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SPECIFICATIONS

[1.General Specifications]

Product Name		Signal Tower				
Model		LR10-□02□□W		LR10-□M2WJ□W		
Rated Voltage		24V DC		100-240V AC (50/60Hz)		
Operating Voltage Range		21.6-26.4V DC		90-250V AC		
Rated Power Consumption (Per Unit)	Typ.	LED Unit : 1.4W(※1)		LED Unit : 1.6W(※1)		
		Buzzer Unit : 1.7W(※2)		Buzzer Unit : 2.0W(※2)		
		Body Unit : 0.4W(※3)		Body Unit : 0.7W(※3)		
	Max.	LED Unit : 1.6W(※1)		LED Unit : 2.0W(※1)		
		Buzzer Unit : 2.0W(※2)		Buzzer Unit : 2.3W(※2)		
		Body Unit : 0.4W(※3)		Body Unit : 0.8W(※3)		
Inrush Current		None		Less than 50A/2ms		
Standby Power Consumption		LED Unit : 0.2W		LED Unit : 0.3W		
		Buzzer Unit : 0.2W		Buzzer Unit : 0.4W		
		Body Unit : 0.2W		Body Unit : 0.7W		
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 / Outdoor *TYPE 4X indoor use only. (UL50E)				
Mounting Direction		Upright / Inverted				
Protection Rating		IP6X,IPX6(IEC 60529),IPX9K(ISO 20653)/TYPE 4X,13(NEMA, UL50E)				
	Environmental	Upright				
Insulation Resistance		More than 1MΩ at 500VDC between live part and non-current carrying metallic part		More than 1MΩ at 500VDC between live part and non-current carrying metallic part		
Withstand Voltage		500VAC applied for 1min between live part and non-current carrying metallic part without breaking insulation		1500VAC applied for 1min between live part and non-current carrying metallic part without breaking insulation		
Buzzer Sound / Typical Frequency		No.1	Rapid Intermittent Beep/2,941Hz		No.2	Continuous Beep Sound/2,941Hz
		No.3	Rapid Hi-Low/2,000Hz&3,012Hz		No.4	Sweep Sound/1,000Hz-4,032Hz
	Setting	Depending on DIP Switch Settings. Refer to the 6.Buzzer Pattern Set-up				
Sound Pressure Level(Typ.)		92dB				
	Environmental Condition	Buzzer sound No.4 was measured from the total circumference of the Buzzer Unit at 1m				
Flash Pattern		Continuous / Blinking, Rotating, Triple-Flash, Dimmed continuous / Dimmed Blinking				
	Setting	Refer to the 5.2 Flash Pattern Setting				
Rotation Flashing Rate(Typ.)		120rpm± 15% (102-138rpm)				
Flashing Rate(Typ.)		Blinking/Dimmed Blinking : 60 Flashes Per Minute, Triple-Flash : 120 Flashes Per Minute				
Outer Dimensions		Refer to the 3.Mounting Dimensional Drawing				
Conformity Standards	UL	UL508, CSA-C22.2 No.14 (File No.E215660)				
	CE Marking UKCA Marking	EN61000-6-4, EN61000-6-2, EN IEC 63000			EN61000-6-4, EN61000-6-2, EN IEC 63000, EN60947-5-1,EN62471	
	KC	KS C 9610-6-4, KS C 9610-6-2				
	FCC	FCC Part15 SubpartB ClassA				
	IC	ICES-003 Class A				
	EAC	TR CU 020 TR EAEU 037			TR CU 020, TR EAEU 037, TR CU 004	

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Mass (Tolerance ±10%)	Assembly model WJ	Tiers	LR10-□02WJNW	LR10-□02WJBW	LR10-□M2WJNW	LR10-□M2WJBW
		1	0.83kg	0.89kg	0.85kg	0.91kg
		2	1.01kg	1.07kg	1.04kg	1.10kg
		3	1.20kg	1.26kg	1.22kg	1.28kg
		4	1.38kg	1.44kg	1.41kg	1.47kg
		5	1.57kg	1.63kg	1.59kg	1.65kg
	Unit Model WJ		0.64kg		0.66kg	
	Assembly model WM	Tiers	LR10-□02WMNW			
		3	1.15kg			
Unit Model WM		0.59kg				
Remarks	Due to the characteristics of the LED elements, there may be a slight variation in color tone and brightness between products. ※1 Environmental Condition:Flash Pattern "Continuous" ※2 Environmental Condition:Buzzer Sound "No.4 Sweep Sound" ※3 Environmental Condition:Signal Wire × 8 - Common are short-circuited.					

[2.Model Number Configuration]

<Assembly Model>

L R 1 0 - 3 02 WJ N W - RYG

■ Tiers

1 : 1Tier
2 : 2Tiers
3 : 3Tiers
4 : 4Tiers
5 : 5Tiers

■ Rated Voltage

02 : 24V DC
M2 : 100-240V AC

■ Buzzer

B : With Buzzer
N : No Buzzer

■ Body Color

w : Off-white

■ LED Unit Color

R : Red
Y : Amber
G : Green
B : Blue
C : White

From top to bottom

■ Mounting/Wiring

WJ : Direct Mount/Cabtyre Cord
WM : Direct Mount/M12 Connector (Only 02 type)

<Unit Model(Body Unit)>

L R 1 0 - 02 WJ N W

■ Rated Voltage

02 : 24V DC
M2 : 100-240V AC

■ Buzzer

N : No Buzzer

■ Body Color

w : Off-white

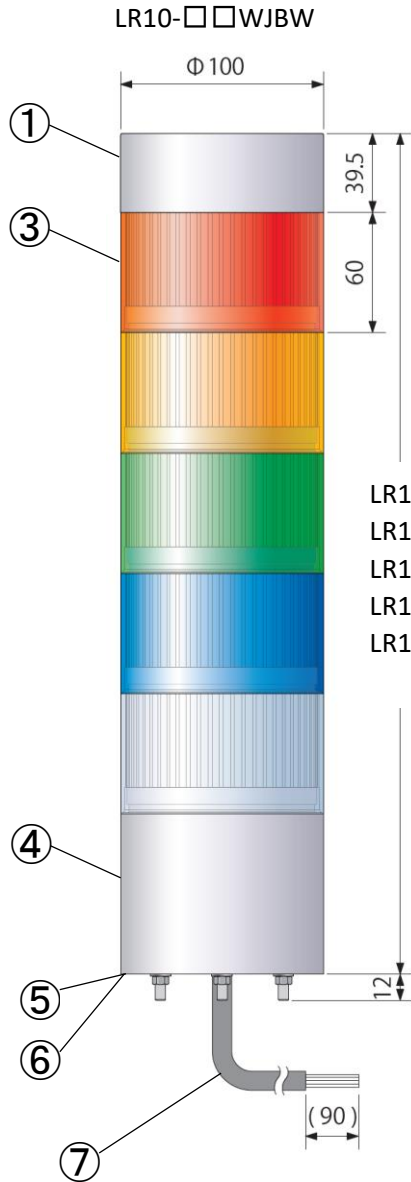
■ Mounting/Wiring

WJ : Direct Mount/Cabtyre Cord
WM : Direct Mount/M12 Connector (Only 02 type)

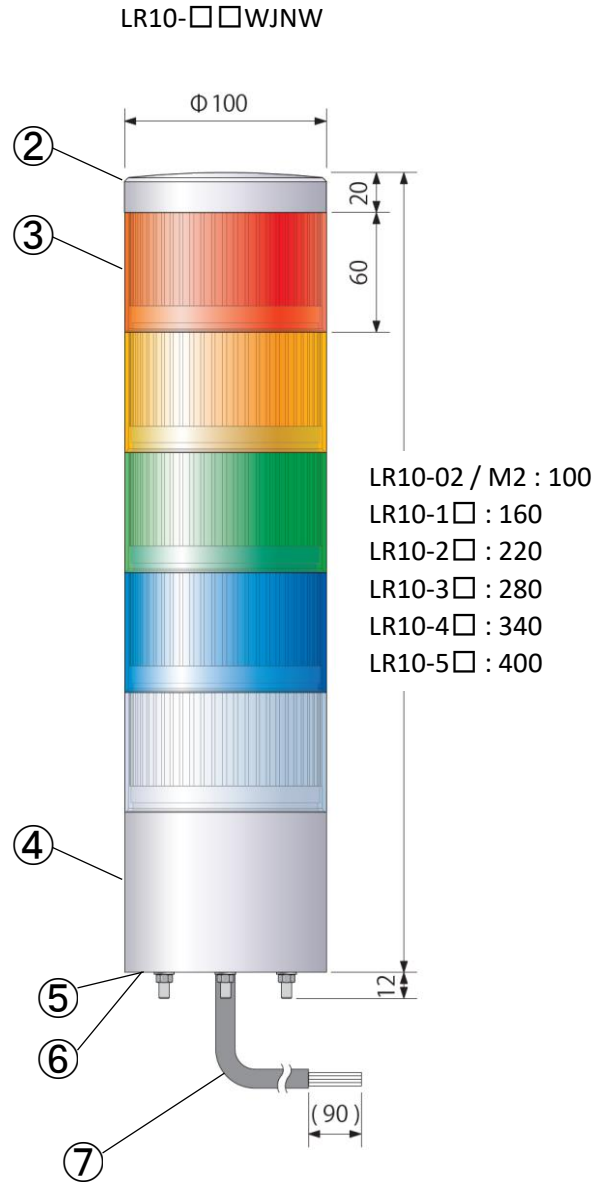
[3.Outer Dimensions]

WJ Direct Mount with Cabtyre Cord

(Unit:mm)



LR10-1□ : 179.5
 LR10-2□ : 239.5
 LR10-3□ : 299.5
 LR10-4□ : 359.5
 LR10-5□ : 419.5



LR10-02 / M2 : 100
 LR10-1□ : 160
 LR10-2□ : 220
 LR10-3□ : 280
 LR10-4□ : 340
 LR10-5□ : 400

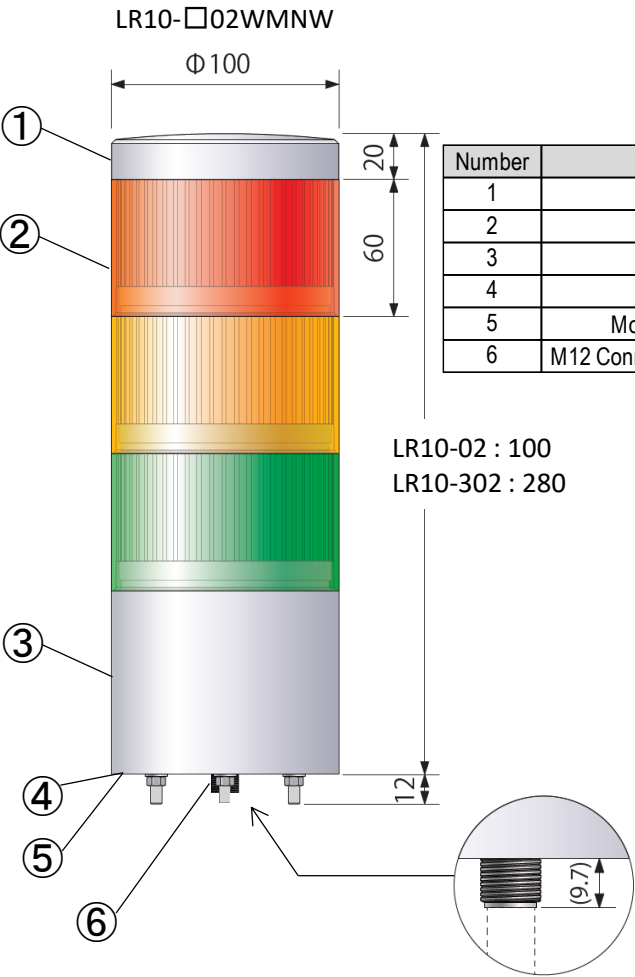
- Maximum Board Thickness : 6
- Cabtyre Cord
 - Wire Diameter : ($\phi 8.5$)
 - Power Supply Wire : AWG18
 - Signal Wire : AWG24
 - Cord Length : (500)

Accessory	
Plain Washer(M5) SUS	Nut(M5) SUS
	
3 pcs.	3 pcs.

Number	Name	Material	UL Flammability
1	Buzzer Case	PC	V-0
2	Head Cover	PC	V-0
3	Globe	PC	V-2
4	Body	PC	5VA
5	Mount	PC	HB
6	Mounting Gasket	Silicone Rubber	-
7	Cabtyre Cord	PVC	VW-1

WM Direct Mount/M12 Connector

(Unit:mm)

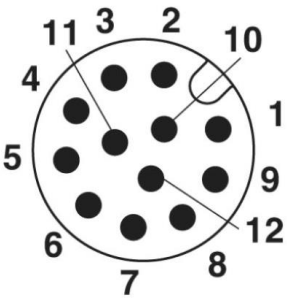


Number	Name	Material	UL Flammability
1	Head Cover	PC	V-0
2	Globe	PC	V-2
3	Body	PC	5VA
4	Mount	PC	HB
5	Mounting Gasket	Silicone Rubber	-
6	M12 Connector (12pin female)	Nickel Plating	-

Accessory	
Plain Washer(M5) SUS	Nut(M5) SUS
	
3 pcs.	3 pcs.

•Maximum Board Thickness : 6

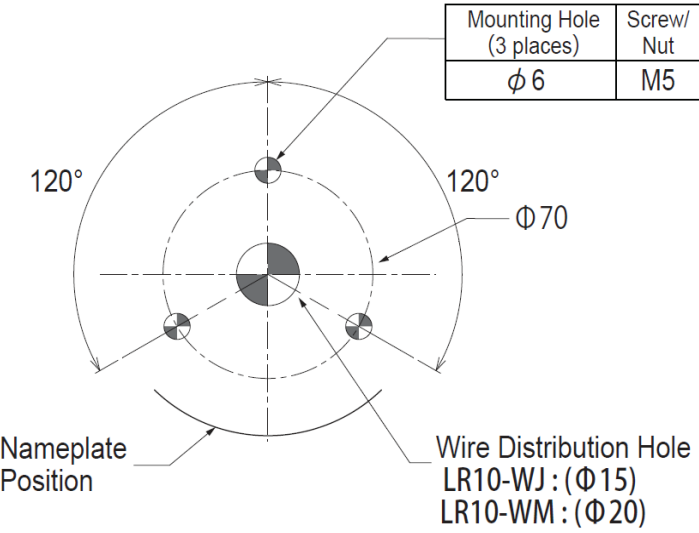
M12 Connector Pin Configuration



Pin No.	Function Name
1	Blinking Common
2	LED B
3	LED C
4	LED G
5	Common
6	LED Y
7	Power Supply
8	Power Supply
9	LED R
10	Buzzer
11	Pattern1
12	Pattern2

[4.Mounting Diagram]

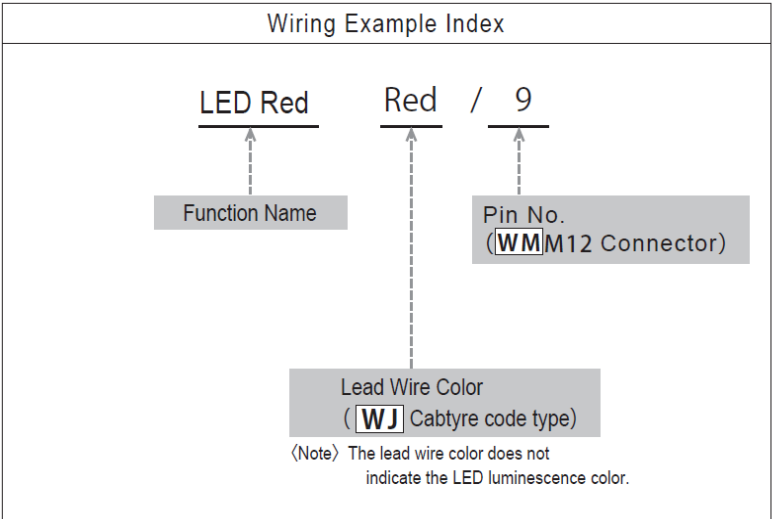
(Unit:mm)



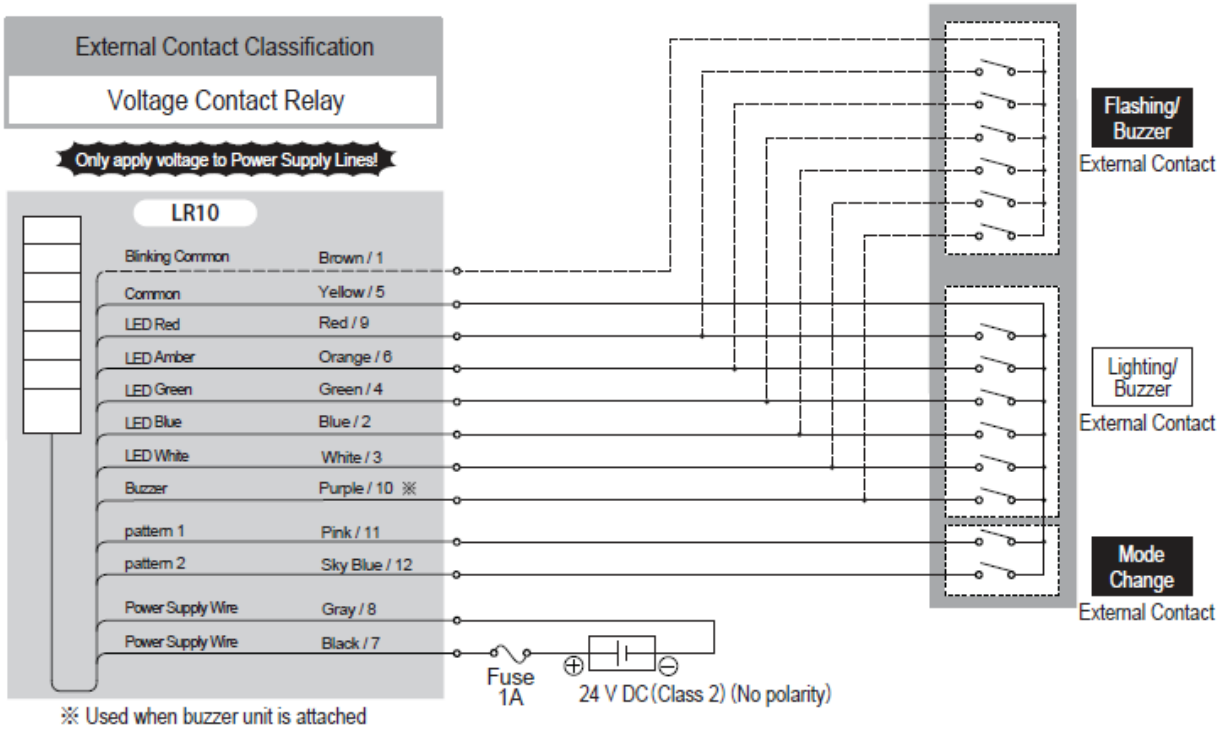
Recommended Torque
1.4 N m

[5.Wiring Diagram]

5.1 Wiring Example



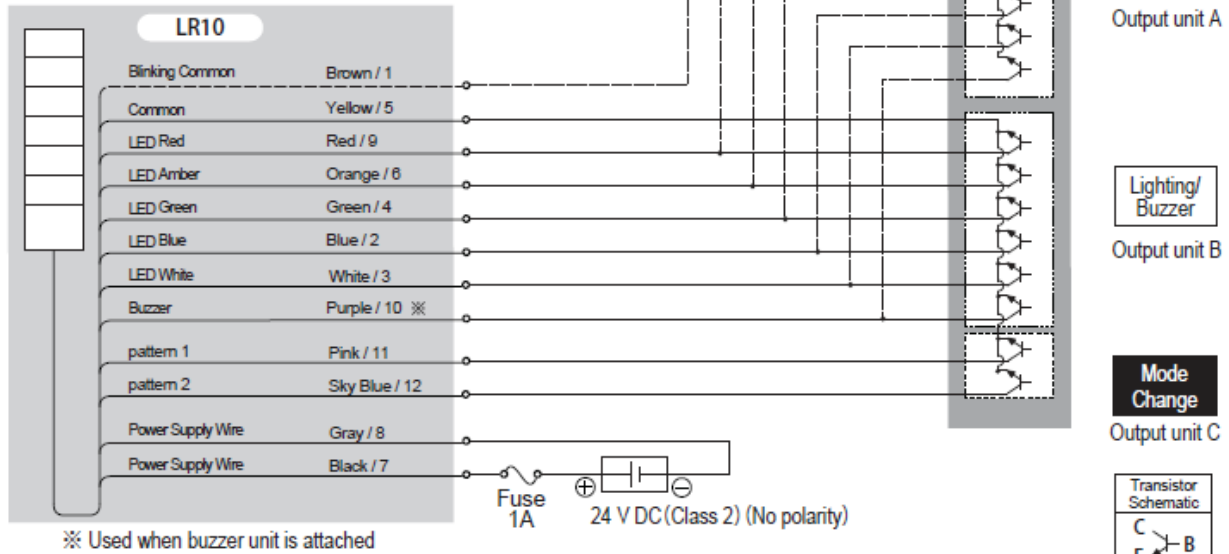
5.1.1 【LR10-02】Wiring Example



External Contact Classification

PLC (NPN Transistor)

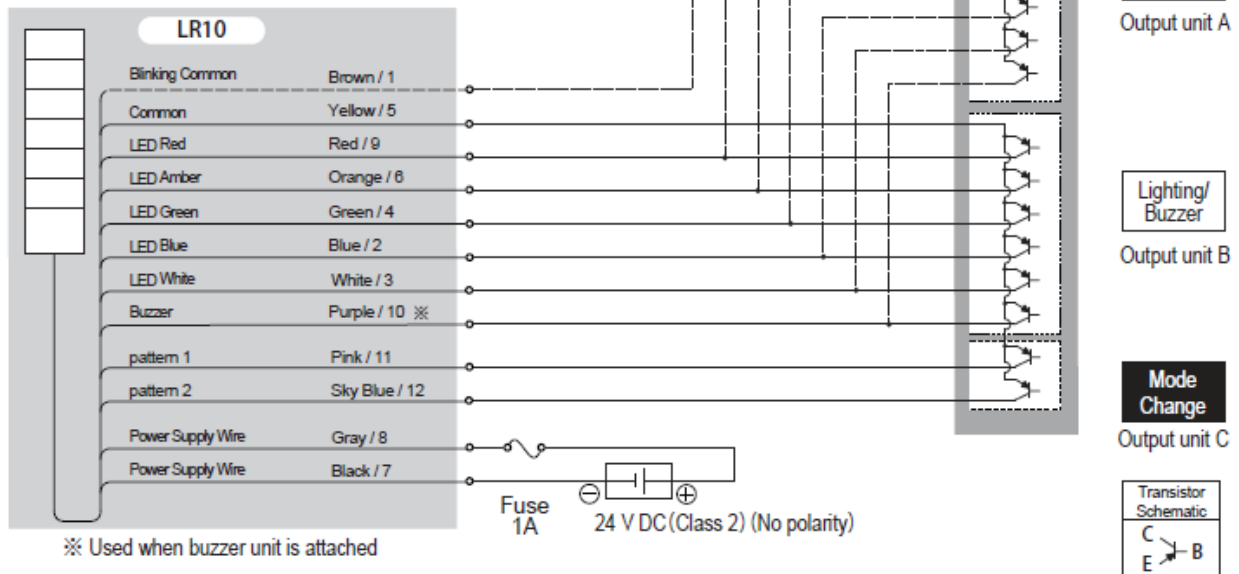
Only apply voltage to Power Supply Lines!



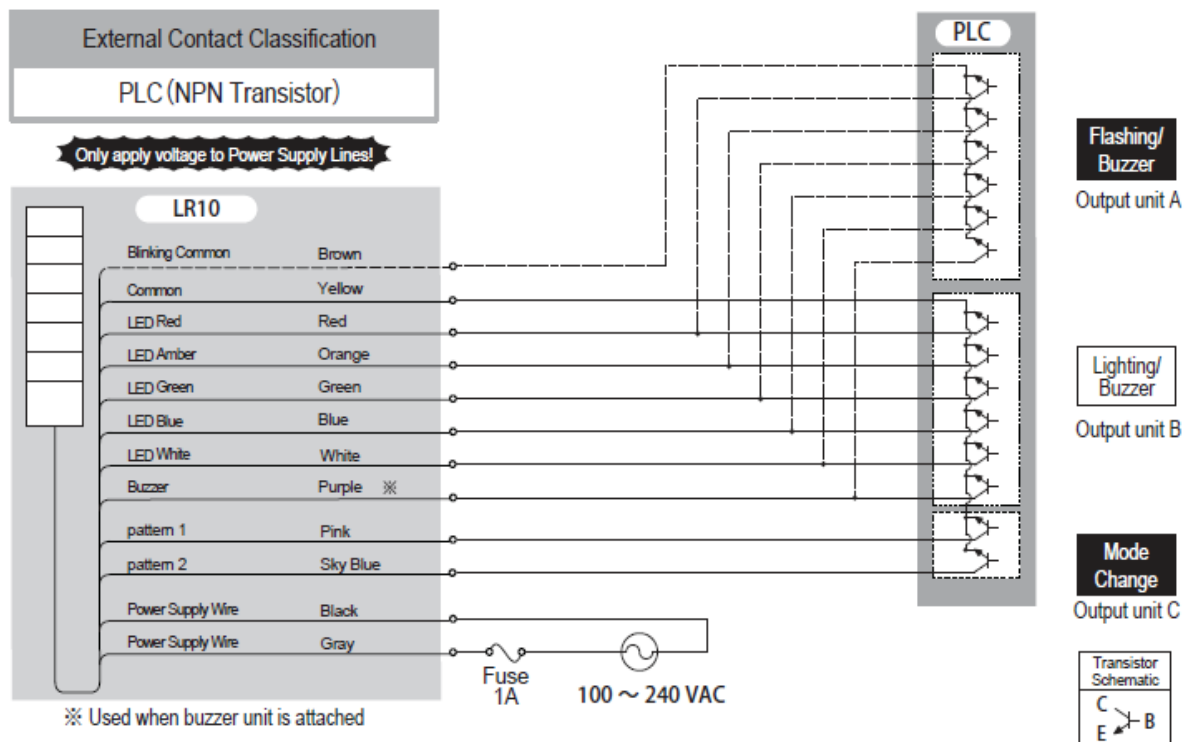
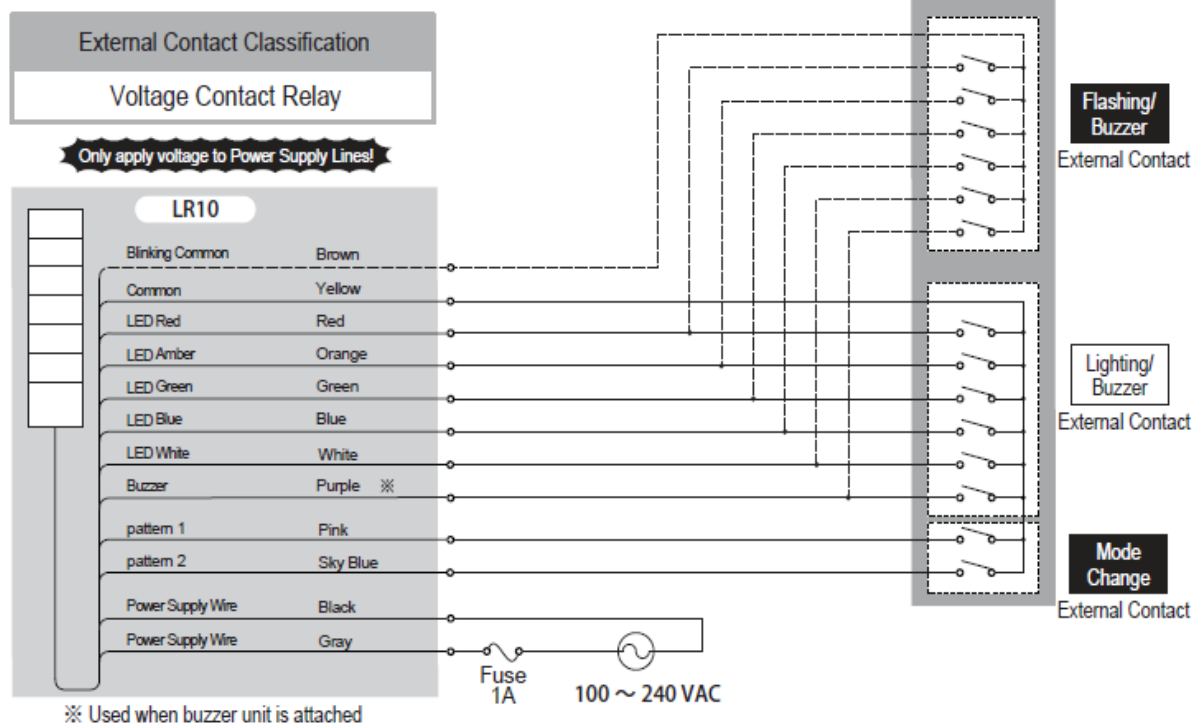
External Contact Classification

PLC (PNP Transistor)

Only apply voltage to Power Supply Lines!



5.1.2 【LR10-M2】Wiring Example



5.2 Flash Pattern Setting

It can be switched to Continuous, Rotating, Triple-Flash, or Dimmed continuous by shorting the common line with Pattern 1 or Pattern 2. The settings are shown in the table below.

■ Setup Table

Wiring		Flash Pattern
pattern1-Common	pattern2-Common	
OFF	OFF	Continuous
ON	OFF	Rotating
OFF	ON	Triple-Flash
ON	ON	Dimmed continuous

5.3 External Contact Capacity

■ Signal line

	O2	M2
Current Capacity (Is)	10mA or more	10mA or more
Withst and Voltage (Vs)	30V or more	30V or more
Lealage Current (I)	0.1mA or less	0.1mA or less

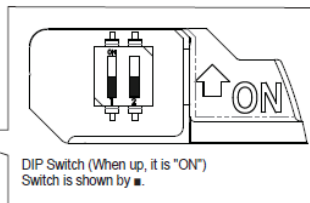
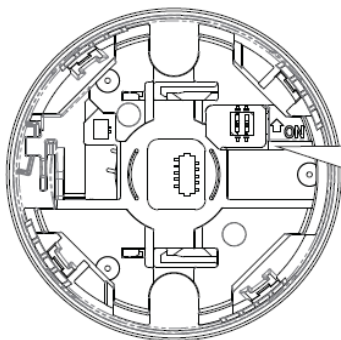
■ Recommended Fuse

Fuse Rating	250V / 1A
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[6.Buzzer Pattern Set-up]

Set up the preferred pattern, using the DIP Switch after removing the buzzer unit.

Buzzer Unit Underside



■ 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

※ It is set to "OFF" at all times after factory shipments.