HMiE

Distributor:

4.0-1122
LED-G 6V

Human Machine Interface Expert

Human Machine Interface Expert   HMIE 4.0 Series Illuminated Pushbutton

HMiE

Human Machine Interface Expert

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Product overview

Product Information

The 4.0 series metal button switch products are a group of combined switch systems. Includes: compact type-which the switching element and the actuator are assembled together; and modular type-which the switching elements and the actuator are divided into two independent modules. Used as a pushbutton, illuminated pushbutton, indicator function, and provides some special operators such as mushroom head button and accessories. The 4.0 series metal button switch is installed through the circular hole with a diameter of Φ16 mm; or with the proper front ring, it also can be mounted on a circular hole with a diameter of Φ8 mm, Φ12 mm, Φ19 mm and Φ22 mm. Switch element and LED lamp connection: Quick connection / soldering connection.

Product structure

Series 4.0 has two kinds of product structure

Compact type: the actuator, switching element and LED assembled together. One product has one switching element with1 NC and 1 NO contacts.

Modular type: the switch elements and the actuator are divided into two independent modules.
One product have three switching elements with 3 NC and 3 NO contacts

Compact (1NO/1NC)   Modular(3NO/3NC)

Product appearance
Front ring diameter:

Φ 12/16mm   Φ 20mm   Φ22mm   Φ24mm   □24x24mm   Φ 30mm

Front ring / button shape:

flat / flat   convex / convex   concave / convex   flat / convex   convex /mushroom

Illumination

Non lighting   ring lighting   dot lighting   full button lighting   symbol lighting
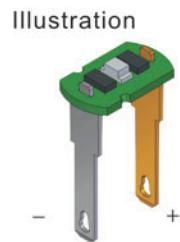
Product overview

Illumination color and voltage (The brightness and color will be slightly different due to different batches of LEDs)
Using the built-in LED provides lighting.

LED color	LED voltage	LED Polarity
Red	6V AC/DC	LED terminal:
Yellow	24V AC/DC	
Green	110V AC/DC	"+pole" gold color
White	230V AC	"−pole" silver color
Other and Bi-color can be customized	Other voltage can be customized	

Illustration

Front ring / button material and color
Material: SUS304 - matte surface treatment; color: natural, gold, black

Natural   Gold   Black

Material: Aluminum alloy - matte anodizing; color: natural, red, green, yellow, other customized

Natural   Red   Green   Yellow

Marking

standard illumainted patterns: Power symbol, Arrow symbol, Open symbol, Close symbol
non-illuminated laser marking: patterns and text can be customized

Power symbol   Arrow symbol   Open symbol   Close symbol   Laser marking

OPEN

Material

Switching housing: polycarbonate (PC)
Switching element: nylon (PA66)
Terminals: Superhard copper alloy
Contact material: silver alloy
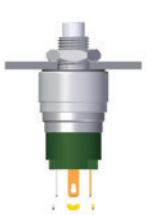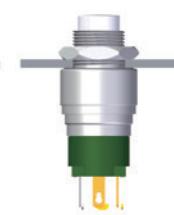
Mounting

The 4.0 series metal button switch is installed through the circular hole with a diameter of Φ16 mm. or with the proper front ring, it also can be mounted on a circular hole with a diameter of Φ8 mm, Φ12 mm, Φ19 mm and Φ22 mm. There is an anti rotation groove for Φ16mm, Φ19mm and Φ22mm products to prevent product rotation, it is mainly applied to products with lighting symbols and laser engraving
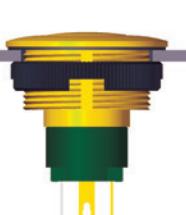
Φ8 mm   Φ12 mm   Φ16 mm   Φ19 mm   Φ22 mm
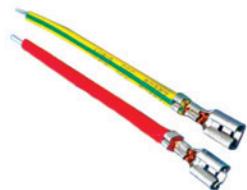
Product overview

Connection:
Quick connection / soldering connection.
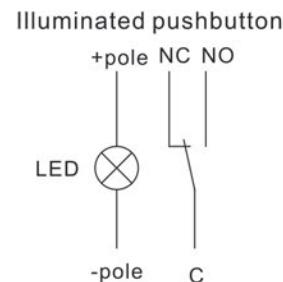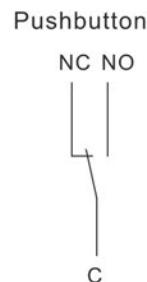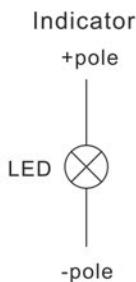
2.8 X 0.5 quick connection   soldering connection

Electrical wiring diagram (SPDT Single Pole Double Throw)

Compact type

Indicator	Pushbutton	Illuminated pushbutton
+pole	NC NO	+pole NC NO
LED ⊗		LED ⊗
-pole	C	-pole C
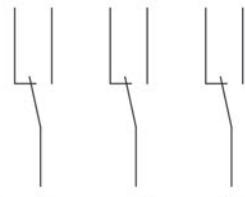
Modular type
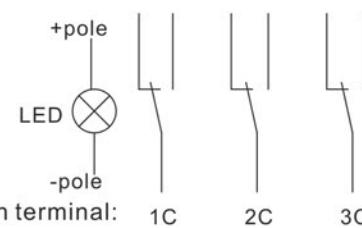
Pushbutton
terminal number: 12 11   22 21   32 31
terminal state: NC NO   NC NO   NC NO

Common terminal: 1C   2C   3C

Illuminated pushbutton
terminal number: 12 11   22 21   32 31
terminal state: NC NO   NC NO   NC NO

+pole
LED ⊗
-pole
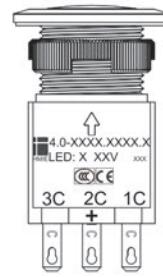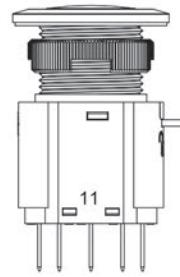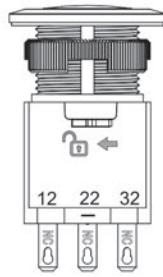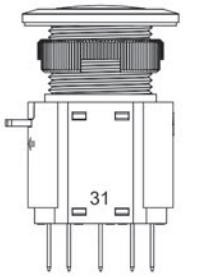
Common terminal: 1C   2C   3C

Description of electrical wiring numbers (terminal numbers) of modular product
The first number of terminal number indicates the number of switches, 1 means first switch, 2 means second switch, 3 means third switch.
The second number of terminal number indicates the state when the switch is not actuated,1 means NO; 2 means NC, C means common
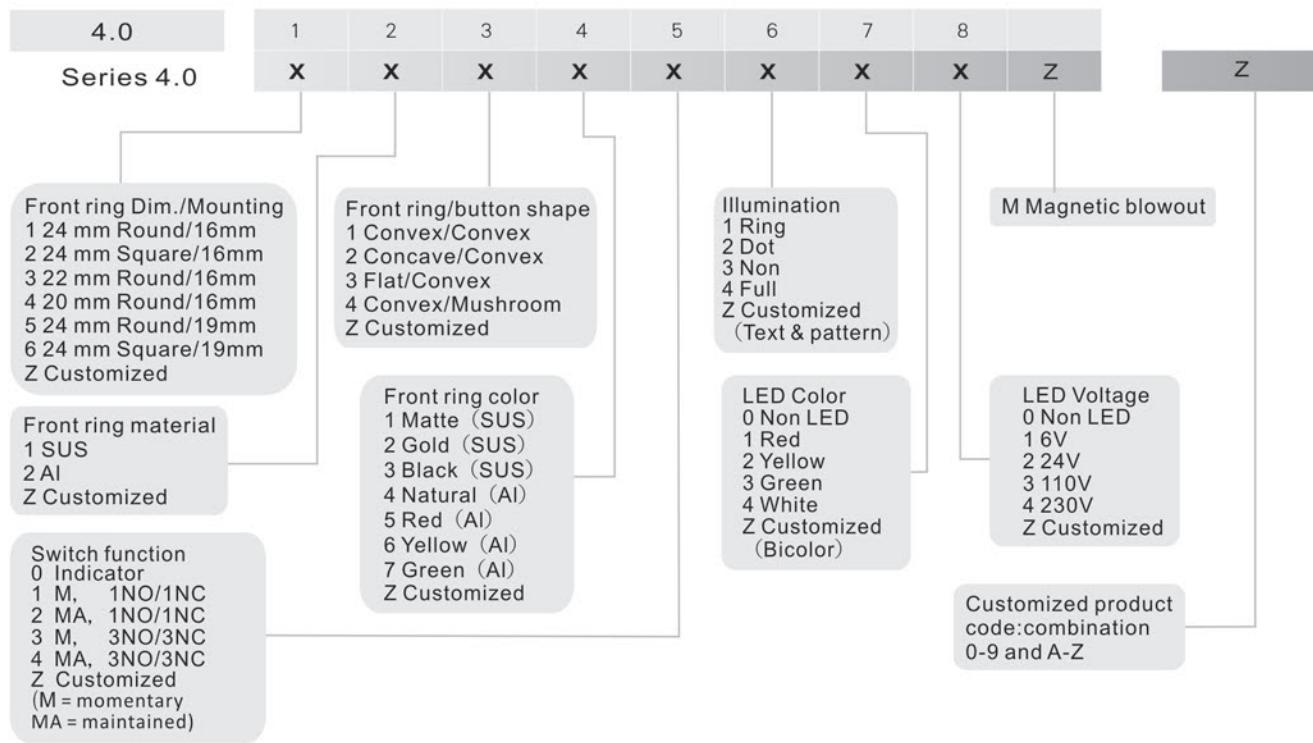
Operating function:
momentary and maintained

4.0 Series metal pushbutton coding principle （for specific product selection please refer to page9-31）

4.0	1	2	3	4	5	6	7	8	Z		Z
Series 4.0	X	X	X	X	X	X	X	X			

Front ring Dim./Mounting
1 24 mm Round/16mm
2 24 mm Square/16mm
3 22 mm Round/16mm
4 20 mm Round/16mm
5 24 mm Round/19mm
6 24 mm Square/19mm
Z Customized

Front ring material
1 SUS
2 Al
Z Customized

Switch function
0 Indicator
1 M,   1NO/1NC
2 MA, 1NO/1NC
3 M,   3NO/3NC
4 MA, 3NO/3NC
Z Customized
(M = momentary
MA = maintained)

Front ring/button shape
1 Convex/Convex
2 Concave/Convex
3 Flat/Convex
4 Convex/Mushroom
Z Customized

Front ring color
1 Matte（SUS）
2 Gold（SUS）
3 Black（SUS）
4 Natural（Al）
5 Red（Al）
6 Yellow（Al）
7 Green（Al）
Z Customized

Illumination
1 Ring
2 Dot
3 Non
4 Full
Z Customized
（Text & pattern）

LED Color
0 Non LED
1 Red
2 Yellow
3 Green
4 White
Z Customized
（Bicolor）

M Magnetic blowout

LED Voltage
0 Non LED
1 6V
2 24V
3 110V
4 230V
Z Customized

Customized product code:combination
0-9 and A-Z

Product Selection Explanation

This numbering system table stands for standard Φ16mm mounting hole version. Other mounting hole dimension needs specific modification on the numbering as below:

Digit 1: mounting hole Φ8mm (front ring dimension Φ12mm), digit 1 should be changed to A
mounting hole Φ12mm (front ring dimension Φ16mm), digit 1 should be changed to B
mounting hole Φ19mm (front ring dimension Φ24mm or □24mm), digit 1 should be changed to 5 or 6
mounting hole Φ22mm (front ring dimension Φ28mm), digit 1 should be changed to D
other size are on request. Z stands for customized customer request.

Digit 2: universal. All version could select. Front ring and button keeps same metal material.

Digit 3: mounting hole Φ8mm, Φ12mm, "Front ring / button shape" is only "flat \ flat"
mounting hole Φ8mm, digit 3 should be changed to A
mounting hole Φ12mm, digit 3 should be changed to B
Z stands for customized customer request (Change the shape of the front ring only)

Digit 4: universal. All version could select. Metal front ring and metal button keeps same color, It can be customized when different colors are needed, please specify

Digit 5: universal. All version could select
Z stands for customized customer request (for modular type, it might be possible to have different switching element)

Digit 6: the materials of ring and dot lighting part are plastic with white color.
the material of full button lighting part is plastic, and the color is same as the lighting LED color.
other colors are on request. Z stands for customized customer request.

Digit 7: universal. All version could select. Indicator could not select "0 Non LED"

Digit 8: universal. All version could select. Indicator could not select "0 Non LED"
Z stands for customized request (voltage < 230V, power<0.25W)

Digit Z: these digit stand for customized request
"M" stands for "Special Magnetic Arc Extinction" optional on compact type 1NO\1NC switching element.

Product technical specifications

Product technical data
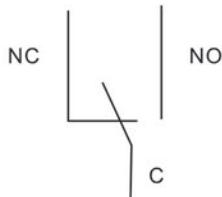
Switch system:
Snap-action changeover contact normally closed / normally open (single pole double throw).
Switching function momentary or maintained.
-Standard switching element
-Switching element with magnetic field of arc extinguishing (patent products)

Changeover contact

No action state   Action state

Mounting panel thickness
Compact: 0.5 mm ~ 6.0 mm
Modular: 0.5 mm ~ 4.5 mm

Tightening torque
50 N.cm min. – 200 N.cm max. for fixing nut

Wiring specification:
2.8 X 0.5 quick connection / soldering connection
The maximum wire cross-sectional area :1× 1.5mm^2 or 2 X 0.75mm^2

Actuating travel
2.6 mm ± 0.2 mm

Actuating force (Measurement on button)

Compact type (1NO/1NC)	Modular type (3NO/3NC)
3.0 N (+/- 0.3 N)	6.0 N (+/- 0.5N)

Rated withstand voltage
1500 V

Conventional free air thermal current Ith
8 A
The maximum current in continuous operation and at ambient temperature must not exeed
the quoted maximum values

Switch rating: alternating current (AC)
Rated operating voltage Ue / rated working current Ie under usage category

AC-12		AC-15	
Ue	Ie	Ue	Ie
24 VAC	5.0 A	24 VAC	5.0 A
110 VAC	5.0 A	110 VAC	1.5 A
220 VAC	3.0 A	220 VAC	0.75 A

Product technical specifications

Switch rating: direct current (DC)

Standard switching element
Rated operating voltage Ue / rated working current Ie under usage category

DC – 12		DC – 13	
Ue	Ie	Ue	Ie
24 VDC	5.0 A	24 VDC	3.0 A
72 VDC	2.0 A	72 VDC	0.8 A
110 VDC	1.0 A	110 VDC	0.4 A
220 VDC	0.3 A	220 VDC	0.2 A

Switching element with magnetic field of arc extinguishing
Rated operating voltage Ue / rated working current Ie under usage category

DC – 12		DC – 13	
Ue	Ie	Ue	Ie
24 VDC	5.0 A	24 VDC	4 A
72 VDC	4.0 A	72 VDC	1.2 A
110 VDC	2.0 A	110 VDC	0.7 A
220 VDC	0.5 A	220 VDC	0.3 A

Recommended minimum operational data:

voltage	current
5 V	10 mA
12 V	5 mA
24 V	2 mA
110 V	1 mA

Contact resistance
new state ≤ 50mΩ

Rebound time
≤ 3ms

Insulation voltage
1500 VAC, 50 Hz, 1 min., Between life terminals and ground

Isolation resistance
≥ 1000 MΩ

Operating temperature
- 40 °C ~ + 65 °C

Storage temperature
- 45 °C ~ + 85 °C

Front ingress protection
IP65; IP67

Product technical specifications

Mechanical lifetime

Copmact pushbutton	momentary action	≥	$3×10^6$ cycles of operation (3 million)
	maintained action	≥	$2×10^6$ cycles of operation (2 million)
Modular pushbutton	momentary action	≥	$3×10^6$ cycles of operation (3 million)
	maintained action	≥	$1×10^6$ cycles of operation (1 million)

Impact resistance

IK10 for SUS

Shock resistance

1. 1000 m/s^2, 100 gn, 6 s (GB/T2423.5 / IEC 60068-2-27)

2. 50 m/s^2, 30ms, 36 times

（GB/T21563 / IEC 61373 railway application-rolling stock equipment-shock and vibration tests)

Vibration resistance

1. 100 m/s^2 at 10Hz ~500Hz, amplitude 0.75mm, 10 times 3 axial (GB/T2423.10 / EN IEC 60068-2-6)

2. Functional experiment: Class B, 0.45-1.0m/s^2, 10min 3 axial;

   Shock test: 3 axial 6 directions, impact 6 times in each axial direction, total 36 times;

   Long life test: 5 hours in three directions perpendicular to each other, total 15 hours.

   （GB/T21563 / IEC 61373 railway application-rolling stock equipment-shock and vibration tests)

Protection class

Indicators and switches, fit for mounting into devices with protection class Ⅱ

Approbations
CCC
CB
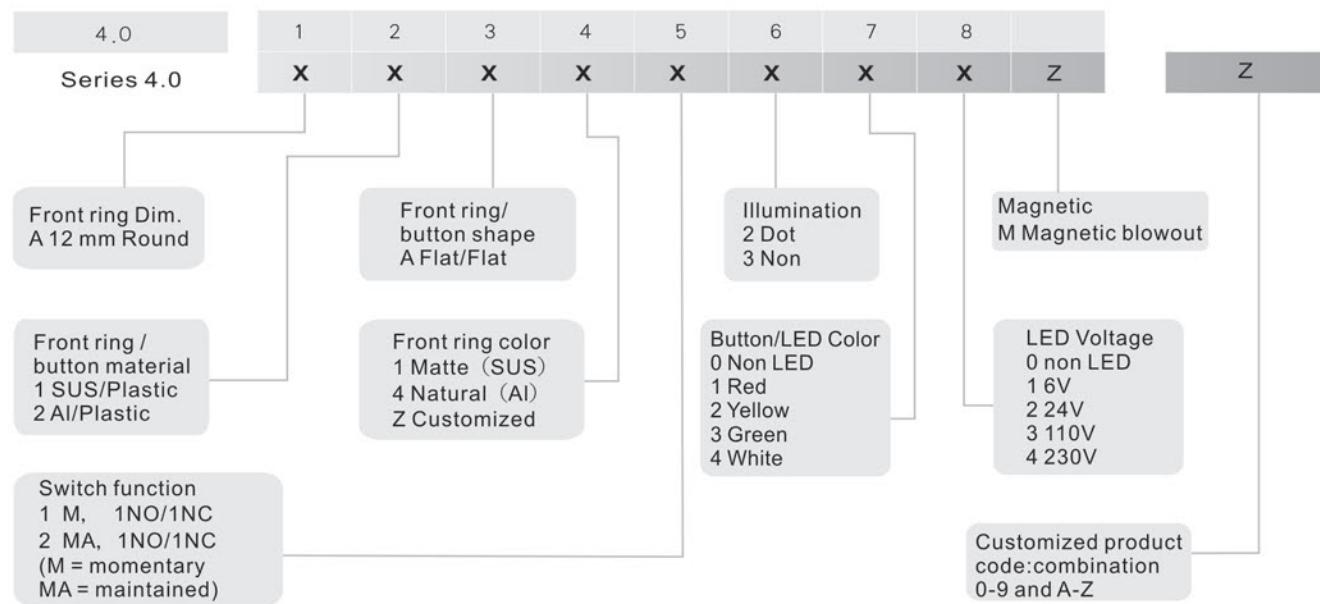
Declaration of conformity
CE
RoHS
En45545 (smoke and fire norm for railway)

※ The manufacturer reserves the right to change specifications without prior notice

Φ8mm mounting hole – compact

Front ring Dim.: Round 12mm

4.0	1	2	3	4	5	6	7	8		Z
Series 4.0	X	X	X	X	X	X	X	X	Z	Z

Front ring Dim.
A 12 mm Round

Front ring / button material
1 SUS/Plastic
2 Al/Plastic

Switch function
1 M, 1NO/1NC
2 MA, 1NO/1NC
(M = momentary
MA = maintained)

Front ring/ button shape
A Flat/Flat

Front ring color
1 Matte (SUS)
4 Natural (Al)
Z Customized

Illumination
2 Dot
3 Non

Button/LED Color
0 Non LED
1 Red
2 Yellow
3 Green
4 White

Magnetic
M Magnetic blowout

LED Voltage
0 non LED
1 6V
2 24V
3 110V
4 230V

**Customized product code:combination**
0-9 and A-Z

Φ8mm mounting hole–compact: 12mm round front ring standard product list
(Please select the specific code according to the field where x is located)

		1	2	3	4	5	6	7	8	
Product number		Front ring Dim	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button / LED color	LED voltage	Mounting hole
4.0-A1A1.12XX		A 12 mm	1 SUS / Plastic	A flat/flat	1 matte	1 M 1NO/1NC	2 dot	1 red	1 6V	Φ8mm
4.0-A1A1.22XX						2 MA 1NO/1NC		2 yellow	2 24V	
4.0-A2A4.12XX			2 Al / plastic		4 natural	1 M 1NO/1NC		3 green	3 110V	
4.0-A2A4.22XX						2 MA 1NO/1NC		4 white	4 230V	
4.0-A1A1.13X0			1 SUS / Plastic		1 matte	1 M 1NO/1NC	3 non	1 red	0 non LED	
4.0-A1A1.23X0						2 MA 1NO/1NC		2 yellow		
4.0-A2A4.13X0			2 Al / plastic		4 natural	1 M 1NO/1NC		3 green		
4.0-A2A4.23X0						2 MA 1NO/1NC		4 white		

Electrical wiring diagram: see page 4

Dimension (unit: mm)

Ø12
12
32.6
6 max.
Ø 17.7
18 min.
18 min.
Ø8⁺¹

4.0-A1A1.2
LED:W 24V

Φ12mm mounting hole – compact

Front ring Dim.: Round 16mm

4.0	1	2	3	4	5	6	7	8	Z		Z
Series 4.0	X	X	X	X	X	X	X	X	Z		Z

Front ring Dim.
B 16 mm Round

Front ring /
button material
1 SUS/Plastic
2 Al/Plastic

Switch function
1 M, 1NO/1NC
2 MA, 1NO/1NC
(M = momentary
MA = maintained)

Front ring/
button shape
B Flat/Flat

Front ring color
1 Matte (SUS)
4 Natural (Al)
Z Customized

Illumination
2 Dot
3 Non

Button/
LED Color
0 Non LED
1 Red
2 Yellow
3 Green
4 White

Magnetic
M Magnetic blowout

LED Voltage
0 non LED
1 6V
2 24V
3 110V
4 230V

Customized product
code:combination
0-9 and A-Z

Φ12mm mounting hole–compact: 16mm round front ring standard product list
(Please select the specific code according to the field where x is located)

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim	Front ring / button material	Front ring/ button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-B1B1.12XX		1 SUS / Plastic		1 matte	1 M 1NO/1NC	2 dot	1 red	1 6V	
4.0-B1B1.22XX					2 MA 1NO/1NC		2 yellow	2 24V	
4.0-B2B4.12XX		2 Al / plastic		4 natural	1 M 1NO/1NC		3 green	3 110V	
4.0-B2B4.22XX	B 16 mm		B flat/ flat		2 MA 1NO/1NC		4 white	4 230V	Φ12mm
4.0-B1B1.13X0		1 SUS / Plastic		1 matte	1 M 1NO/1NC	3 non	1 red	0 non LED	
4.0-B1B1.23X0					2 MA 1NO/1NC		2 yellow		
4.0-B2B4.13X0		2 Al / plastic		4 natural	1 M 1NO/1NC		3 green		
4.0-B2B4.23X0					2 MA 1NO/1NC		4 white		

Electrical wiring diagram: see page 4

Dimension (unit: mm)

Φ16mm mounting hole – compact

4.0		1	2	3	4	5	6	7	8		Z
Series 4.0		X	X	X	X	X	X	X	X	Z	Z

Front ring Dim.
1 24 mm Round
2 24 mm Square
3 22 mm Round
4 20 mm Round
Z Customized

Front ring material
1 SUS
2 Al
Z Customized

Switch function
0 Indicator
1 M,   1NO/1NC
2 MA, 1NO/1NC
(M = momentary
MA = maintained)

Front ring/button shape
1 Convex/Convex
2 Concave/Convex
3 Flat/Convex
Z Customized

Front ring color
1 Matte（SUS）
2 Gold（SUS）
3 Black（SUS）
4 Natural（AI）
5 Red（AI）
6 Yellow（AI）
7 Green（AI）
Z Customized

Illumination
1 Ring
2 Dot
3 Non
4 Full
Z Customized
(Text & pattern)

LED Color
0 Non LED
1 Red
2 Yellow
3 Green
4 White
Z Customized
（Bicolor）

Magnetic
M Magnetic blowout

LED Voltage
0 Non LED
1 6V
2 24V
3 110V
4 230V
Z Customized

Customized product code:combination 0-9 and A-Z

Dimension (unit: mm)

D = 1   24 mm Round
    2   24 mm Square
    3   22 mm Round
    4   20 mm Round

Φ16mm mounting hole – compact

Front ring Dim.: Round 24mm

Φ16mm mounting hole—compact: 24mm round front ring standard product list
(Please select the specific code according to the field where x is located)

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−11XX.01XX	1 24 mm round	1 SUS/SUS	1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	1 matte 2 gold 3 black	0 indicator	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−11XX.11XX					1 M 1NO/1NC				
4.0−11XX.21XX					2 MA 1NO/1NC				
4.0−11XX.02XX		1 SUS/SUS			0 indicator	② 2 dot			
4.0−11XX.12XX					1 M 1NO/1NC				
4.0−11XX.22XX					2 MA 1NO/1NC				
4.0−11XX.04XX		1 SUS/Plastic			0 indicator	③ 4 full			
4.0−11XX.14XX					1 M 1NO/1NC				
4.0−11XX.24XX					2 MA 1NO/1NC				
4.0−11XX.1300		1 SUS/SUS			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0−11XX.2300					2 MA 1NO/1NC				

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−12XX.01XX	1 24 mm round	2 AI / AI	1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	4 natural 5 red 6 yellow 7 green	0 indicator	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−12XX.11XX					1 M 1NO/1NC				
4.0−12XX.21XX					2 MA 1NO/1NC				
4.0−12XX.02XX		2 AI / AI			0 indicator	② 2 dot			
4.0−12XX.12XX					1 M 1NO/1NC				
4.0−12XX.22XX					2 MA 1NO/1NC				
4.0−12XX.04XX		2 AI / Plastic			0 indicator	③ 4 full			
4.0−12XX.14XX					1 M 1NO/1NC				
4.0−12XX.24XX					2 MA 1NO/1NC				
4.0−12XX.1300		2 AI / AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0−12XX.2300					2 MA 1NO/1NC				

①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 11

Φ16mm mounting hole – compact

Front ring Dim.: Square 24mm

Φ16mm mounting hole—compact: 24mm square front ring standard product list
(Please select the specific code according to the field where x is located)

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−21XX.01XX					0 indicator	① 1 ring			
4.0−21XX.11XX		1 SUS/SUS			1 M 1NO/1NC				
4.0−21XX.21XX					2 MA 1NO/1NC				
4.0−21XX.02XX					0 indicator	② 2 dot	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−21XX.12XX	2 24 mm square	1 SUS/SUS	1 Convex /Convex	1 matte 2 gold 3 black	1 M 1NO/1NC				
4.0−21XX.22XX					2 MA 1NO/1NC				
4.0−21XX.04XX					0 indicator	③ 4 full			
4.0−21XX.14XX		1 SUS/Plastic			1 M 1NO/1NC				
4.0−21XX.24XX					2 MA 1NO/1NC				
4.0−21XX.1300		1 SUS/SUS			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0−21XX.2300					2 MA 1NO/1NC				

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−22XX.01XX					0 indicator	① 1 ring			
4.0−22XX.11XX		2 AI/AI			1 M 1NO/1NC				
4.0−22XX.21XX					2 MA 1NO/1NC				
4.0−22XX.02XX					0 indicator	② 2 dot	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−22XX.12XX	2 24 mm square	2 AI/AI	1 Convex /Convex	4 natural 5 red 6 yellow 7 green	1 M 1NO/1NC				
4.0−22XX.22XX					2 MA 1NO/1NC				
4.0−22XX.04XX					0 indicator	③ 4 full			
4.0−22XX.14XX		2 AI/Plastic			1 M 1NO/1NC				
4.0−22XX.24XX					2 MA 1NO/1NC				
4.0−22XX.1300		2 AI/AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0−22XX.2300					2 MA 1NO/1NC				

①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 11
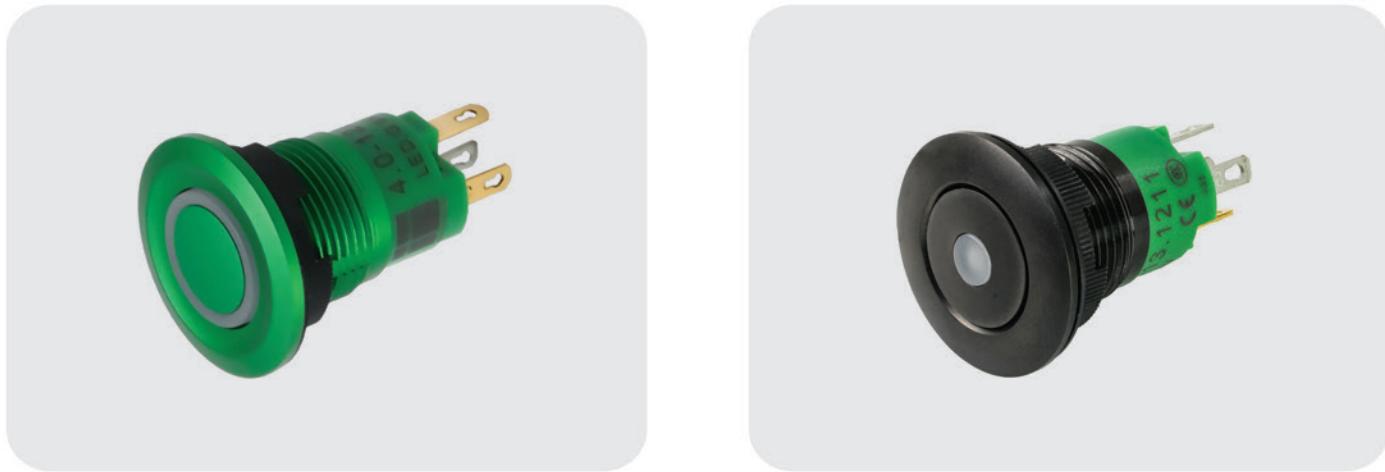
Φ16mm mounting hole – compact

Front ring Dim.: Round 22mm

Φ16mm mounting hole–compact: 22mm round front ring standard product list
(Please select the specific code according to the field where x is located)

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−31XX.01XX					0 indicator	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−31XX.11XX		1 SUS/SUS			1 M 1NO/1NC				
4.0−31XX.21XX					2 MA 1NO/1NC				
4.0−31XX.02XX	3 22 mm round		1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	1 matte 2 gold 3 black	0 indicator	② 2 dot			
4.0−31XX.12XX		1 SUS/SUS			1 M 1NO/1NC				
4.0−31XX.22XX					2 MA 1NO/1NC				
4.0−31XX.04XX					0 indicator	③ 4 full			
4.0−31XX.14XX		1 SUS/Plastic			1 M 1NO/1NC				
4.0−31XX.24XX					2 MA 1NO/1NC				
4.0−31XX.1300		1 SUS/SUS			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0−31XX.2300					2 MA 1NO/1NC				

|	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−32XX.01XX					0 indicator	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−32XX.11XX		2 AI/AI			1 M 1NO/1NC				
4.0−32XX.21XX					2 MA 1NO/1NC				
4.0−32XX.02XX	3 22 mm round		1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	4 natural 5 red 6 yellow 7 green	0 indicator	② 2 dot			
4.0−32XX.12XX		2 AI/AI			1 M 1NO/1NC				
4.0−32XX.22XX					2 MA 1NO/1NC				
4.0−32XX.04XX					0 indicator	③ 4 full			
4.0−32XX.14XX		2 AI/Plastic			1 M 1NO/1NC				
4.0−32XX.24XX					2 MA 1NO/1NC				
4.0−32XX.1300		2 AI/AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0−32XX.2300					2 MA 1NO/1NC				

①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 11

Φ16mm mounting hole – compact

Front ring Dim.: Round 20mm

Φ16mm mounting hole–compact: 20mm round front ring standard product list
(Please select the specific code according to the field where x is located)

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−41XX.01XX		1 SUS/SUS			0 indicator	① 1 ring			
4.0−41XX.11XX					1 M 1NO/1NC				
4.0−41XX.21XX					2 MA 1NO/1NC				
4.0−41XX.02XX	4 20 mm round	1 SUS/SUS	1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	1 matte 2 gold 3 black	0 indicator	② 2 dot	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−41XX.12XX					1 M 1NO/1NC				
4.0−41XX.22XX					2 MA 1NO/1NC				
4.0−41XX.04XX		1 SUS/Plastic			0 indicator	③ 4 full			
4.0−41XX.14XX					1 M 1NO/1NC				
4.0−41XX.24XX					2 MA 1NO/1NC				
4.0−41XX.1300		1 SUS/SUS			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0−41XX.2300					2 MA 1NO/1NC				

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−42XX.01XX		2 AI/AI			0 indicator	① 1 ring			
4.0−42XX.11XX					1 M 1NO/1NC				
4.0−42XX.21XX					2 MA 1NO/1NC				
4.0−42XX.02XX	4 20 mm round	2 AI/AI	1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	4 natural 5 red 6 yellow 7 green	0 indicator	② 2 dot	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−42XX.12XX					1 M 1NO/1NC				
4.0−42XX.22XX					2 MA 1NO/1NC				
4.0−42XX.04XX		2 AI/Plastic			0 indicator	③ 4 full			
4.0−42XX.14XX					1 M 1NO/1NC				
4.0−42XX.24XX					2 MA 1NO/1NC				
4.0−42XX.1300		2 AI/AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0−42XX.2300					2 MA 1NO/1NC				

①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 11

4.0	1	2	3	4	5	6	7	8		Z
Series 4.0	X	X	X	X	X	X	X	X	Z	Z

Front ring Dim.
1 24 mm Round
2 24 mm Square
3 22 mm Round
4 20 mm Round
Z Customized

Front ring material
1 SUS
2 AI
Z Customized

Switch function
3 M,   3NO/3NC
4 MA,   3NO/3NC
(M = momentary
MA = maintained)

Front ring/ button shape
1 Convex/Convex
2 Concave/Convex
3 Flat/Convex
Z Customized

Front ring color
1 Matte（SUS）
2 Gold（SUS）
3 Black（SUS）
4 Natural（AI）
5 Red（AI）
6 Yellow（AI）
7 Green（AI）
Z Customized

Illumination
1 Ring
2 Dot
3 Non
4 Full
Z Customized
(Text & pattern)

LED Color
0 Non LED
1 Red
2 Yellow
3 Green
4 White
Z Customized
（Bicolor）

Magnetic
M Magnetic blowout

LED Voltage
0 Non LED
1 6   V
2 24 V
3 110V
4 230V
Z Customized

Customized product code:combination
0-9 and A-Z

Dimension (unit: mm)

D = 1 24 mm Round
    2 24 mm Square
    3 22 mm Round
    4 20 mm Round

3
37.2
D min
M16
4.5 max.
25.5

D min
26 min.
15.5
Ø16⁺⁰·²₀
A
1.8 ±0.1

A

Φ16mm mounting hole – modular

Front ring Dim.: Round 24mm

Φ16mm mounting hole—modular: 24mm round front ring standard product list
(Please select the specific code according to the field where x is located)

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−11XX.31XX	1 24 mm round	1 SUS/SUS	1 Convex /Convex 2 Concave /Concave 3 Flat /Convex	1 matte 2 gold 3 black	3 M 3NO/3NC	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−11XX.41XX					4 MA 3NO/3NC				
4.0−11XX.32XX		1 SUS/SUS			3 M 3NO/3NC	② 2 dot			
4.0−11XX.42XX					4 MA 3NO/3NC				
4.0−11XX.34XX		1 SUS/Plastic			3 M 3NO/3NC	③ 4 full			
4.0−11XX.44XX					4 MA 3NO/3NC				
4.0−11XX.3300		1 SUS/SUS			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0−11XX.4300					4 MA 3NO/3NC				

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−12XX.31XX	1 24 mm round	2 Al/Al	1 Convex /Convex 2 Concave /Concave 3 Flat /Convex	4 natural 5 red 6 yellow 7 green	3 M 3NO/3NC	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−12XX.41XX					4 MA 3NO/3NC				
4.0−12XX.32XX		2 Al/Al			3 M 3NO/3NC	② 2 dot			
4.0−12XX.42XX					4 MA 3NO/3NC				
4.0−12XX.34XX		2 Al/Plastic			3 M 3NO/3NC	③ 4 full			
4.0−12XX.44XX					4 MA 3NO/3NC				
4.0−12XX.3300		2 Al/Al			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0−12XX.4300					4 MA 3NO/3NC				

①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 16
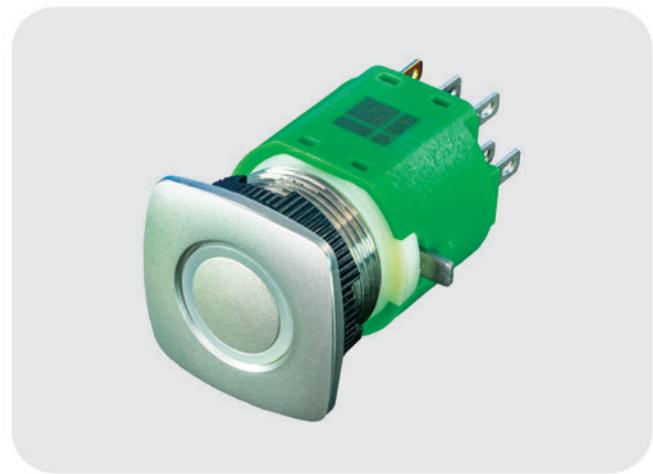
Φ16mm mounting hole – modular

Front ring Dim.: Square 24mm

Φ16mm mounting hole-modular: 24mm square front ring standard product list
（Please select the specific code according to the field where x is located）

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-21XX.31XX	2 24 mm square	1 SUS/SUS	1 Convex /Convex	1 matte 2 gold 3 black	3 M 3NO/3NC	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0-21XX.41XX					4 MA 3NO/3NC				
4.0-21XX.32XX		1 SUS/SUS			3 M 3NO/3NC	② 2 dot			
4.0-21XX.42XX					4 MA 3NO/3NC				
4.0-21XX.34XX		1 SUS/Plastic			3 M 3NO/3NC	③ 4 full			
4.0-21XX.44XX					4 MA 3NO/3NC				
4.0-21XX.3300		1 SUS/SUS			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0-21XX.4300					4 MA 3NO/3NC				

|	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-22XX.31XX	2 24 mm square	2 AI/AI	1 Convex /Convex	4 natural 5 red 6 yellow 7 green	3 M 3NO/3NC	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0-22XX.41XX					4 MA 3NO/3NC				
4.0-22XX.32XX		2 AI/AI			3 M 3NO/3NC	② 2 dot			
4.0-22XX.42XX					4 MA 3NO/3NC				
4.0-22XX.34XX		2 AI/Plastic			3 M 3NO/3NC	③ 4 full			
4.0-22XX.44XX					4 MA 3NO/3NC				
4.0-22XX.3300		2 AI/AI			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0-22XX.4300					4 MA 3NO/3NC				

①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 16

Φ16mm mounting hole – modular

Front ring Dim.: Round 22mm

Φ16mm mounting hole—modular: 22mm round front ring standard product list
(Please select the specific code according to the field where x is located)

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−31XX.31XX	3 22 mm round	1 SUS/SUS	1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	1 matte 2 gold 3 black	3 M 3NO/3NC	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−31XX.41XX					4 MA 3NO/3NC				
4.0−31XX.32XX		1 SUS/SUS			3 M 3NO/3NC	② 2 dot			
4.0−31XX.42XX					4 MA 3NO/3NC				
4.0−31XX.34XX		1 SUS/Plastic			3 M 3NO/3NC	③ 4 full			
4.0−31XX.44XX					4 MA 3NO/3NC				
4.0−31XX.3300		1 SUS/SUS			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0−31XX.4300					4 MA 3NO/3NC				

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−32XX.31XX	3 22 mm round	2 AI/AI	1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	4 natural 5 red 6 yellow 7 green	3 M 3NO/3NC	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−32XX.41XX					4 MA 3NO/3NC				
4.0−32XX.32XX		2 AI/AI			3 M 3NO/3NC	② 2 dot			
4.0−32XX.42XX					4 MA 3NO/3NC				
4.0−32XX.34XX		2 AI/Plastic			3 M 3NO/3NC	③ 4 full			
4.0−32XX.44XX					4 MA 3NO/3NC				
4.0−32XX.3300		2 AI/AI			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0−32XX.4300					4 MA 3NO/3NC				

①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 16

Φ16mm mounting hole – modular

Front ring Dim.: Round 20mm

Φ16mm mounting hole-modular: 20mm round front ring standard product list
(Please select the specific code according to the field where x is located)

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−41XX.31XX	4 20 mm round	1 SUS/SUS	1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	1 matte 2 gold 3 black	3 M 3NO/3NC	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−41XX.41XX					4 MA 3NO/3NC				
4.0−41XX.32XX		1 SUS/SUS			3 M 3NO/3NC	② 2 dot			
4.0−41XX.42XX					4 MA 3NO/3NC				
4.0−41XX.34XX		1 SUS/Plastic			3 M 3NO/3NC	③ 4 full			
4.0−41XX.44XX					4 MA 3NO/3NC				
4.0−41XX.3300		1 SUS/SUS			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0−41XX.4300					4 MA 3NO/3NC				

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0−42XX.31XX	4 20 mm round	2 AI/AI	1 Convex /Convex 2 Concave /Convex 3 Flat /Convex	4 natural 5 red 6 yellow 7 green	3 M 3NO/3NC	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ16mm
4.0−42XX.41XX					4 MA 3NO/3NC				
4.0−42XX.32XX		2 AI/AI			3 M 3NO/3NC	② 2 dot			
4.0−42XX.42XX					4 MA 3NO/3NC				
4.0−42XX.34XX		2 AI/Plastic			3 M 3NO/3NC	③ 4 full			
4.0−42XX.44XX					4 MA 3NO/3NC				
4.0−42XX.3300		2 AI/AI			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0−42XX.4300					4 MA 3NO/3NC				
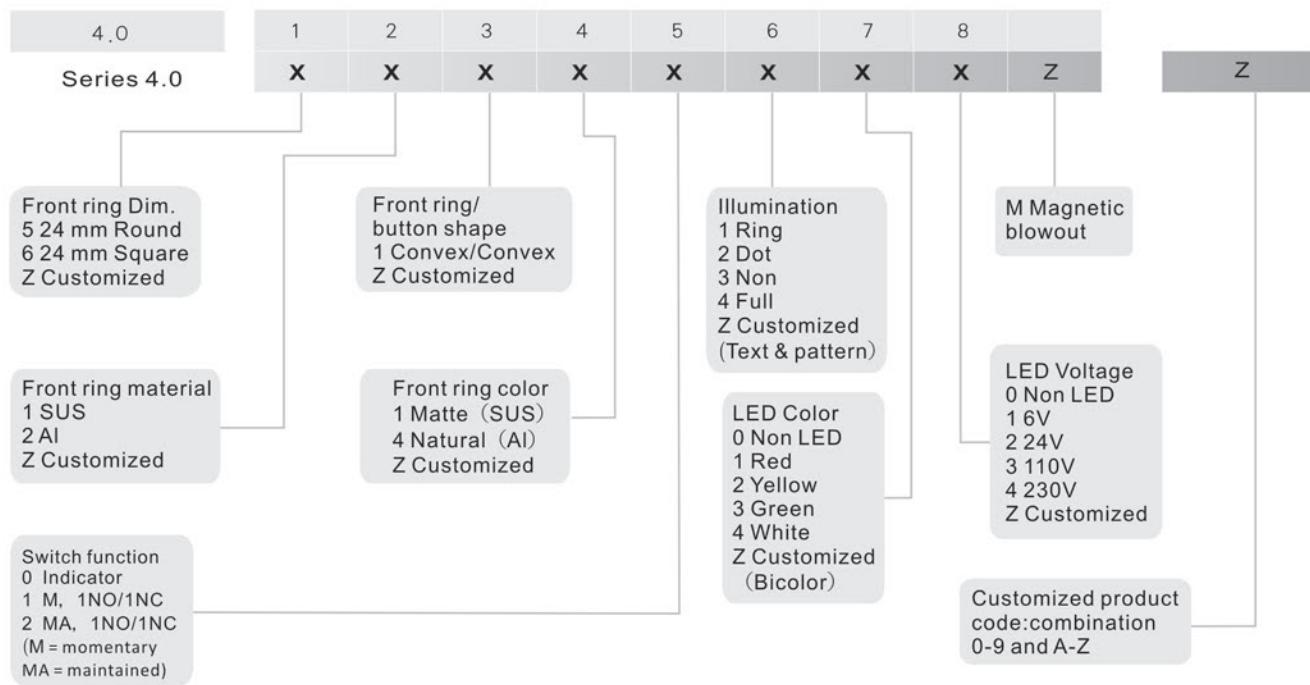
①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 16

4.0	1	2	3	4	5	6	7	8	Z		Z
Series 4.0	X	X	X	X	X	X	X	X			

Front ring Dim.
5 24 mm Round
6 24 mm Square
Z Customized

Front ring material
1 SUS
2 AI
Z Customized

Switch function
0 Indicator
1 M, 1NO/1NC
2 MA, 1NO/1NC
(M = momentary
MA = maintained)

Front ring/button shape
1 Convex/Convex
Z Customized

Front ring color
1 Matte (SUS)
4 Natural (AI)
Z Customized

Illumination
1 Ring
2 Dot
3 Non
4 Full
Z Customized
(Text & pattern)

LED Color
0 Non LED
1 Red
2 Yellow
3 Green
4 White
Z Customized
(Bicolor)

M Magnetic blowout

LED Voltage
0 Non LED
1 6V
2 24V
3 110V
4 230V
Z Customized

Customized product code:combination 0-9 and A-Z

Dimension (unit: mm)

D =5 24 mm round
6 24 mm square

D
3
30.1
6 max.
M19

D min.
D min.
18.5
Φ19
1.8 ±0.1
A
A

4.0-1111.24
LED:R 24V
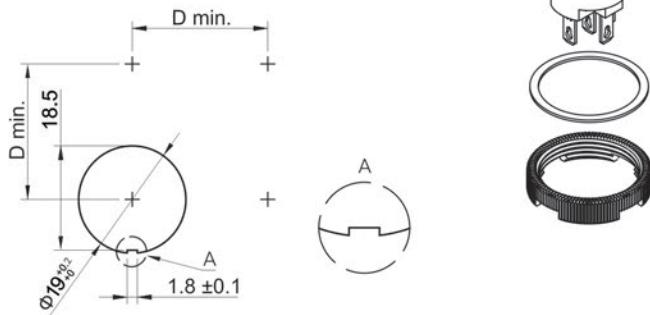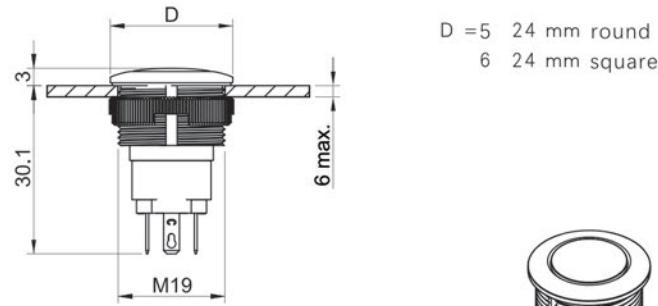
Φ19mm mounting hole – compact

Front ring Dim.: Round 24mm

Φ19mm mounting hole-compact：24mm round front ring standard product list
（Please select the specific code according to the field where x is located）

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-5111.01XX	1 24 mm round	1 SUS/SUS	1 Convex /Convex	1 matte	0 indicator	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ19mm
4.0-5111.11XX					1 M 1NO/1NC				
4.0-5111.21XX					2 MA 1NO/1NC				
4.0-5111.02XX		1 SUS/SUS			0 indicator	② 2 dot			
4.0-5111.12XX					1 M 1NO/1NC				
4.0-5111.22XX					2 MA 1NO/1NC				
4.0-5111.04XX		1 SUS/Plastic			0 indicator	③ 4 full			
4.0-5111.14XX					1 M 1NO/1NC				
4.0-5111.24XX					2 MA 1NO/1NC				
4.0-5111.1300		1 SUS/SUS			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0-5111.2300					2 MA 1NO/1NC				

|	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-5214.01XX	1 24 mm round	2 AI/AI	1 Convex /Convex	4 natural	0 indicator	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ19mm
4.0-5214.11XX					1 M 1NO/1NC				
4.0-5214.21XX					2 MA 1NO/1NC				
4.0-5214.02XX		2 AI/AI			0 indicator	② 2 dot			
4.0-5214.12XX					1 M 1NO/1NC				
4.0-5214.22XX					2 MA 1NO/1NC				
4.0-5214.04XX		2 AI/Plastic			0 indicator	③ 4 full			
4.0-5214.14XX					1 M 1NO/1NC				
4.0-5214.24XX					2 MA 1NO/1NC				
4.0-5214.1300		2 AI/AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0-5214.2300					2 MA 1NO/1NC				
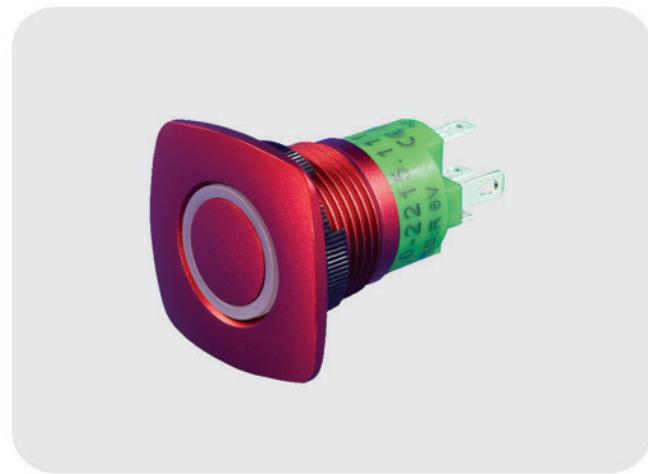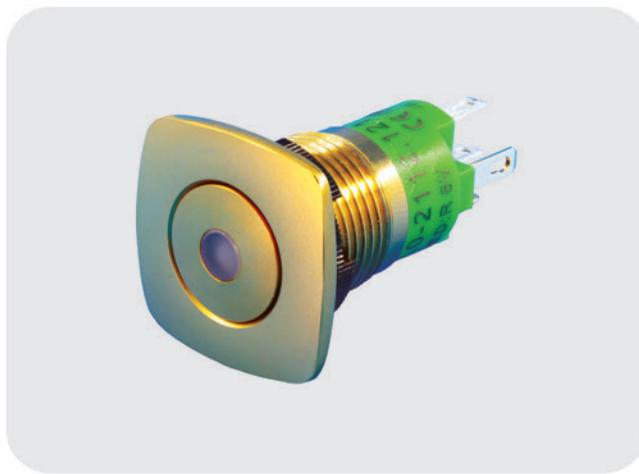
①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 21

Φ19mm mounting hole – compact

Front ring Dim.: Square 24mm

Φ19mm mounting hole-compact: 24mm square front ring standard product list
（Please select the specific code according to the field where x is located）

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-6111.01XX					0 indicator	① 1 ring			
4.0-6111.11XX		1 SUS/SUS			1 M 1NO/1NC				
4.0-6111.21XX					2 MA 1NO/1NC				
4.0-6111.02XX					0 indicator	② 2 dot	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	
4.0-6111.12XX	2 24 mm square	1 SUS/SUS	1 Convex /Convex	1 matte	1 M 1NO/1NC				Φ19mm
4.0-6111.22XX					2 MA 1NO/1NC				
4.0-6111.04XX					0 indicator	③ 4 full			
4.0-6111.14XX		1 SUS/Plastic			1 M 1NO/1NC				
4.0-6111.24XX					2 MA 1NO/1NC				
4.0-6111.1300		1 SUS/SUS			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0-6111.2300					2 MA 1NO/1NC				

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-6214.01XX					0 indicator	① 1 ring			
4.0-6214.11XX		2 AI/AI			1 M 1NO/1NC				
4.0-6214.21XX					2 MA 1NO/1NC				
4.0-6214.02XX					0 indicator	② 2 dot	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	
4.0-6214.12XX	2 24 mm square	2 AI/AI	1 Convex /Convex	4 natural	1 M 1NO/1NC				Φ19mm
4.0-6214.22XX					2 MA 1NO/1NC				
4.0-6214.04XX					0 indicator	③ 4 full			
4.0-6214.14XX		2 AI/Plastic			1 M 1NO/1NC				
4.0-6214.24XX					2 MA 1NO/1NC				
4.0-6214.1300		2 AI/AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0-6214.2300					2 MA 1NO/1NC				
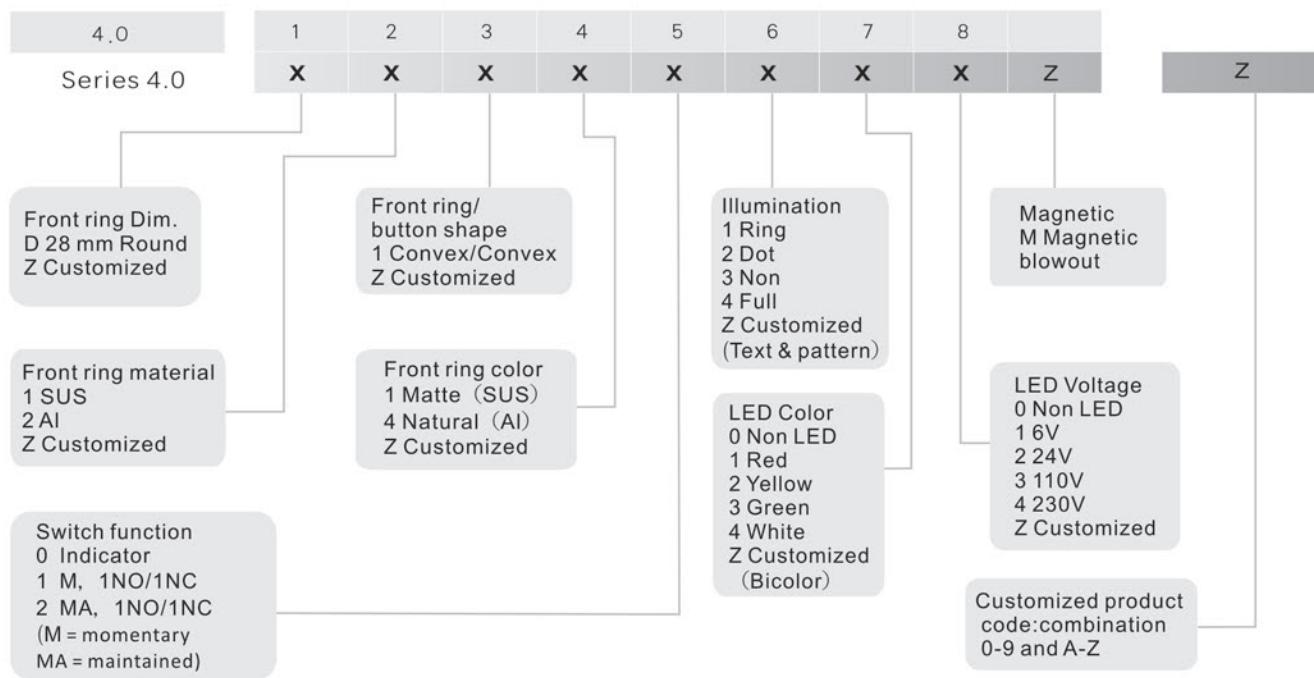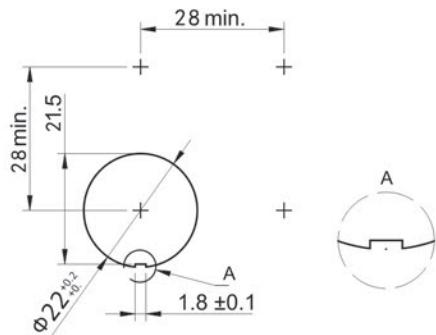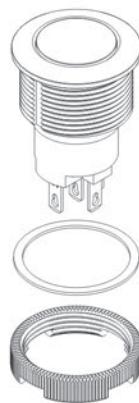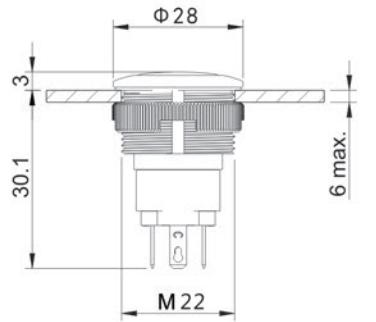
①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 21

Φ22mm mounting hole – compact

4.0	1	2	3	4	5	6	7	8	Z		Z
Series 4.0	X	X	X	X	X	X	X	X	Z		Z

Front ring Dim.
D 28 mm Round
Z Customized

Front ring material
1 SUS
2 Al
Z Customized

Switch function
0 Indicator
1 M，1NO/1NC
2 MA，1NO/1NC
(M = momentary
MA = maintained)

**Front ring/
button shape**
1 Convex/Convex
Z Customized

Front ring color
1 Matte（SUS）
4 Natural（Al）
Z Customized

Illumination
1 Ring
2 Dot
3 Non
4 Full
Z Customized
（Text & pattern）

LED Color
0 Non LED
1 Red
2 Yellow
3 Green
4 White
Z Customized
（Bicolor）

Magnetic
M Magnetic
blowout

LED Voltage
0 Non LED
1 6V
2 24V
3 110V
4 230V
Z Customized

**Customized product
code:combination
0-9 and A-Z**

Dimension (unit: mm)

Φ28
3
30.1
6 max.
M 22

28 min.
28 min.
21.5
Φ22$^{+0.2}_{0}$
1.8 ±0.1
A
A

4.0-D214
LED:R 24V

Φ22mm mounting hole – compact

Front ring Dim.: Round 28mm

Φ22mm mounting hole-compact： 28mm round front ring standard product list
（Please select the specific code according to the field where x is located）

Product number	1 Front ring Dim.	2 Front ring / button material	3 Front ring / button shape	4 Front ring color	5 Switch function	6 Illumination	7 Button/ LED color	8 LED voltage	Mounting hole
4.0-D111.01XX	D 28 mm round	1 SUS/SUS	1 Convex /Convex	1 matte	0 indicator	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ22mm
4.0-D111.11XX					1 M 1NO/1NC				
4.0-D111.21XX					2 MA 1NO/1NC				
4.0-D111.02XX		1 SUS/SUS			0 indicator	② 2 dot			
4.0-D111.12XX					1 M 1NO/1NC				
4.0-D111.22XX					2 MA 1NO/1NC				
4.0-D111.04XX		1 SUS/Plastic			0 indicator	③ 4 full			
4.0-D111.14XX					1 M 1NO/1NC				
4.0-D111.24XX					2 MA 1NO/1NC				
4.0-D111.1300		1 SUS/SUS			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0-D111.2300					2 MA 1NO/1NC				

Product number	1 Front ring Dim.	2 Front ring / button material	3 Front ring / button shape	4 Front ring color	5 Switch function	6 Illumination	7 Button/ LED color	8 LED voltage	Mounting hole
4.0-D214.01XX	D 28 mm round	2 AI/AI	1 Convex /Convex	4 natural	0 indicator	① 1 ring	0 nonLED 1 red 2 yellow 3 green 4 white	0 nonLED 1 6 V 2 24 V 3 110 V 4 230 V	Φ22mm
4.0-D214.11XX					1 M 1NO/1NC				
4.0-D214.21XX					2 MA 1NO/1NC				
4.0-D214.02XX		2 AI/AI			0 indicator	② 2 dot			
4.0-D214.12XX					1 M 1NO/1NC				
4.0-D214.22XX					2 MA 1NO/1NC				
4.0-D214.04XX		2 AI/Plastic			0 indicator	③ 4 full			
4.0-D214.14XX					1 M 1NO/1NC				
4.0-D214.24XX					2 MA 1NO/1NC				
4.0-D214.1300		2 AI/AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0-D214.2300					2 MA 1NO/1NC				
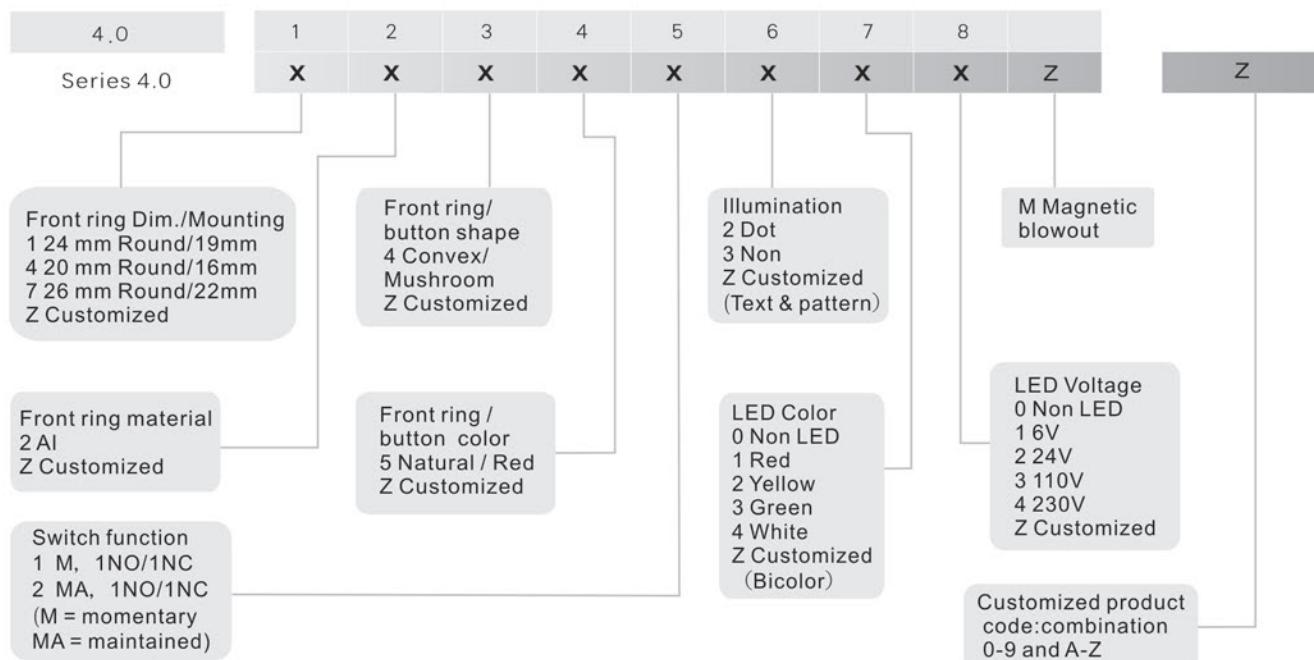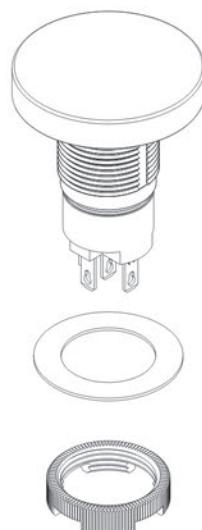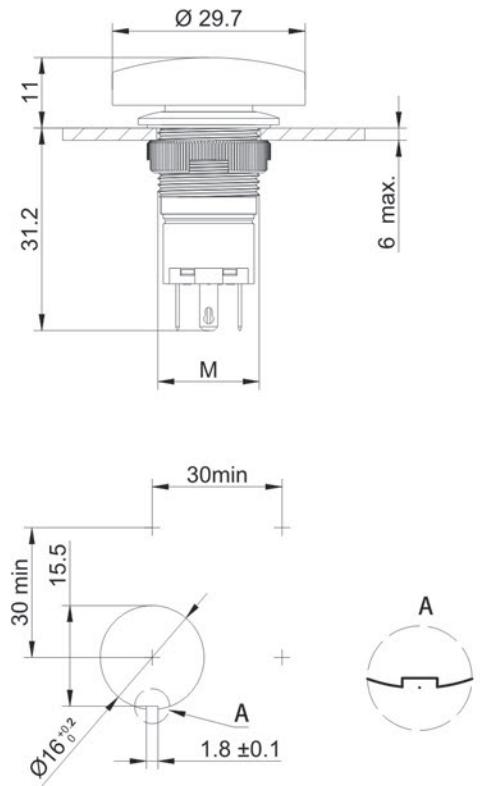
①②Ring and dot illumination lighting part is plastic material with white color.
③Full illumination lighting part is plastic material,color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 24

Mushroom pushbutton - Compact

4.0	1	2	3	4	5	6	7	8		
Series 4.0	X	X	X	X	X	X	X	X	Z	Z

Front ring Dim./Mounting
1 24 mm Round/19mm
4 20 mm Round/16mm
7 26 mm Round/22mm
Z Customized

Front ring material
2 Al
Z Customized

Switch function
1 M, 1NO/1NC
2 MA, 1NO/1NC
(M = momentary
MA = maintained)

Front ring/button shape
4 Convex/Mushroom
Z Customized

Front ring / button color
5 Natural / Red
Z Customized

Illumination
2 Dot
3 Non
Z Customized
(Text & pattern)

LED Color
0 Non LED
1 Red
2 Yellow
3 Green
4 White
Z Customized
(Bicolor)

M Magnetic blowout

LED Voltage
0 Non LED
1 6V
2 24V
3 110V
4 230V
Z Customized

Customized product code:combination 0-9 and A-Z

Dimension (unit: mm)

Ø 29.7
11
31.2
6 max.
M

30min
15.5
30 min
Ø16⁺⁰·²₀
1.8 ±0.1
A

4.0-4244.12/?
LED:R 24V

4.0-4244

Φ16mm mounting hole-compact： 20mm round front ring standard product list
（Please select the specific code according to the field where x is located）

Product number	1 Front ring Dim.	2 Front ring / button material	3 Front ring / button shape	4 Front ring color	5 Switch function	6 Illumination	7 Button/ LED color	8 LED voltage	Mounting hole
4.0-4245.12XX	4 20 mm round	2 AI / AI	4 Convex / Mushroom	5 natural	1 M 1NO/1NC	② 2 dot	1 red 2 yellow 3 green 4 white	1 6V 2 24V 3 110V 4 230V	Φ16mm
4.0-4245.22XX					2 MA 1NO/1NC				
4.0-4245.1300		2 AI / AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0-4245.2300					2 MA 1NO/1NC				

Φ19mm mounting hole-compact： 24mm round front ring standard product list
（Please select the specific code according to the field where x is located）

Product number	1 Front ring Dim.	2 Front ring / button material	3 Front ring / button shape	4 Front ring color	5 Switch function	6 Illumination	7 Button/ LED color	8 LED voltage	Mounting hole
4.0-1245.12XX	1 24 mm round	2 AI / AI	4 Convex / Mushroom	5 natural	1 M 1NO/1NC	② 2 dot	1 red 2 yellow 3 green 4 white	1 6V 2 24V 3 110V 4 230V	Φ19mm
4.0-1245.22XX					2 MA 1NO/1NC				
4.0-1245.1300		2 AI / AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0-1245.2300					2 MA 1NO/1NC				

Φ22mm mounting hole-compact： 26mm round front ring standard product list
（Please select the specific code according to the field where x is located）
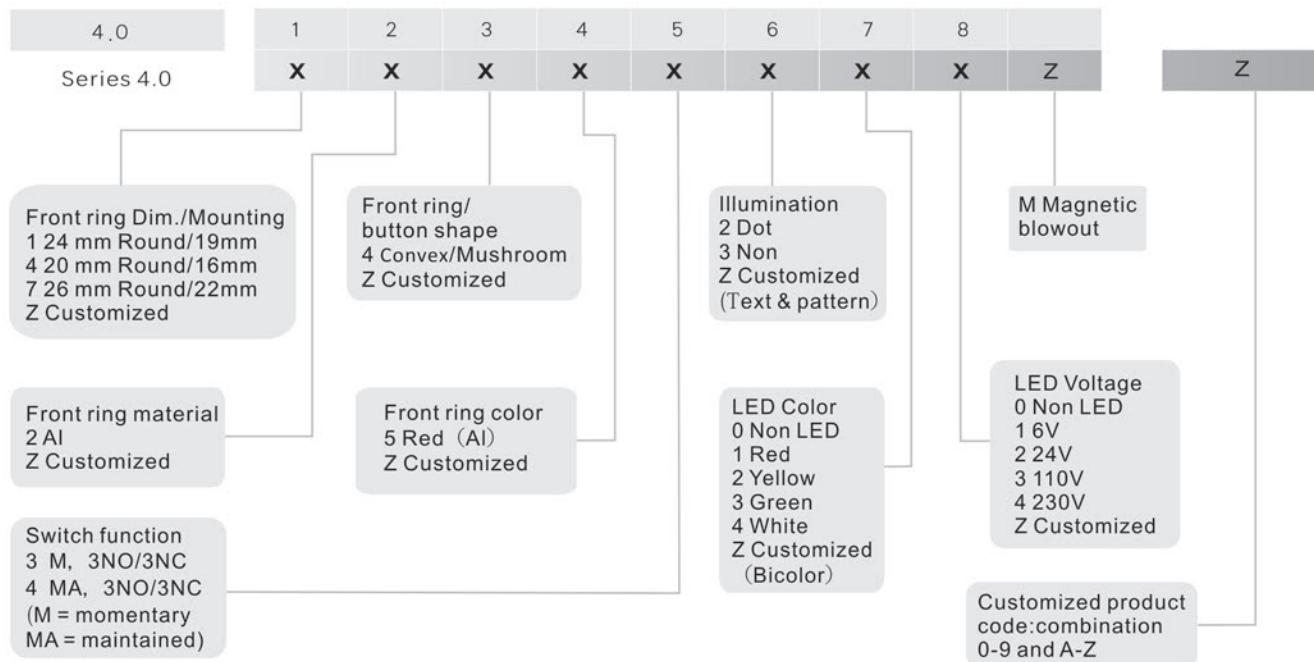
| Product number	1 Front ring Dim.	2 Front ring / button material	3 Front ring / button shape	4 Front ring color	5 Switch function	6 Illumination	7 Button/ LED color	8 LED voltage	Mounting hole
4.0-7245.12XX	5 26 mm round	2 AI / AI	4 Convex / Mushroom	5 natural	1 M 1NO/1NC	② 2 dot	1 red 2 yellow 3 green 4 white	1 6V 2 24V 3 110V 4 230V	Φ22mm
4.0-7245.22XX					2 MA 1NO/1NC				
4.0-7245.1300		2 AI / AI			1 M 1NO/1NC	3 non	0 nonLED	0 nonLED	
4.0-7245.2300					2 MA 1NO/1NC				

② Dot illumination lighting part is plastic material, color is same as LED.
Electrical wiring diagram see page 4
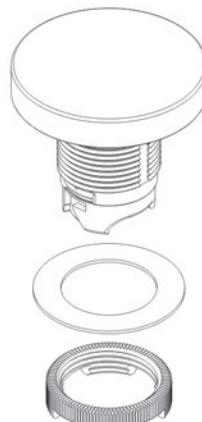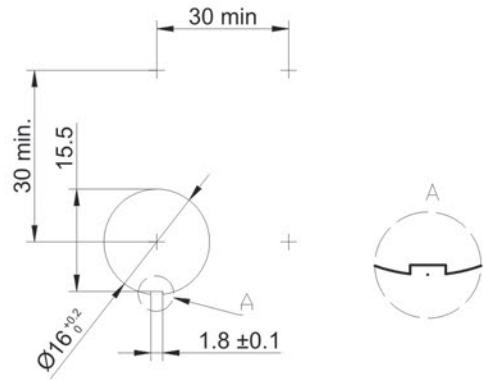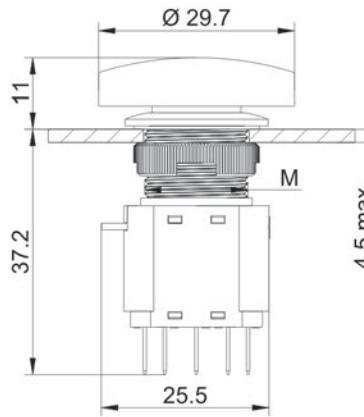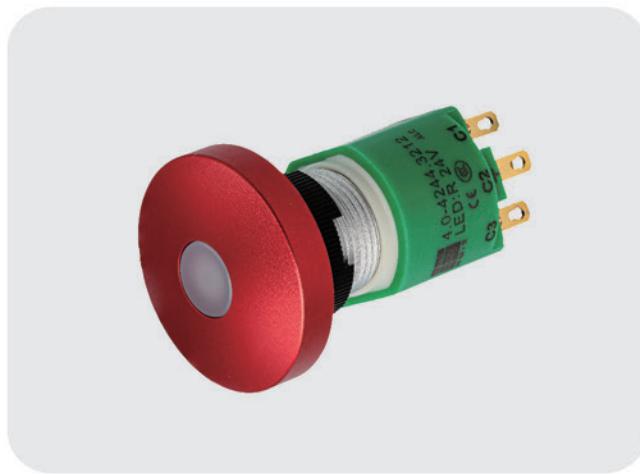
Mushroom pushbutton - Modular

4.0	1	2	3	4	5	6	7	8		Z
Series 4.0	X	X	X	X	X	X	X	X	Z	Z

Front ring Dim./Mounting
1 24 mm Round/19mm
4 20 mm Round/16mm
7 26 mm Round/22mm
Z Customized

Front ring material
2 AI
Z Customized

Switch function
3 M，3NO/3NC
4 MA，3NO/3NC
(M = momentary
MA = maintained）

**Front ring/
button shape**
4 Convex/Mushroom
Z Customized

Front ring color
5 Red（AI）
Z Customized

Illumination
2 Dot
3 Non
Z Customized
(Text & pattern）

LED Color
0 Non LED
1 Red
2 Yellow
3 Green
4 White
Z Customized
（Bicolor）

**M Magnetic
blowout**

LED Voltage
0 Non LED
1 6V
2 24V
3 110V
4 230V
Z Customized

**Customized product
code:combination
0-9 and A-Z**

Dimension (unit: mm)

Ø 29.7
11
37.2
25.5
M
4.5 max.

30 min
30 min.
15.5
Ø16 +0.2/0
1.8 ±0.1
A

4.0-4244.3212
LED:R 24V
C3 C2 C1

4.0-4244.3300
C3 C2 C1

Φ16mm mounting hole-modular：20mm round front ring standard product list
（Please select the specific code according to the field where x is located）

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-4245.32XX	4 20 mm round	2 AI / AI	4 Convex / Mushroom	5 natural	3 M 3NO/3NC	② 2 dot	1 red 2 yellow 3 green 4 white	1 6V 2 24V 3 110V 4 230V	Φ16mm
4.0-4245.42XX					4 MA 3NO/3NC				
4.0-4245.3300		2 AI / AI			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0-4245.4300					4 MA 3NO/3NC				

Φ19mm mounting hole-modular：24mm round front ring standard product list
（Please select the specific code according to the field where x is located）

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-1245.32XX	1 24 mm round	2 AI / AI	4 Convex/ Mushroom	5 natural	3 M 3NO/3NC	② 2 dot	1 red 2 yellow 3 green 4 white	1 6V 2 24V 3 110V 4 230V	Φ19mm
4.0-1245.42XX					4 MA 3NO/3NC				
4.0-1245.3300		2 AI / AI			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0-1245.4300					4 MA 3NO/3NC				

Φ22mm mounting hole-modular：26mm round front ring standard product list
（Please select the specific code according to the field where x is located）

	1	2	3	4	5	6	7	8	
Product number	Front ring Dim.	Front ring / button material	Front ring / button shape	Front ring color	Switch function	Illumination	Button/ LED color	LED voltage	Mounting hole
4.0-7245.32XX	5 26 mm round	2 AI / AI	4 Convex / Mushroom	5 natural	3 M 3NO/3NC	② 2 dot	1 red 2 yellow 3 green 4 white	1 6V 2 24V 3 110V 4 230V	Φ22mm
4.0-7245.42XX					4 MA 3NO/3NC				
4.0-7245.3300		2 AI / AI			3 M 3NO/3NC	3 non	0 nonLED	0 nonLED	
4.0-7245.4300					4 MA 3NO/3NC				
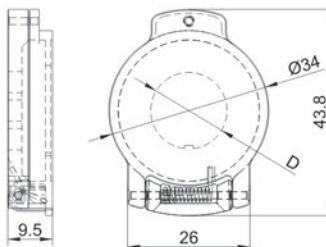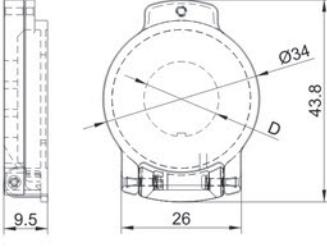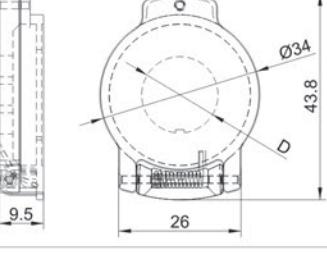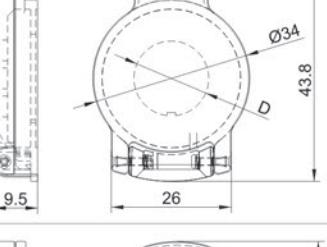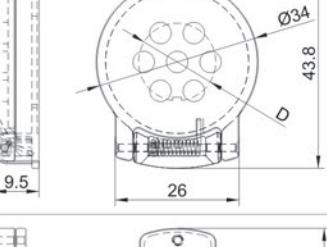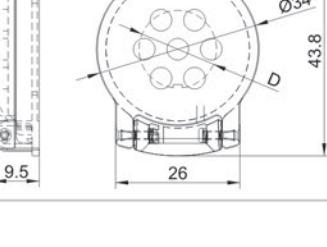
② Dot illumination lighting part is plastic material, color is same as LED.
Electrical wiring diagram see page 4
Product dimension drawing see page 28
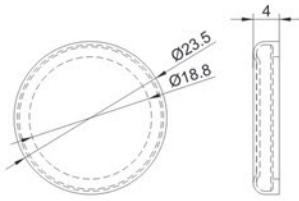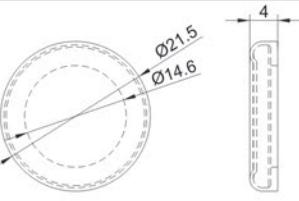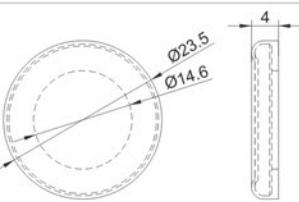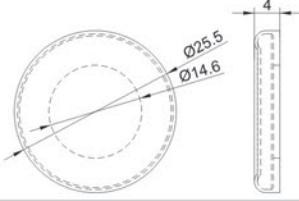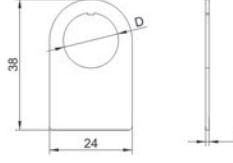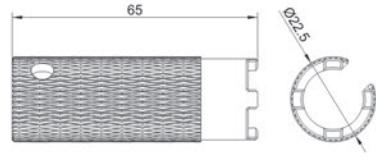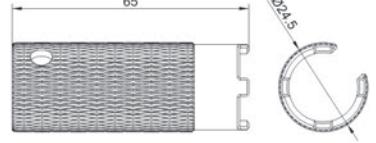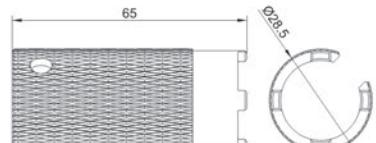
4.0/5.0 Accessories

Product Number	Product Name	Material & Color	Size	Picture	Dimension
4. 0-0001	Protective cover (plastic, spring fitted)	Plastic/ Transparent	D=Ø16mm mounting hole		
4. 0-0002			D=Ø19mm mounting hole		
4. 0-0003			D=Ø22mm mounting hole		
4. 0-0004	Protective cover (plastic)	Plastic/ Transparent	D=Ø16mm mounting hole		
4. 0-0005			D=Ø19mm mounting hole		
4. 0-0006			D=Ø22mm mounting hole		
4. 0-0007	Protective cover (spring fitted)	Al/Natural	D=Ø16mm mounting hole		
4. 0-0008			D=Ø19mm mounting hole		
4. 0-0009			D=Ø22mm mounting hole		
4. 0-0010	Protective cover	Al/Natural	D=Ø16mm mounting hole		
4. 0-0011			D=Ø19mm mounting hole		
4. 0-0012			D=Ø22mm mounting hole		
4. 0-0013	Protective cover (spring fitted)	Al/Natural	D=Ø16mm mounting hole		
4. 0-0014			D=Ø19mm mounting hole		
4. 0-0015			D=Ø22mm mounting hole		
4. 0-0016	Protective cover	Al/Natural	D=Ø16mm mounting hole		
4. 0-0017			D=Ø19mm mounting hole		
4. 0-0018			D=Ø22mm mounting hole		

4.0/5.0 Accessories

Product Number	Product Name	Material & Color	Size	Picture	Dimension
4.0-0019	Rubber Cap	Silicon/ Transparent	Ø22mm front ring Ø19mm mounting hole		
4.0-0020	Rubber Cap	Silicon/ Transparent	Ø20mm front ring Ø16mm mounting hole		
4.0-0021	Rubber Cap	Silicon/ Transparent	Ø22mm front ring Ø16mm mounting hole		
4.0-0022	Rubber Cap	Silicon/ Transparent	Ø24mm front ring Ø16mm mounting hole		
4.0-0023	Legend plate	Al/Natural	D=Ø16mm mounting hole		
4.0-0024		Al/Black			
4.0-0025		Al/Natural	D=Ø19mm mounting hole		
4.0-0026		Al/Black			
4.0-0027		Al/Natural	D=Ø22mm mounting hole		
4.0-0028		Al/Black			
4.0-1001	M16mm mounting tool	Al/Black	Ø16mm mounting hole		
4.0-1002	M19mm mounting tool	Al/Black	Ø19mm mounting hole		
4.0-1003	M22mm mounting tool	Al/Black	Ø22mm mounting hole		

4.0 Product installation instructions

Caution

⚠️ Please turn off or disconnect the power supply before installation or maintenance in order to avoid electrocution risk.

⚠️ Operation voltage higher >60V AC/DC, metal panel and metal pushbutton must be connected to ground.

Tightening torque: 50 N.cm min. – 200 N.cm max. for fixing nut
Wiring specification: 2.8 X 0.5 quick connection or soldering
The maximum wire cross-sectional area :1 X 1.5mm^2 or 2 X 0.75mm^2
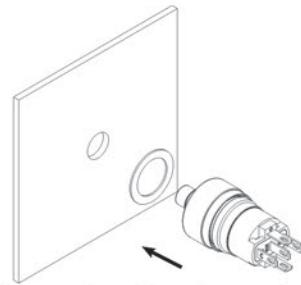
Soldering temperature: Electric soldering iron with temperature control is recommended. if not, the power of eletric soldering iron should be between 15-20w. In any case, the temperature of electric iron welding head shall not exceed 280°C, welding time is controlled within 3-5 seconds. Otherwise, continuous heating will damage the switching element.

Mounting instruction
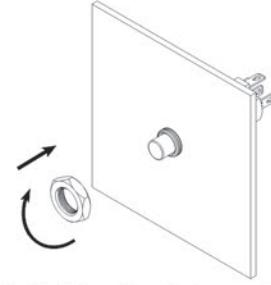
4.0 Series compact: 8 / 12 mm
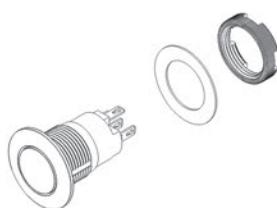
1. Product composition
2. Button and sealing ring are installed from the back of the panel
3. Tighten the fixing nut clockwise from the front of the panel
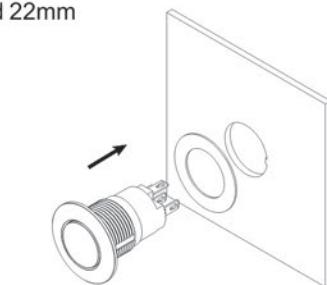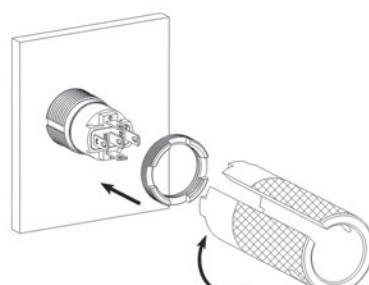
4.0 Series compact: 16mm, 19mm and 22mm
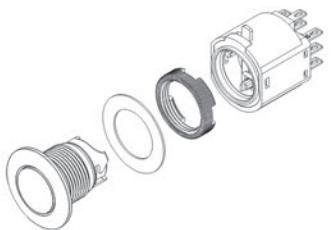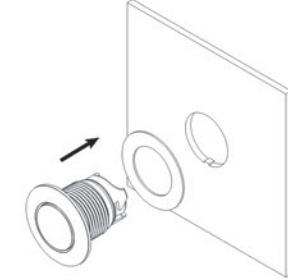
1. Product composition
2. Button and sealing ring are installed from the front of the panel
3. Tighten the fixing nut clockwise from the back of the panel
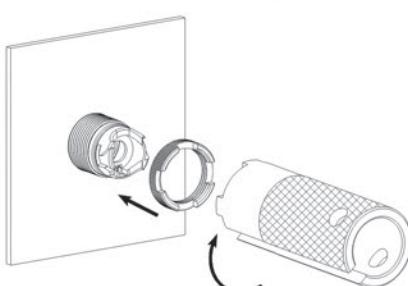
### 4.0 Series modular
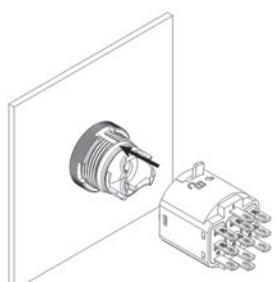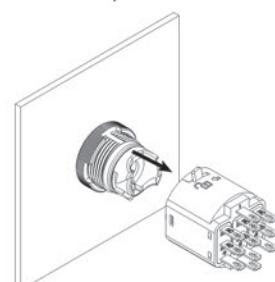
1. Product composition
2. Actuator and sealing ring are installed from the front of the panel
3. Tighten the fixing nut clockwise from the back of the panel

4. Assembling switching element: the metal handle of switching element is aligned with the groove of the metal front ring, then push to lock the switch
5. Disassembling switching element: turn the metal handle of switching element to the unlock position, then pull out the switch

5.0 Series product introduction

5.0 Series: Double break switch

Appearance and configuration corresponding to series 4.0

Self-clean snap-action switching element

Recommended Max. 3 switching elements: 3NO/3NC

Conventional free air thermal current Ith:8 A

Switch rating: alternating current (AC)
Rated operating voltage Ue / rated working current Ie under usage category
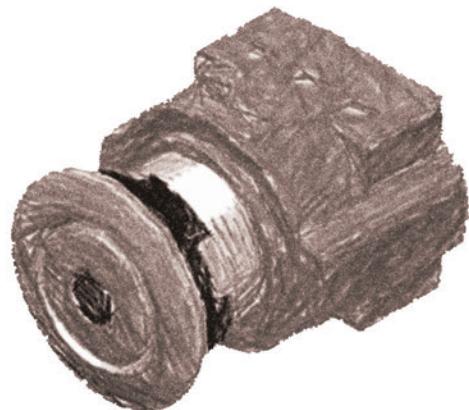
| AC-12	
Ue	Ie
24 VAC	5.0 A
110 VAC	5.0 A
220 VAC	3.0 A
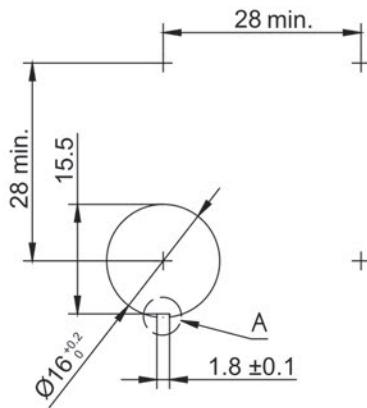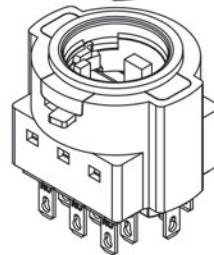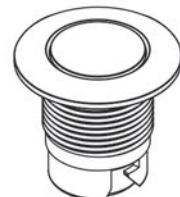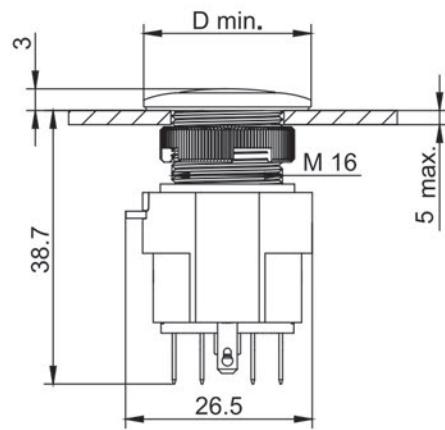
DC – 12	
	Ie
24 VDC	5.0 A
72 VDC	2.0 A
110 VDC	1.0 A
220 VDC	0.3 A

Recommended minimum operational data:

voltage	current
5 V	10 mA
12 V	5 mA
24 V	2 mA
110 V	1 mA

Dimension (unit: mm)

5.0 Series Approbation and
Declaration of conformity

CCC
CB
CE
RoHS
En45545 (smoke and fire
norm for railway)

6.0 Series product introduction

6.0 Series High-current switches

Ultra short installation depth
Self-clean snap-action / slow make switching element
Recommended Max. 3 level switching elements:
6NO; 6NC; 3NO/3NC

Conventional free air thermal current Ith:20 A
Switch rating: alternating current (AC)
Rated operating voltage Ue / rated working
current Ie under usage category
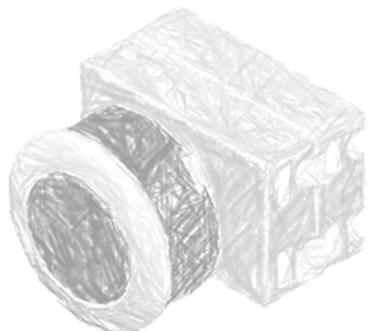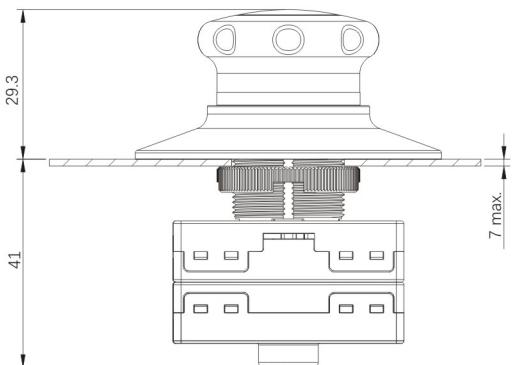
AC-12	
Ue	Ie
24 VAC	20.0 A
110 VAC	20.0 A
220 VAC	16.0 A
400 VAC	8.0 A
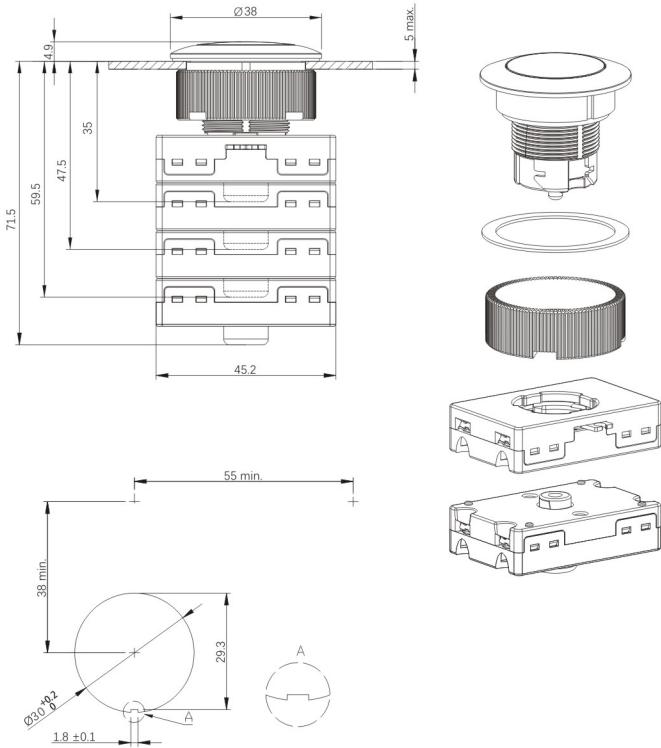
DC – 12	
	Ie
24 VDC	20.0 A
72 VDC	6.0 A
110 VDC	6.0 A
220 VDC	0.8 A

Recommended minimum operational data:

voltage	current
5 V	10 mA
12 V	5 mA
24 V	2 mA
110 V	1 mA

6.0 Series E-Stop switches

Ultra short installation depth
Double break slow-make switching elements
Recommended Max. 3 level switching elements
As per IEC 60947-5-5, ISO 13850
GB 14048.1, GB/T 14048.5, GB/T 14048.14

Dimension (unit: mm)

·6.0 Series Approbation and
Declaration of conformity

CCC
CB
CE
RoHS
En45545 (smoke and fire
norm for railway)