

Indicators M22N

22-mm dia. Indicators

Control panel miniaturization through a more compact design and modified wiring direction.

Addition of Push-In Plus terminal blocks for easy wiring.

Easy to Use

- Improved wiring visibility through to a modified wiring direction. (Push-In Plus terminal block type)
- Screw terminal structure is compatible with round crimp terminals. (Screw terminal block type)

Miniaturization

- No need for extra lateral space because of the modified wiring direction. (Push-In Plus terminal block type)
- Compact design.

Product Lineup

- Meet global safety standards.
- Can be installed in two types of panel hole dimensions: 22.3 and 25.5 dia.
- The indicators come in a wide variety of colors and shapes.
- Compliant with IEC IP66, Certified for UL508 Type 4X, 13.



Refer to Safety Precautions for All Pushbutton Switches/ Indicators and Safety Precautions on page 85.



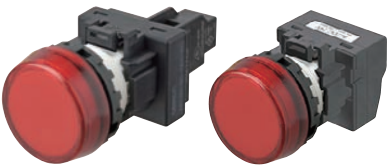
Indicator Unit Colors

	Red	Green	Yellow	White	Blue	Orange	White
When not lit							
When lit							

* The colors when the Switches are lit are for transparent white Indicator Units (code: TW) and yellow LED Lamps (code: Y).

M22N

List of Models

Screw Terminal Blocks/Push-In Plus Terminal Blocks	
Appearance	Model
Plastic flat 	M22N-BN
Plastic projected 	M22N-BP
Plastic semi-spherical 	M22N-BG
Plastic flat etched 	M22N-BC

Model Number Structure

Model Number Legend

--Shipped as a set that includes the Indicator Unit, LED Lamp, and Socket Unit.
For information on combinations, refer to *Ordering Information* on page 46.

Model Numbers for Sets

M 2 2 N - ⁽¹⁾BN - ⁽²⁾TR ⁽³⁾A - ⁽⁴⁾R ⁽⁵⁾A - ⁽⁶⁾

(1) Indicator Unit Shape

Code	Shape
BN	Plastic flat
BP	Plastic projected
BG	Plastic semi-spherical
BC	Plastic flat etched

(2) Indicator Color and (4) LED Lamp Color

Code (2)	Code (4)	Indicator color	LED Lamp color
TR	R	Red	Red
TG	G	Green	Green
TY	Y	Yellow	Yellow
TW	W	White	White
TA	A	Blue	Blue
TO	O	Orange	Orange
TW	Y	White*	Yellow

* The color is opaque white when the Indicator is lit.

(3) Degree of Protection

Code	Protection
A	Compliant with IEC IP66, Certified for UL508 Type 4X, 13

(5) LED Lamp Voltage

Code	LED Lamp voltage
A	6 VAC/DC
B	12 VAC/DC
C	24 VAC/DC
D	100/110/120 VAC
E	200/220/230/240 VAC

(6) Terminals Specifications

Code	Specification
No Code	Screw Terminal Block
P	Push-In Plus Terminal Block

- Specifications: Refer to page 47.
- Accessories and tools: Refer to pages 80 to 81.

- Dimensions: Refer to page 48.
- Precautions for correct use: Refer to pages 85 to 96.

M22N

Ordering Information

Model Numbers for Sets - - - Shipped as a set that includes the Indicator Unit, LED Lamp, and Socket Unit.

Indicators

Appearance	Rated voltage	Model	(2)(2) Indicator color	(4) LED lamp color
Plastic flat 	6 VAC/DC	M22N-BN-(2)(2)A-(4)A M22N-BN-(2)(2)A-(4)A-P	TR: Transparent red TG: Transparent green TY: Transparent yellow TW: Transparent white TA: Transparent blue TO: Transparent orange	
	12 VAC/DC	M22N-BN-(2)(2)A-(4)B M22N-BN-(2)(2)A-(4)B-P		
	24 VAC/DC	M22N-BN-(2)(2)A-(4)C M22N-BN-(2)(2)A-(4)C-P		
	100, 110, or 120 VAC	M22N-BN-(2)(2)A-(4)D M22N-BN-(2)(2)A-(4)D-P		
	200, 220, 230, or 240 VAC	M22N-BN-(2)(2)A-(4)E M22N-BN-(2)(2)A-(4)E-P		
Plastic projected 	6 VAC/DC	M22N-BP-(2)(2)A-(4)A M22N-BP-(2)(2)A-(4)A-P		
	12 VAC/DC	M22N-BP-(2)(2)A-(4)B M22N-BP-(2)(2)A-(4)B-P		
	24 VAC/DC	M22N-BP-(2)(2)A-(4)C M22N-BP-(2)(2)A-(4)C-P		
	100, 110, or 120 VAC	M22N-BP-(2)(2)A-(4)D M22N-BP-(2)(2)A-(4)D-P		
	200, 220, 230, or 240 VAC	M22N-BP-(2)(2)A-(4)E M22N-BP-(2)(2)A-(4)E-P		
Plastic semi-spherical 	6 VAC/DC	M22N-BG-(2)(2)A-(4)A M22N-BG-(2)(2)A-(4)A-P		
	12 VAC/DC	M22N-BG-(2)(2)A-(4)B M22N-BG-(2)(2)A-(4)B-P		
	24 VAC/DC	M22N-BG-(2)(2)A-(4)C M22N-BG-(2)(2)A-(4)C-P		
	100, 110, or 120 VAC	M22N-BG-(2)(2)A-(4)D M22N-BG-(2)(2)A-(4)D-P		
	200, 220, 230, or 240 VAC	M22N-BG-(2)(2)A-(4)E M22N-BG-(2)(2)A-(4)E-P		
Plastic flat etched 	6 VAC/DC	M22N-BC-(2)(2)A-(4)A M22N-BC-(2)(2)A-(4)A-P		
	12 VAC/DC	M22N-BC-(2)(2)A-(4)B M22N-BC-(2)(2)A-(4)B-P		
	24 VAC/DC	M22N-BC-(2)(2)A-(4)C M22N-BC-(2)(2)A-(4)C-P		
	100, 110, or 120 VAC	M22N-BC-(2)(2)A-(4)D M22N-BC-(2)(2)A-(4)D-P		
	200, 220, 230, or 240 VAC	M22N-BC-(2)(2)A-(4)E M22N-BC-(2)(2)A-(4)E-P		

Note: Normally, the Indicator Unit and LED Lamp with the same color are combined.
However, opaque white is available by combining a white Indicator Unit and yellow LED. M22N-B□-TWA-Y□-□

- Specifications: Refer to page 47.

■ Accessories and tools: Refer to pages 80 to 81.

■ Dimensions: Refer to page 48.

■ Precautions for correct use: Refer to pages 85 to 96.

Ratings and Specifications

Certified Standard Ratings

UL508 Type 4X, 13 (File No.E76675), CSA C22.2 No.14

12 mA 6 VAC/DC
12 mA 12 VAC/DC
12 mA 24 VAC/DC
12 mA 100-120 VAC
12 mA 200-240 VAC

TÜV (EN60947-5-1)

80 mA 6 VAC/DC
40 mA 12 VAC/DC
20 mA 24 VAC/DC
10 mA 100-120 VAC
5 mA 200-240 VAC

CCC (GB/T14048.5)

6, 12, 24 VAC/DC
100-120, 200-240 VAC

Application Standards

UL1059 and UL486E (Push-In Plus terminal block type)

Ratings

LED Lamps

Rated voltage	Applied voltage	Current
6 VAC/DC	6 VAC/DC ±10%	Approx. 11 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
12 VAC/DC	12 VAC/DC ±10%	Approx. 12 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
24 VAC/DC	24 VAC/DC ±10%	Approx. 12 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
100 VAC	100 VAC ±10%	Approx. 12 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
110 VAC	110 VAC ±10%	
120 VAC	100-130 VAC	
200 VAC	200 VAC ±10%	Approx. 12 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
220 VAC	220 VAC ±10%	
230 VAC	230 VAC ±10%	
240 VAC	220-250 VAC	

Characteristics

Item		Type	Indicator
Allowable operating frequency	Mechanical	---	
	Electrical	---	
Insulation resistance		---	
Contact resistance		---	
Dielectric strength	Between terminals of same polarity	---	
	Between each terminal and ground	2,500 VAC at 50/60 Hz for 1 min. (initial value)	
Vibration resistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude	
Shock resistance	Malfunction	1,000 m/s ² max.	
Durability	Mechanical	---	
	Electrical	---	
Ambient operating temperature ^{*1}		-25 to 55°C	
Ambient operating humidity		35% to 85% RH	
Ambient storage temperature ^{*1}		-40 to 80°C	
Degree of protection ^{*2}		Compliant with IEC IP66, Certified for UL508 Type 4X, 13	
Electric shock protection class		Class II	
PTI (tracking characteristic)		175	
Degree of contamination (application environment)		3 (EN 60947-5-1)	
Weight		Approx. 30 g	

*1. With no icing or condensation.

*2. Degree of protection from the front of the panel.

Pushbutton Switches
A22N

Selector Switches
A22N

Key-type Selector Switches
A22N

Indicators
M22N

Pushbutton Switches
A30N

Selector Switches
A30N

Key-type Selector Switches
A30N

Subassemblies (Common)

Accessories and Tools

Safety Precautions

M22N

Dimensions

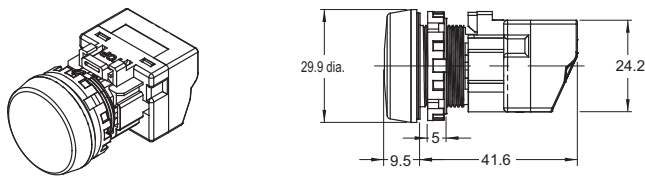
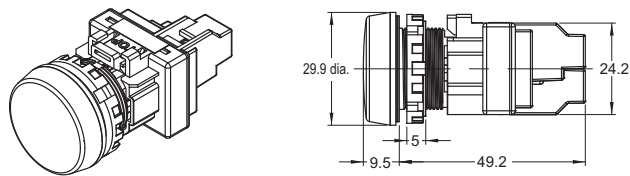
(Unit: mm)

Indicators

Plastic Flat Indicators

M22N-BN-□□A-□□

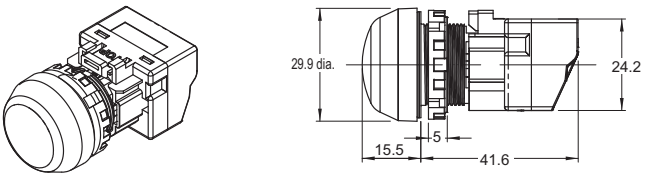
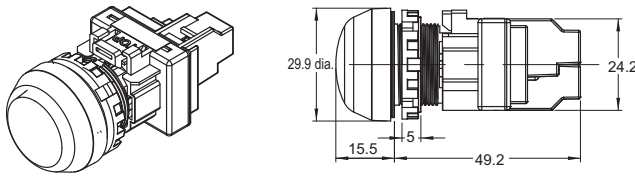
M22N-BN-□□A-□□-P



Plastic Semi-spherical Indicators

M22N-BG-□□A-□□

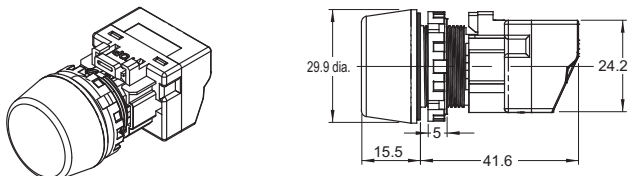
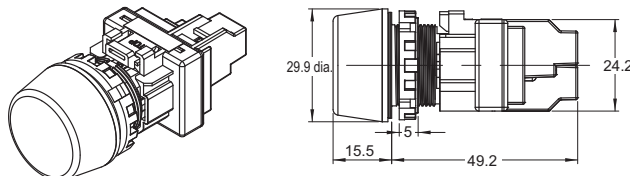
M22N-BG-□□A-□□-P



Plastic Projected Indicators

M22N-BP-□□A-□□

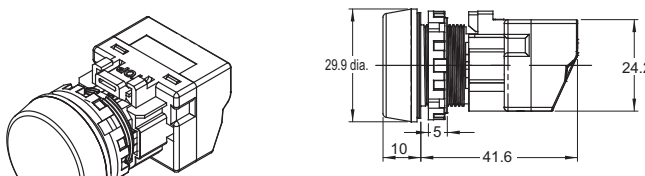
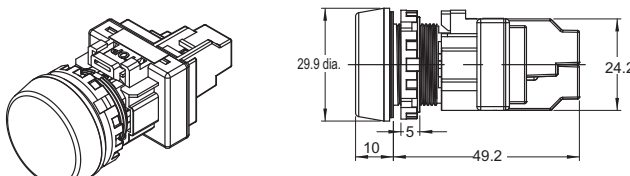
M22N-BP-□□A-□□-P



Plastic Flat Etched Indicators

M22N-BC-□□A-□□

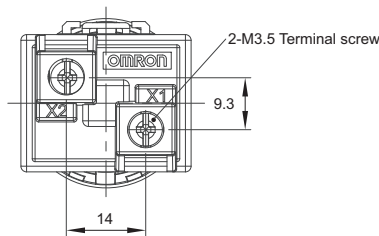
M22N-BC-□□A-□□-P



Terminal Arrangement

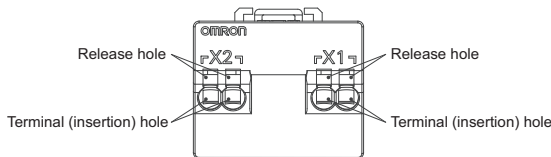
BOTTOM VIEW

Screw terminal block type



BOTTOM VIEW

Push-in Plus terminal block type



Terminal Connection Diagrams

Screw terminal block type
Push-in Plus terminal block type

