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# SPECIFICATIONS

## [1.General Specifications]

|                               |                            |                                                                                                                                                                                                                                                               |                                    |
|-------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Product Name                  |                            | Signal Tower                                                                                                                                                                                                                                                  |                                    |
| Model                         |                            | LR6-□02W□□W-□+FB295                                                                                                                                                                                                                                           |                                    |
| Rated Voltage                 |                            | 24V DC                                                                                                                                                                                                                                                        |                                    |
| Operating Voltage Range       |                            | Rated Voltage ±10%                                                                                                                                                                                                                                            |                                    |
| Rated Current Consumption     | Typ.                       | LED Unit : 40mA                                                                                                                                                                                                                                               |                                    |
|                               |                            | Buzzer Unit : 40mA (※1)                                                                                                                                                                                                                                       |                                    |
|                               | Max.                       | LED Unit : 45mA                                                                                                                                                                                                                                               |                                    |
|                               |                            | Buzzer Unit : 250mA (※1)                                                                                                                                                                                                                                      |                                    |
| Rated Power Consumption       | Typ.                       | LED Unit : 1W                                                                                                                                                                                                                                                 |                                    |
|                               |                            | Buzzer Unit : 1W (※1)                                                                                                                                                                                                                                         |                                    |
|                               | Max.                       | LED Unit : 1.3W                                                                                                                                                                                                                                               |                                    |
|                               |                            | Buzzer Unit : 1.3W (※1)                                                                                                                                                                                                                                       |                                    |
| Operating Ambient Temperature |                            | -20℃ to +50 ℃                                                                                                                                                                                                                                                 |                                    |
| Operating Ambient Humidity    |                            | Less than 90 % (No condensation)                                                                                                                                                                                                                              |                                    |
| Storage Ambient Temperature   |                            | -30℃ to +60 ℃                                                                                                                                                                                                                                                 |                                    |
| Storage Ambient Humidity      |                            | Less than 90 % (No condensation)                                                                                                                                                                                                                              |                                    |
| Mounting Location             |                            | Indoor                                                                                                                                                                                                                                                        |                                    |
| Mounting Direction            |                            | Upright                                                                                                                                                                                                                                                       |                                    |
| Protection Rating             |                            | IP67(IEC 60529) / IP69K(DIN 40050 PART9)                                                                                                                                                                                                                      |                                    |
|                               | Environmental Condition    | Upright                                                                                                                                                                                                                                                       |                                    |
| Insulation Resistance         |                            | More than 1MΩ at 500V DC between live part and non-current carrying metallic part                                                                                                                                                                             |                                    |
| Withstand Voltage             |                            | 500V AC applied for 1min between live part and non-current carrying metallic part without breaking insulation                                                                                                                                                 |                                    |
| Mass<br>(Tolerance ±10%)      |                            | Body Unit + (LED Unit) + [Buzzer Unit]                                                                                                                                                                                                                        |                                    |
|                               |                            | LR6-WC                                                                                                                                                                                                                                                        | 0.17kg + (0.06kg)×Tiers + [0.06kg] |
|                               |                            | LR6-WM                                                                                                                                                                                                                                                        | 0.21kg + (0.06kg)×Tiers + [0.06kg] |
| Compatible Unit<br>(Optional) | LED Unit Model             | LR6-E-R,Y,G,B,C,MZ+FB295                                                                                                                                                                                                                                      |                                    |
|                               | Buzzer Unit Model          | LR6-BW+FB295                                                                                                                                                                                                                                                  |                                    |
| Conformity Standards          | UL, cUL                    | UL 508, CSA-C22.2 No. 14                                                                                                                                                                                                                                      |                                    |
|                               | FCC                        | FCC Part 15 SubpartB Class A                                                                                                                                                                                                                                  |                                    |
|                               | CE Marking<br>UKCA Marking | EN 61000-6-4, EN 61000-6-2, EN IEC 63000                                                                                                                                                                                                                      |                                    |
|                               | KC                         | KS C 9610-6-4, KS C 9610-6-2                                                                                                                                                                                                                                  |                                    |
| Remarks                       |                            | (※1) Environmental Condition: Buzzer sound No.2 Continuous beep sound.<br>Due to the characteristics of the LED elements, a variation in difference of the color tone and brightness of every product may occur.<br>UL Recognized Component (File No.E215660) |                                    |

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[2.Model Number Configuration]

|                | Model | Size |   | Tiers | Rated Voltage | Mounting/Wiring | Flashing/Buzzer | Body Color |   | LED Unit Color |   | Custom Order Number |
|----------------|-------|------|---|-------|---------------|-----------------|-----------------|------------|---|----------------|---|---------------------|
| Assembly Model | LR    | 6    | - | ↓     | 02            | ↓               | ↓               | W          | - | ↓              | + | FB295               |

|       |
|-------|
| Size  |
| 6 Φ60 |

|               |
|---------------|
| Rated Voltage |
| 02 24V DC     |

|          |
|----------|
| Tiers    |
| 1 1Tier  |
| 2 2Tiers |
| 3 3Tiers |
| 4 4Tiers |
| 5 5Tiers |

|             |
|-------------|
| Body Color  |
| W Off-white |

|                        |
|------------------------|
| Flashing / Buzzer      |
| B No Flashing / Buzzer |
| N No Flashing / Buzzer |

|                |
|----------------|
| LED Unit Color |
| R Red          |
| Y Yellow       |
| G Green        |
| B Blue         |
| C White        |

From top to bottom

|                                                                    |
|--------------------------------------------------------------------|
| Mounting / Wiring                                                  |
| WC Direct Mount / M12 Connector<br>(Mounting with M30 Nut)         |
| WM Direct Mount / M12 Connector<br>(Mounting with 3 Hexagon Bolts) |

|                       | Model | Size |   | Rated Voltage | Mounting/Wiring | Flashing/Buzzer | Body Color |   | Custom Order Number |
|-----------------------|-------|------|---|---------------|-----------------|-----------------|------------|---|---------------------|
| Unit Model(Body Unit) | LR    | 6    | - | 02            | ↓               | N               | W          | + | FB295               |

|       |
|-------|
| Size  |
| 6 Φ60 |

|               |
|---------------|
| Rated Voltage |
| 02 24V DC     |

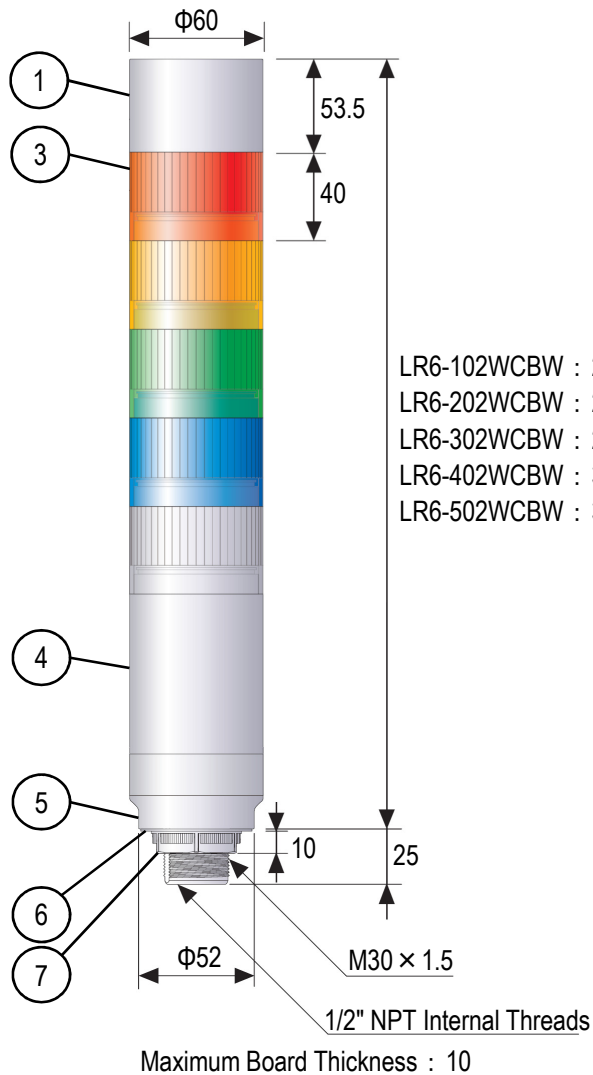
|             |
|-------------|
| Body Color  |
| W Off-white |

|                        |
|------------------------|
| Flashing / Buzzer      |
| N No Flashing / Buzzer |

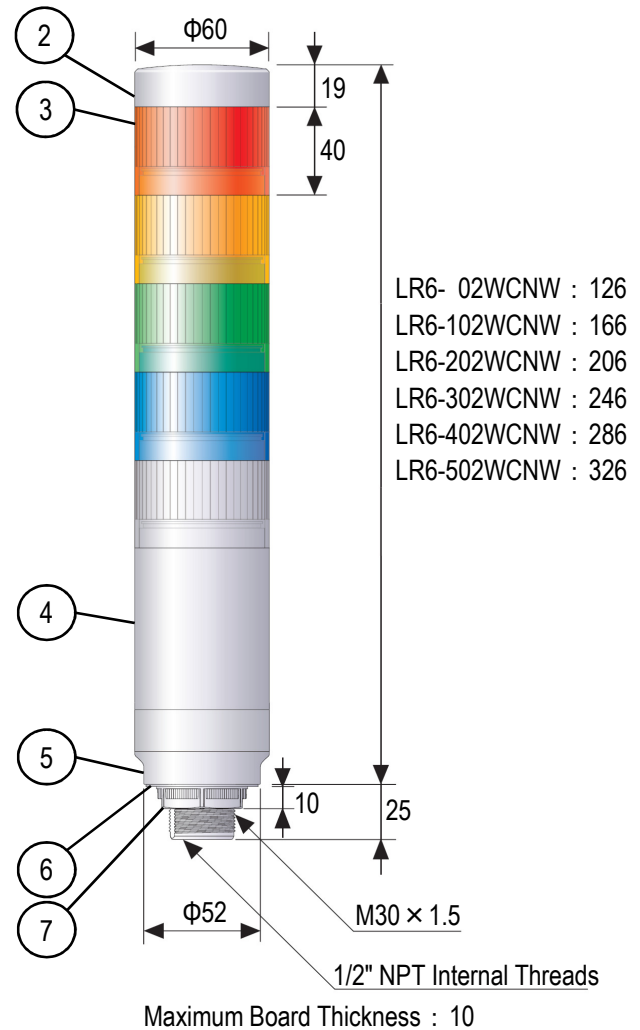
|                                                                    |
|--------------------------------------------------------------------|
| Mounting / Wiring                                                  |
| WC Direct Mount / M12 Connector<br>(Mounting with M30 Nut)         |
| WM Direct Mount / M12 Connector<br>(Mounting with 3 Hexagon Bolts) |

[3.Outer Dimensions]

■ LR6-□02WCBW-□+FB295

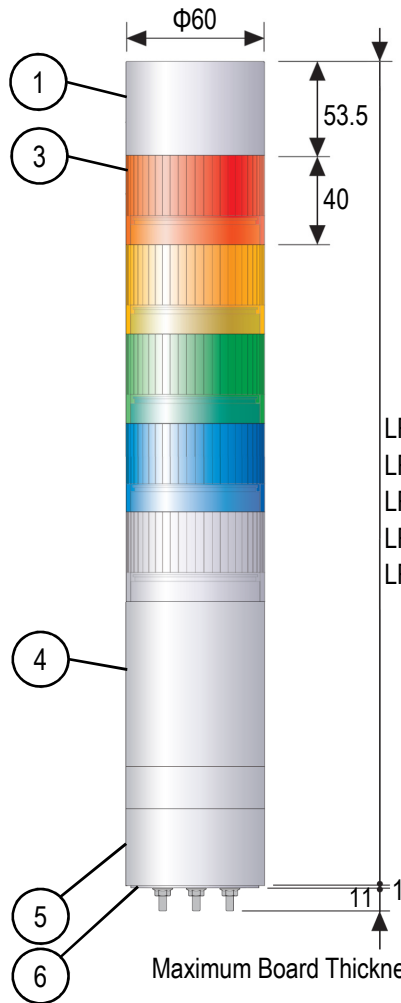


■ LR6-□02WCNW-□+FB295



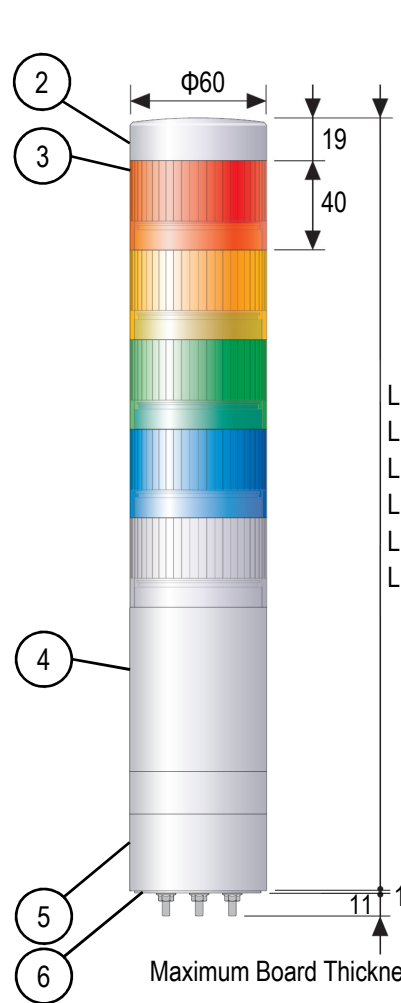
| Number | Name                      | Material        | UL Flammability |
|--------|---------------------------|-----------------|-----------------|
| 1      | Buzzer Case (Buzzer Unit) | PC              | V-2             |
| 2      | Head Cover                | PC              | V-2             |
| 3      | Globe (LED Unit)          | PC              | V-2             |
| 4      | Body                      | PC              | V-2             |
| 5      | Direct Mount Bracket      | PC              | V-2             |
| 6      | Mounting Gasket           | Silicone Rubber | -               |
| 7      | M30 Nut                   | PC              | V-2             |

■ LR6-□02WMBW-□+FB295



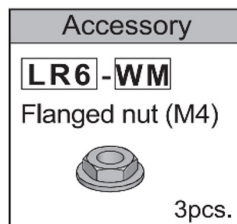
LR6-102WMBW : 225.5  
 LR6-202WMBW : 265.5  
 LR6-302WMBW : 305.5  
 LR6-402WMBW : 345.5  
 LR6-502WMBW : 385.5

■ LR6-□02WMNW-□+FB295



LR6- 02WMNW : 151  
 LR6-102WMNW : 191  
 LR6-202WMNW : 231  
 LR6-302WMNW : 271  
 LR6-402WMNW : 311  
 LR6-502WMNW : 351

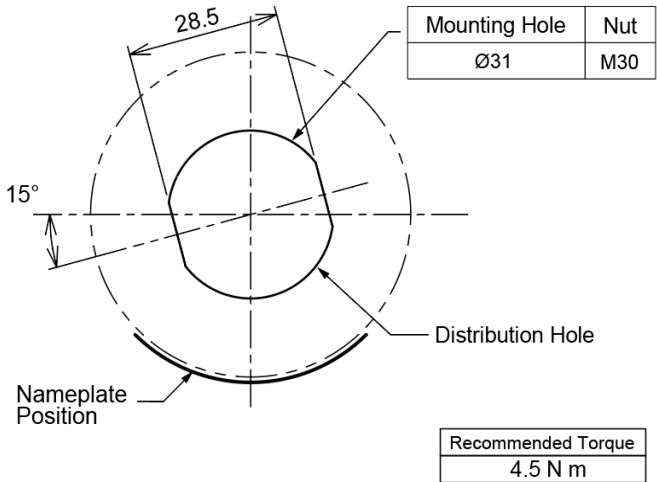
| Number | Name                      | Material        | UL Flammability |
|--------|---------------------------|-----------------|-----------------|
| 1      | Buzzer Case (Buzzer Unit) | PC              | V-2             |
| 2      | Head Cover                | PC              | V-2             |
| 3      | Globe (LED Unit)          | PC              | V-2             |
| 4      | Body                      | PC              | V-2             |
| 5      | Direct Mount Bracket      | PC              | V-2             |
| 6      | Mounting Gasket           | Silicone Rubber | -               |



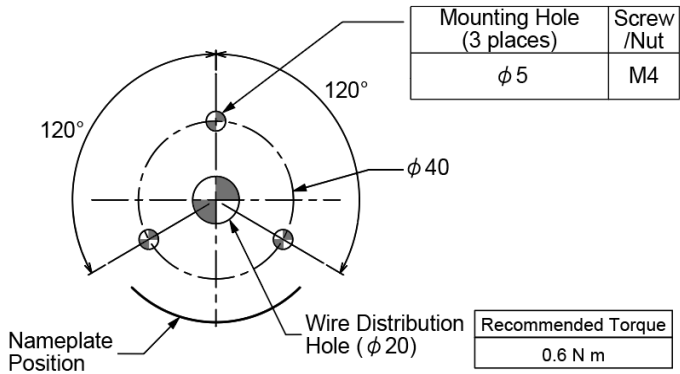
[4.Mounting Dimensional Drawing]

■ **WC** Mounting Dimensional Drawing (M30×1.5 Installation)

[mm]

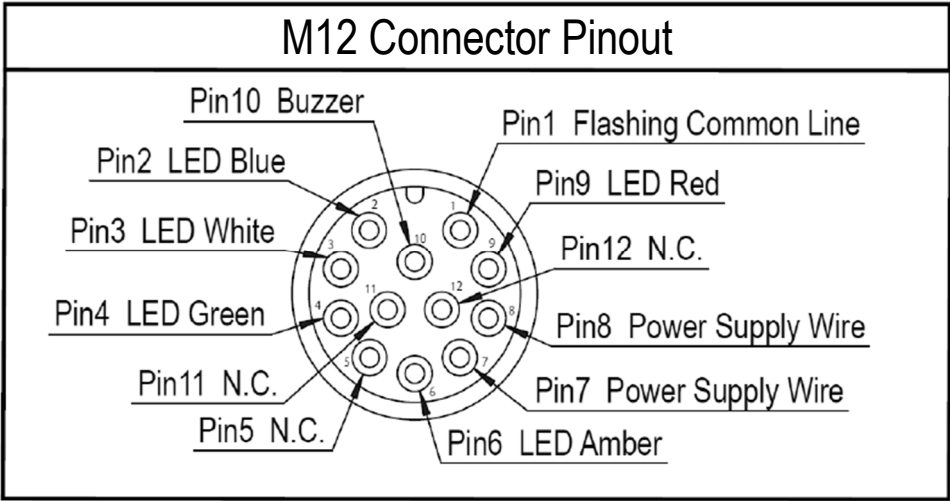


■ **WM** Mounting Dimensional Drawing

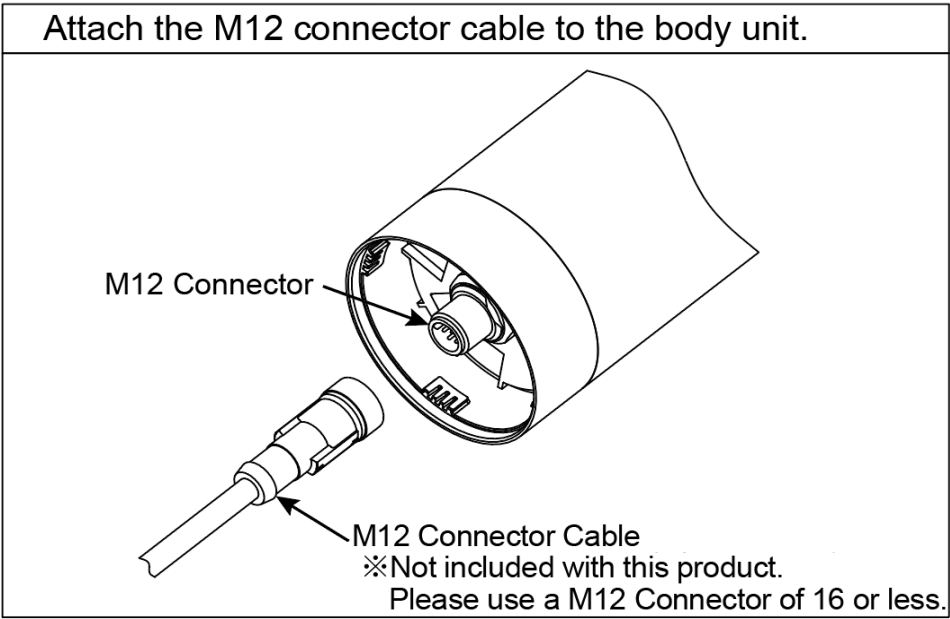


[5.Wiring Diagram]

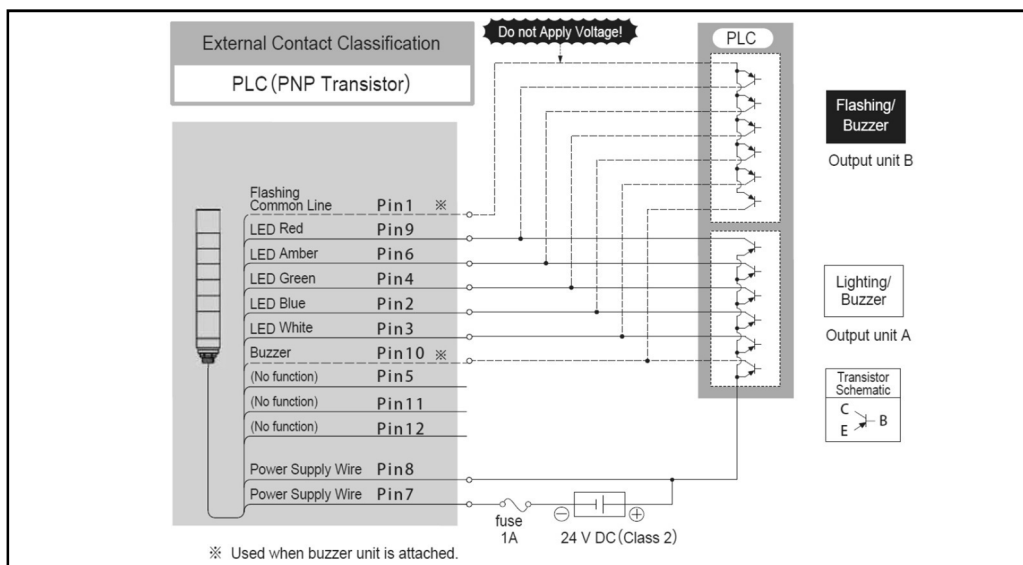
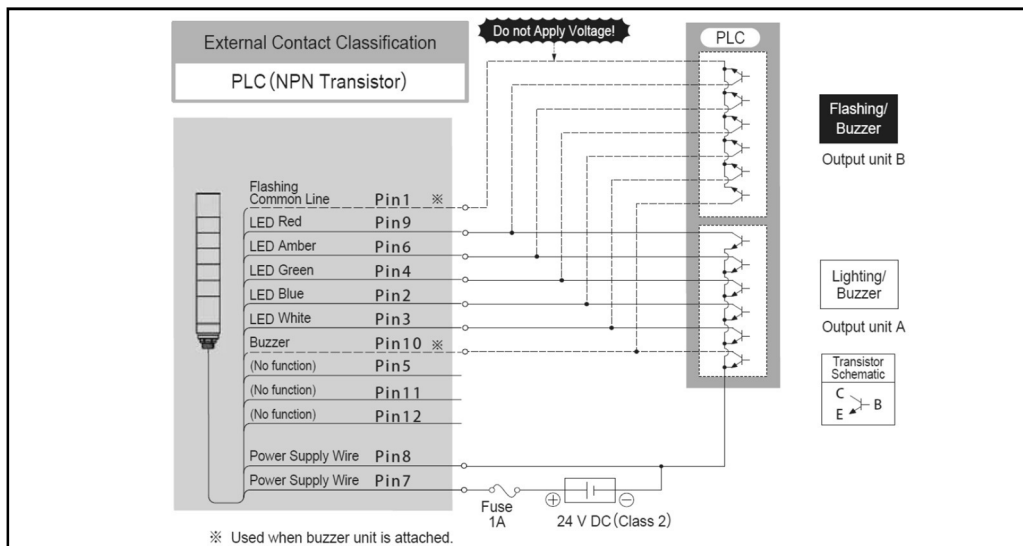
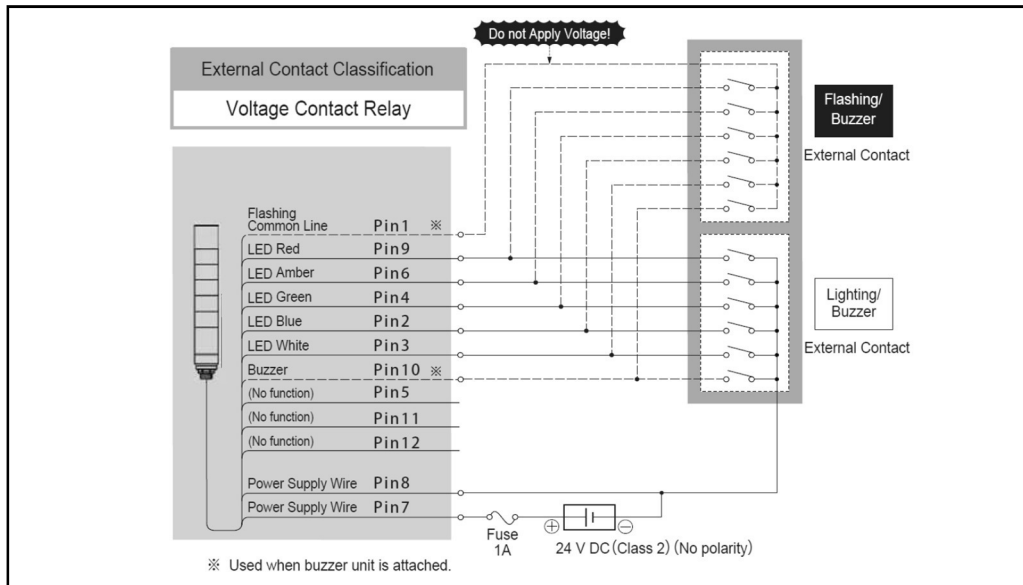
5.1 M12 Connector Pin Layout  
12-pin male(plug)



5.2 Attach the M12 connector with cable to the body unit.



## 5.4 Wiring Example



#### 5.4 External Contact Capacity

$I_S$  : Current Capacity  $V_S$  : Withstand Voltage  $I_L$  : Leakage Current

| Rated Load Voltage   |                                      | 24V DC                                           |      |        |           |
|----------------------|--------------------------------------|--------------------------------------------------|------|--------|-----------|
| LED Unit<br>(1 Tier) | Signal Wire Current (Max.) / Voltage | 45mA / Power Supply Voltage                      |      |        |           |
|                      | Recommended Contact Capacity         | $I_S \geq 100\text{mA}$ $V_S \geq 35\text{V DC}$ |      |        |           |
| Buzzer               | Signal Wire Current (Max.) / Voltage | 250mA / Power Supply Voltage                     |      |        |           |
|                      | Recommended Contact Capacity         | $I_S \geq 300\text{mA}$ $V_S \geq 35\text{V DC}$ |      |        |           |
| Power Supply         | Current Consumption (Max.)           | 250mA (※1)                                       |      |        |           |
|                      | Signal Wire Current (Max.) / Voltage | $I_S \geq 500\text{mA}$ $V_S \geq 35\text{V DC}$ |      |        |           |
| Inrush Current       | Signal Wire                          | LED                                              | None | Buzzer | None (※2) |
|                      | Power Supply Wire                    | None (※3)                                        |      |        |           |
| Leakage Current      |                                      | $I_L \leq 0.1\text{mA}$                          |      |        |           |

※1・・・Measured with five LED tiers and buzzer operating.

※2・・・Not exceeding Maximum Signal Wire Current Ratings

※3・・・Signal wire current (Max.) not exceeding the sum total.

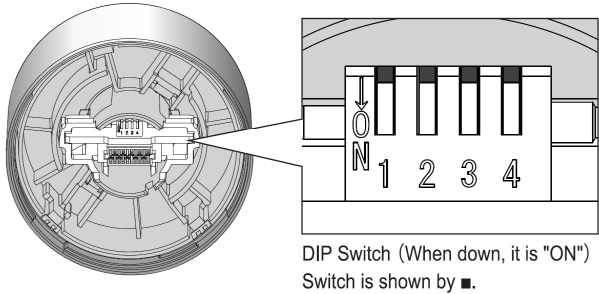
#### ■ Recommended Fuse

|                     |                                                           |
|---------------------|-----------------------------------------------------------|
| Fuse Ampere Ratings | 250 V / 1A (5x20mm Fast-Acting Glass Body Cartridge Fuse) |
|---------------------|-----------------------------------------------------------|

# [6.Buzzer Pattern Set-up]

The **[ B ]** Flashing/Buzzer type includes a set up for four different patterns and sound reduction. Set up the preferred pattern, using the DIP Switch after removing the buzzer unit.

Buzzer Unit Underside View



■ Pattern Setup Table

| Buzzer Sound | DIP Switch |     | Sound Pattern           |
|--------------|------------|-----|-------------------------|
|              | 1          | 2   |                         |
| No.1         | OFF        | OFF | Rapid Intermittent Beep |
| No.2         | ON         | OFF | Continuous Beep Sound   |
| No.3         | OFF        | ON  | Rapid Hi-Lo             |
| No.4         | ON         | ON  | Sweep Sound             |

| DIP Switch 3 | Volume          |
|--------------|-----------------|
| OFF          | Normal          |
| ON           | Sound Reduction |

〈Note〉 Do not use DIP Switch 4.  
It is set to "OFF" at all times after factory shipments.