OFF	OFF	----
ON	OFF	BL	BL	ON	Performs the interval-timed responses but CRC error found in receiving the refresh data.
ON	OFF	BL	BL	OFF	----
ON	OFF	BL	OFF	ON	CRC error found in the data addressed to the station.
ON	OFF	BL	OFF	OFF	----
ON	OFF	OFF	BL	ON	Link is not started.
ON	OFF	OFF	BL	OFF	----
ON	OFF	OFF	OFF	ON	No data addressed to the station. Or unable to receive data addressed to the station due to noise interference. (Missing parts of the data sent from the master)
ON	OFF	OFF	OFF	OFF	Unable to receive data due to wire breakdown
ON	OFF	ON	OFF	ON/OFF	Faulty Baud Rate and/or Station Address setting
OFF	OFF	OFF	OFF	OFF	Power input removed. Or power supply failure.

OFF = OFF, ON = ON, BL = Blinking

*1. SD LED may look not blinking but ON with high baud rate and fewer connected modules.

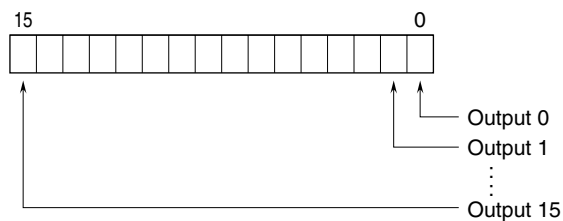
*2. LEDs indicated with "----" in STATUS rarely occurs in normal operation. (LED failure or the like as possible cause).

DATA ALLOCATION



I/O DATA DESCRIPTIONS

OUTPUT DATA



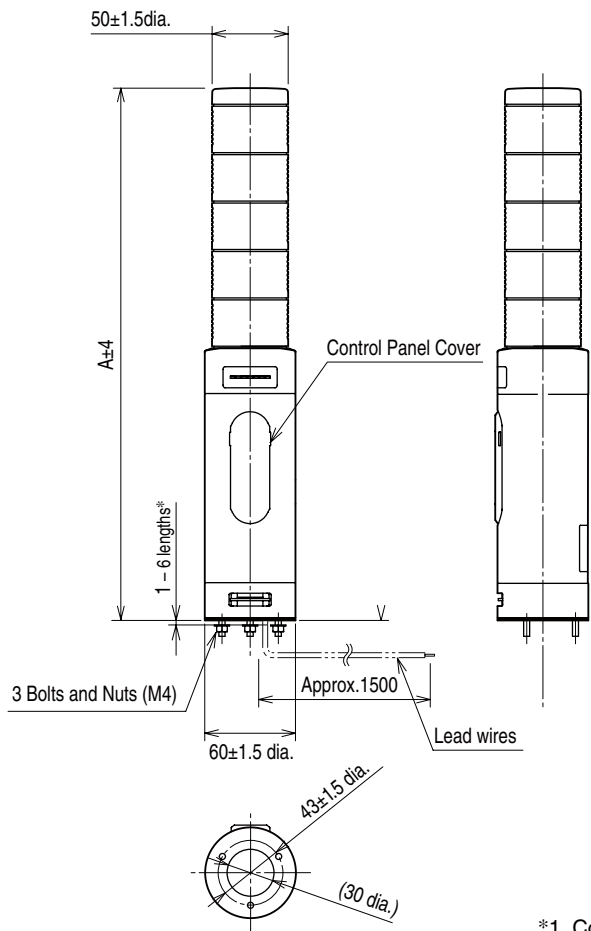
Output 0	Lamp 1	0: Off, 1: On
Output 1	Lamp 2	0: Off, 1: On
Output 2	Lamp 3	0: Off, 1: On
Output 3	Lamp 4	0: Off, 1: On
Output 4	Lamp 5	0: Off, 1: On
Output 5	Buzzer	0: Off, 1: Continuous
Output 6		
Output 7		
Output 8	Lamp 1	0: Off, 1: Blinking
Output 9	Lamp 2	0: Off, 1: Blinking
Output 10	Lamp 3	0: Off, 1: Blinking
Output 11	Lamp 4	0: Off, 1: Blinking
Output 12	Lamp 5	0: Off, 1: Blinking
Output 13	Buzzer	0: Off, 1: Intermittent
Output 14		
Output 15		

Note: If "On" (Continuous) and "Blinking" (Intermittent) are set simultaneously for a single lamp (buzzer), "Blinking" (Intermittent) is disabled.

TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

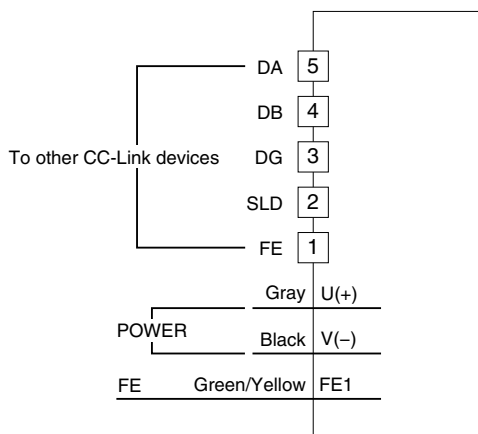
EXTERNAL DIMENSIONS unit: mm



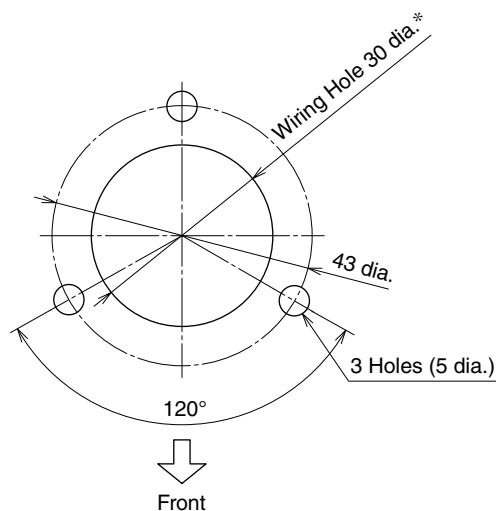
Lamp Layers	A
1	224
2	256
3	288
4	320
5	352

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

CONNECTION DIAGRAM.



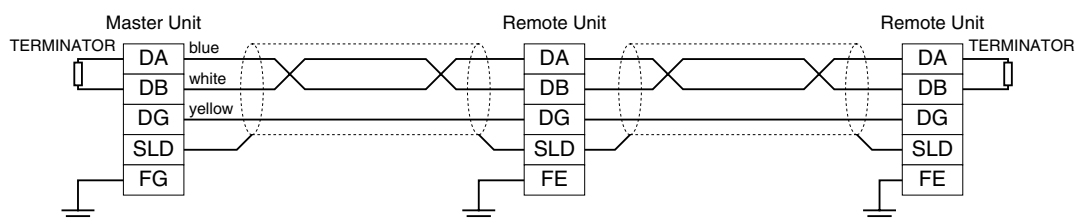
MOUNTING REQUIREMENTS unit: mm



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

COMMUNICATION CABLE CONNECTIONS

■ MASTER CONNECTION



Be sure to connect the terminating resistor across DA and DB at both ends of communication line.
When this unit is located at an end, turn the terminating resistor SW ON.
The Master Unit can be located at not only both ends but also any node of the of communication line.

WIRING INSTRUCTIONS

■ TENSION-CLAMP TERMINAL

Applicable wire size: 0.2 to 1.25 mm²

Stripped length: 10 mm

Recommended solderless terminal

- AI0,5-10WH 0.5 mm² (Phoenix Contact)
- AI0,75-10GY 0.75 mm² (Phoenix Contact)