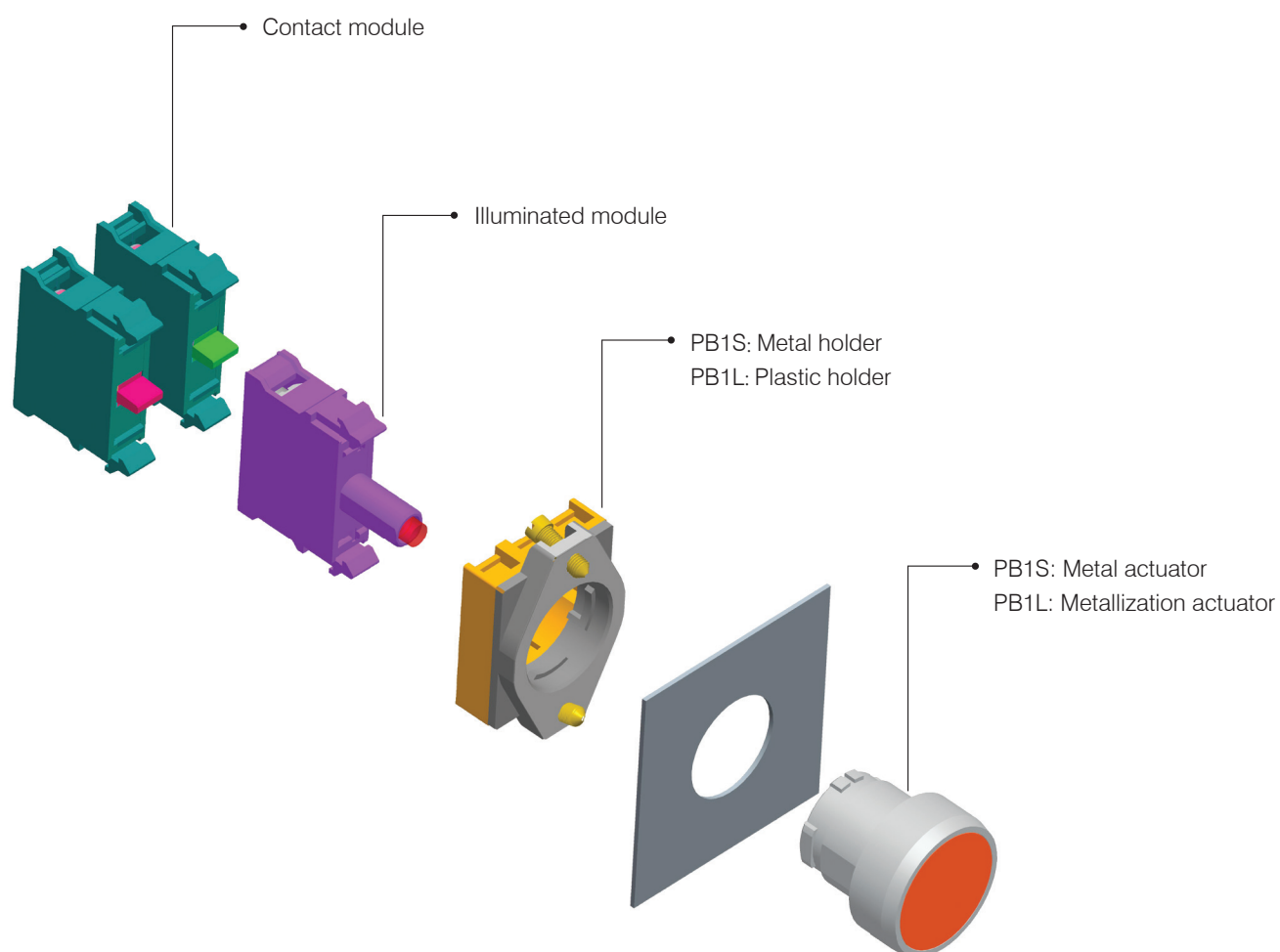


## PB1S Key Switch 22mm Siemens APT

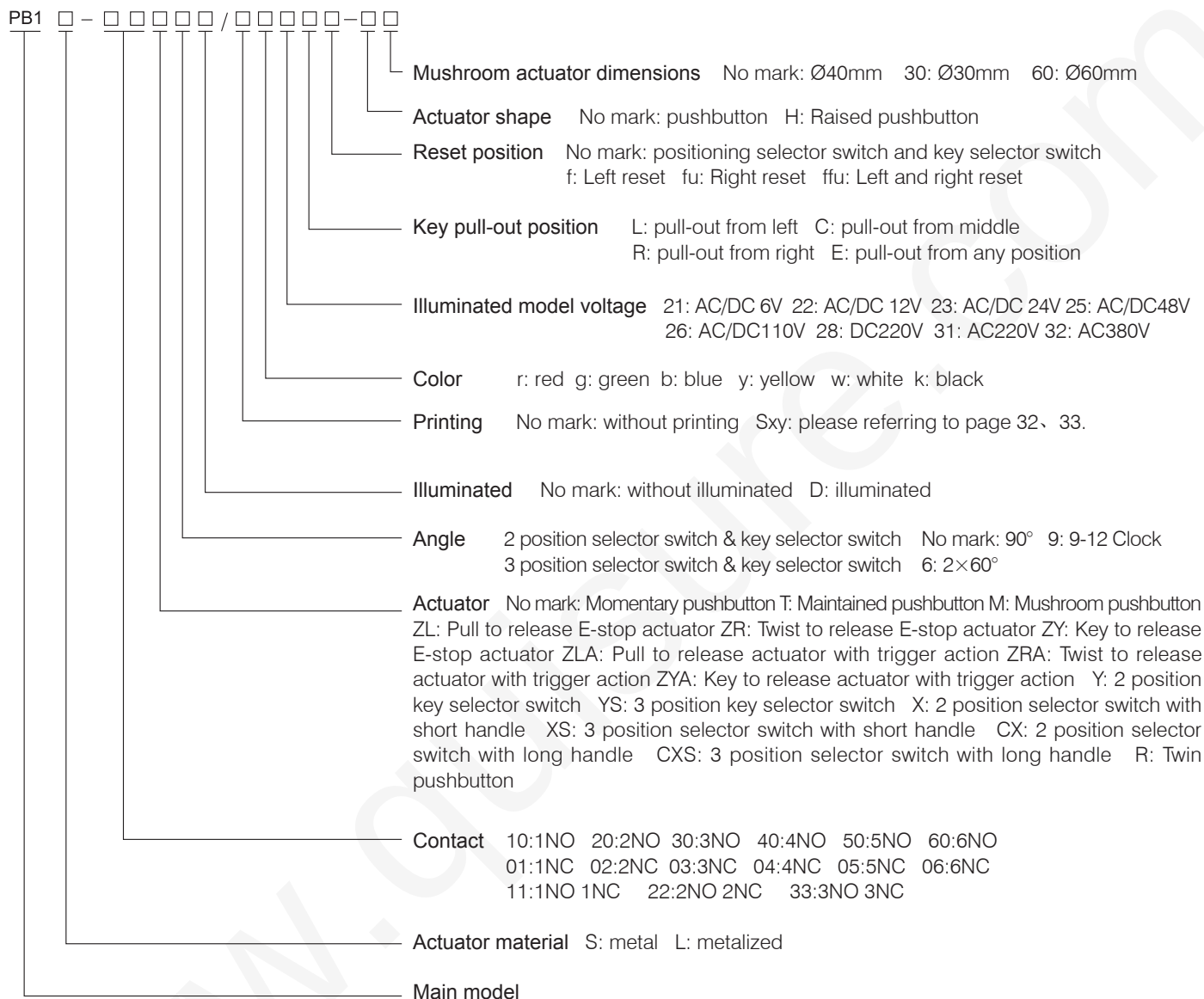
### PB1 introduction

- RoHS material.
- Modularized design with easy installation.
- Protection class: IP65.



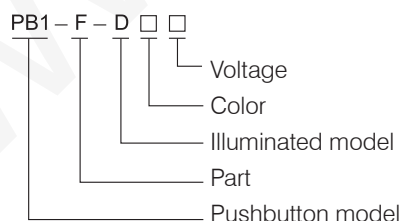
# PB1S Key Switch 22mm

## Model definition

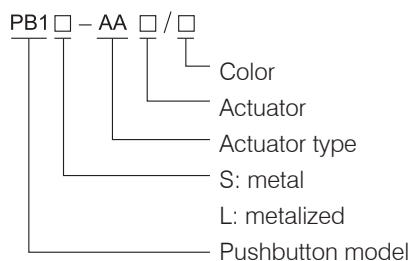


## Part model

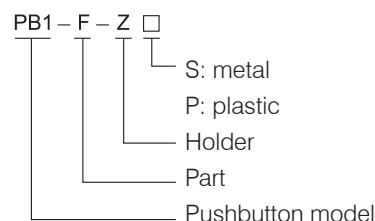
### Illuminated model



### Actuator



### Holder



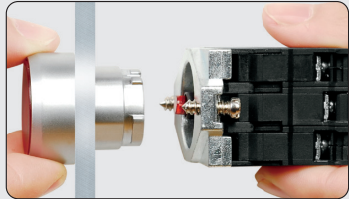
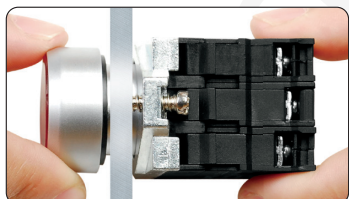
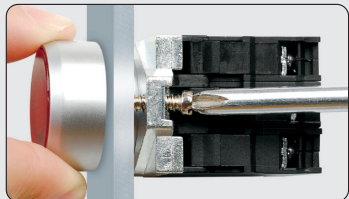
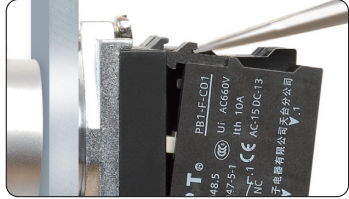
## Technical Data

### Technical data

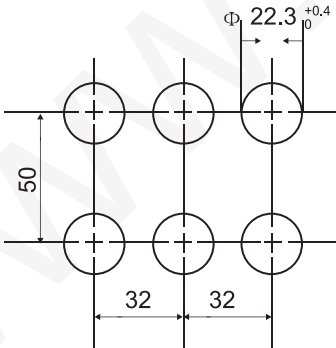
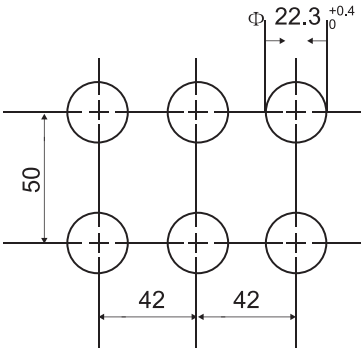
|                                             |                                                                                                                                                                                                                                                                                                |                               |  |  |                                          |     |      |      |      |      |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--|--|------------------------------------------|-----|------|------|------|------|
| Standards:                                  | IEC60947 Part1, IEC60947 Part 5-1, IEC60947 Part 5-5 GB14048.5, GB14048.1 GB14048.14 ISO13850                                                                                                                                                                                                  |                               |  |  |                                          |     |      |      |      |      |
| Rated Insulation Voltage $U_i$ :            | AC 600V, 50Hz illumination module: AC440V, 50Hz; DC250V                                                                                                                                                                                                                                        |                               |  |  |                                          |     |      |      |      |      |
| Rated Impulse Withstand Voltage $U_{imp}$ : | AC 1890V 50Hz.1min                                                                                                                                                                                                                                                                             |                               |  |  |                                          |     |      |      |      |      |
| Conventional Thermal Current $I_{th}$ :     | 10A                                                                                                                                                                                                                                                                                            |                               |  |  |                                          |     |      |      |      |      |
| Rated Load:                                 | Load type<br>Rated operation voltage $U_e$                                                                                                                                                                                                                                                     |                               |  |  | 24V                                      | 48V | 110V | 220V | 380V | 440V |
|                                             | AC-12                                                                                                                                                                                                                                                                                          | Rated operation current $I_e$ |  |  | 10A                                      | -   | 10A  | 10A  | 10A  | 10A  |
|                                             | DC-12                                                                                                                                                                                                                                                                                          |                               |  |  | 10A                                      | 8A  | 3.5A | 1A   | -    | -    |
|                                             | AC-15                                                                                                                                                                                                                                                                                          |                               |  |  | 6A                                       | -   | 6A   | 6A   | 4A   | 4A   |
|                                             | DC-13                                                                                                                                                                                                                                                                                          |                               |  |  | 6A                                       | 4A  | 1.2A | 0.4A | -    | -    |
| Illuminated data:                           | Voltage number 21 22 23 25 26 28 31 32                                                                                                                                                                                                                                                         |                               |  |  |                                          |     |      |      |      |      |
|                                             | Voltage(V)AC/DC6VAC/DC12VAC/DC24V C/DC48V AC/DC110VDC220VAC220V AC380V                                                                                                                                                                                                                         |                               |  |  |                                          |     |      |      |      |      |
|                                             | Current (mA) 18 17 16 11 18 5 19 12                                                                                                                                                                                                                                                            |                               |  |  |                                          |     |      |      |      |      |
| Pollution Class:                            | 3                                                                                                                                                                                                                                                                                              |                               |  |  |                                          |     |      |      |      |      |
| Mechanical Endurance:                       | Pushbutton &Illuminated pushbutton& Mushroom pushbutton: $3 \times 10^6$ times<br>Selector switch & Compact pushbutton & Twin pushbutton &Maintained pushbutton: $3 \times 10^5$ times<br>Key selector switch & E-stop actuator: $5 \times 10^4$ times<br>Contact model: $3 \times 10^6$ times |                               |  |  |                                          |     |      |      |      |      |
| Operating Frequency:                        | 1200 times/1hour                                                                                                                                                                                                                                                                               |                               |  |  |                                          |     |      |      |      |      |
| Electrical Endurance:                       | $5 \times 10^5$ times $I_e$ / AC-15 at 6A/220V/230V Min. load: DC24V 5mA                                                                                                                                                                                                                       |                               |  |  |                                          |     |      |      |      |      |
| Operation Temperature:                      | Operation -25℃ -70℃<br>Storage -40℃ -80℃                                                                                                                                                                                                                                                       |                               |  |  |                                          |     |      |      |      |      |
| Protection Class:                           | IP65                                                                                                                                                                                                                                                                                           | Key selector switch IP54      |  |  | Contact model and illuminated model IP20 |     |      |      |      |      |
| Shock Amplitude:                            | $\leq 15g$ (IEC60068 2-27)                                                                                                                                                                                                                                                                     |                               |  |  |                                          |     |      |      |      |      |
| Impact Amplitude:                           | $\leq 5g$ 10-500Hz (IEC60068 2-6)                                                                                                                                                                                                                                                              |                               |  |  |                                          |     |      |      |      |      |
| Contact Resistance:                         | <50mΩ                                                                                                                                                                                                                                                                                          |                               |  |  |                                          |     |      |      |      |      |
| Contact Material:                           | AgNi10/Cu                                                                                                                                                                                                                                                                                      |                               |  |  |                                          |     |      |      |      |      |

## Installation Mounting-hole Dimensions

### How to install?

|                                                                                                                                                                                           |                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. Installing the actuator into the mounting-hole.                                                                                                                                        |    |
| 2. Installing the holder.                                                                                                                                                                 |    |
| 3. Tighten the screws on holder.                                                                                                                                                          |   |
| 4. Dismantle the switching element or the lighting element: for simply demounting the installed element, hold up the buckle of lock-type installation system with a straight screwdriver. |  |

### Mounting-hole Size

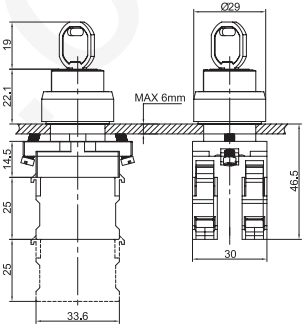
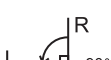
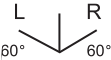
| Pushbutton                                                                          | E-stop pushbutton, Mushroom pushbutton, Select switch with long-handle               |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |

### Notes:

- The tightening torque of wiring screw for switching element is 0.8-1.2Nm.
- The screw tightening torque of metal installation middle seat is no larger than 1Nm, and that of metalized installation middle seat is no larger than 0.8Nm.
- After installing the switching element or the lighting element, check whether the buckle is clipped in completely.

PB1S

Key-operated switch

| Name                | Type                                                                              | Status     | Model                                                                               |                | Key removal positions                                                                                             | Dimensions                                                                           |
|---------------------|-----------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Key-operated switch |  | 2 position |    | PB1S-■Y/▲      | <p>L: removal from left<br/>C: removal from center<br/>R: removal from right<br/>E: removal from any position</p> |  |
|                     |                                                                                   |            |    | PB1S-■Y/▲fu    |                                                                                                                   |                                                                                      |
|                     |                                                                                   |            |    | PB1S-■Y9/▲fu   |                                                                                                                   |                                                                                      |
|                     |                                                                                   | 3 position |   | PB1S-■YS6/▲    |                                                                                                                   |                                                                                      |
|                     |                                                                                   |            |  | PB1S-■YS6/▲f   |                                                                                                                   |                                                                                      |
|                     |                                                                                   |            |  | PB1S-■YS6/▲fu  |                                                                                                                   |                                                                                      |
|                     |                                                                                   |            |  | PB1S-■YS6/▲ffu |                                                                                                                   |                                                                                      |
|                     |                                                                                   |            |                                                                                     |                |                                                                                                                   |                                                                                      |

Notes:

- 1. ■ : The type of contact module.
- 2. ▲ : Key removal positions.

## Accessories

### Accessories

| Name                                       | Type                                                                                | Model                          |                                                    | Description                                                                                                                                                                                                                                          | Function |
|--------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Momentary pushbutton                       |    | PB1S-AA/▲<br>PB1L-AA/▲         |                                                    | ▲: color<br>r-red    g-green<br>b-blue    y-yellow<br>w-white    k-black                                                                                                                                                                             | Actuator |
| Maintained pushbutton                      |                                                                                     | PB1S-AAT/▲<br>PB1L-AAT/▲       |                                                    |                                                                                                                                                                                                                                                      |          |
| Illuminated momentary pushbutton           |    | PB1S-AAD/▲<br>PB1L-AAD/▲       |                                                    | ▲: color<br>r-red    g-green<br>b-blue    y-yellow<br>w-white                                                                                                                                                                                        |          |
| Illuminated maintained pushbutton          |                                                                                     | PB1S-AATD/▲<br>PB1L-AATD/▲     |                                                    |                                                                                                                                                                                                                                                      |          |
| Raised momentary pushbutton                |    | PB1S-AA/▲-H<br>PB1L-AA/▲-H     |                                                    | ▲: color<br>r-red    g-green<br>b-blue    y-yellow<br>w-white    k-black                                                                                                                                                                             |          |
| Raised maintained pushbutton               |                                                                                     | PB1S-AAT/▲-H<br>PB1L-AAT/▲-H   |                                                    |                                                                                                                                                                                                                                                      |          |
| Raised illuminate momentary pushbutton     |   | PB1S-AAD/▲-H<br>PB1L-AAD/▲-H   |                                                    | ▲: color<br>r-red    g-green<br>b-blue    y-yellow<br>w-white                                                                                                                                                                                        |          |
| Raised illuminate maintained pushbutton    |                                                                                     | PB1S-AATD/▲-H<br>PB1L-AATD/▲-H |                                                    |                                                                                                                                                                                                                                                      |          |
| Select switch with short handle            |  | 2 position                     | PB1S-AAX/▲<br>PB1L-AAX/▲                           | ▲: color<br>r-red    g-green<br>b-blue    y-yellow<br>w-white    k-black<br>Reset function code after the color.                                                                                                                                     |          |
|                                            |                                                                                     | 3 position                     | PB1S-AAXS6/▲<br>PB1L-AAXS6/▲                       |                                                                                                                                                                                                                                                      |          |
| Select switch with long handle             |  | 2 position                     | PB1S-AACX/▲<br>PB1L-AACX/▲                         | ▲: color<br>r-red    g-green<br>b-blue    y-yellow<br>w-white    k-black<br>Reset function code after the color.                                                                                                                                     |          |
|                                            |                                                                                     | 3 position                     | PB1S-AACXS6/▲<br>PB1L-AACXS6/▲                     |                                                                                                                                                                                                                                                      |          |
| Illuminate select switch with short handle |  | 2 position                     | PB1S-AAXD/▲<br>PB1L-AAXD/▲                         | ▲: color<br>r-red    g-green<br>b-blue    y-yellow<br>w-white<br>Reset function code after the color.                                                                                                                                                |          |
|                                            |                                                                                     | 3 position                     | PB1S-AAXS6D/▲<br>PB1L-AAXS6D/▲                     |                                                                                                                                                                                                                                                      |          |
| Illuminate select switch with long handle  |  | 2 position                     | PB1S-AACXD/▲<br>PB1L-AACXD/▲                       | ▲: Filled with color<br>r-red    g-green<br>b-blue    y-yellow<br>w-white<br>Reset function code after the color.                                                                                                                                    |          |
|                                            |                                                                                     | 3 position                     | PB1S-AACXS6D/▲<br>PB1L-AACXS6D/▲                   |                                                                                                                                                                                                                                                      |          |
| Key-operated switch                        |  | 2 position                     | PB1S-AAY/<br>PB1L-AAY/<br>PB1S-AAY9/<br>PB1L-AAY9/ | The key removal position and reset function code after “/” .<br><br>9:  6:  |          |
|                                            |                                                                                     | 3 position                     | PB1S-AAYS6/<br>PB1L-AAYS6/                         |                                                                                                                                                                                                                                                      |          |

## Accessories

### Accessories

| Name               | Type                                                                                | Model      | Description                    | Function           |
|--------------------|-------------------------------------------------------------------------------------|------------|--------------------------------|--------------------|
| Contact module     |    | PB1-F-C10  | 1NO                            | Contact module     |
|                    |    | PB1-F-C01  | 1NC                            |                    |
| Illuminated module |    | PB1-F-D/▲★ | ▲ : Color<br>★ : Rated voltage | Illuminated module |
| Holder             |   | PB1-F-ZS   | S: metal                       | Holder             |
|                    |  | PB1-F-ZP   | P: Plastic                     |                    |
| Seal cover         |  | PB1-F-M1   | Only PB1S use                  | Select and use     |
|                    |  | PB1-F-M2   | Only PB1L use                  |                    |
| Protecting cover   |  | F1         | IP65                           | Select and use     |
|                    |  | F2         | Metal                          | Select and use     |

## Accessories

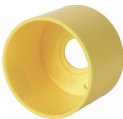
### Accessories

| Name              | Type                                                                                | Model                                                      |            | Description | Function                           |
|-------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------|------------|-------------|------------------------------------|
| Protective cap    |    | F3-1                                                       |            | Plastic     |                                    |
|                   |    | F3-2                                                       |            | Plastic     |                                    |
|                   |    | F3-3                                                       |            | Plastic     |                                    |
| Installing ring   |   | F7                                                         |            | Φ30mm       | Select and use                     |
| Label holder      |  | PB1-F-B11-10<br>书写面积25×10mm<br>PB1-F-B11-18<br>书写面积25×18mm |            | Φ22.5mm     |                                    |
| Label panel       |  | PB1-F-B12                                                  |            | Φ22.5mm     |                                    |
| Yellow name plate |  | F13-60<br>F13-90                                           | Φ60<br>Φ90 | Φ22.5mm     | Used for emergency-stop pushbutton |
|                   |  | F14a-40<br>F14a-60                                         | Φ40<br>Φ60 |             |                                    |
|                   |  | F14b-60<br>F14b-90                                         | Φ60<br>Φ90 |             |                                    |



## Accessories

### Accessories

| Name                                | Type                                                                                | Model                        |            | Description                 | Function                           |
|-------------------------------------|-------------------------------------------------------------------------------------|------------------------------|------------|-----------------------------|------------------------------------|
| E- stop pushbutton protective cover |    | PB1-F-PC-a60                 |            | Φ22.5mm                     | Used for emergency-stop pushbutton |
|                                     |    | PB1-F-PC-b60<br>PB1-F-PC-b90 |            | Φ22.5mm                     |                                    |
| Indicator light installing ring     |    | F15-25<br>F15-30             | Φ25<br>Φ30 | Special for indicator light | Select and use                     |
| Indicator light insert label        |   | F-18                         | POM        | Printing                    |                                    |
| Blanking plugs                      |  | F19                          | Φ22        | Injection molding           |                                    |