

**GIGA SWITCHES  
& PILOT LIGHTS**



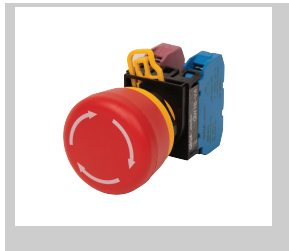
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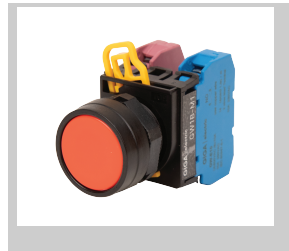
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# Control Switch

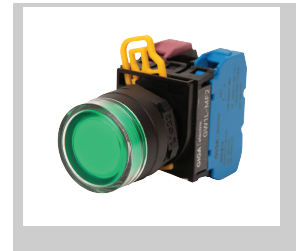
Ø 22



Emergency Stop Switches



Non-Illuminated Push Button



Illuminated Push Button



Pilot Light



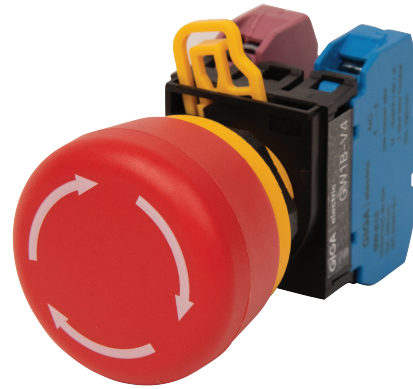
Selector Switches



Key Selector Switches

| General Specification  |                           |                       |  |                            |   |      |      |
|--|---------------------------|-----------------------|--|----------------------------|---|------|------|
| Specifications   | Ambient Temperature       |                       | -200C ~ +550C (with no icing)                                  |                            |   |      |      |
|  | Ambient Humidity          |                       | 45% ~ 85%RH(with no icing)                                     |                            |   |      |      |
|  | Storage Temperature       |                       | -450C ~ +800C  |                            |   |      |      |
|  | Storage Humidity          |                       | Min. 90%RH   |                            |   |      |      |
|  | Protection Grade          |                       | Front side : IP65(IEC60529) / Selector, Key: IP40              |                            |   |      |      |
|  | Insulation Resistant      |                       | 100MΩ min.(at 500VDC)  |                            |   |      |      |
|  | Dielectric strength       | Contact               |  | 2,500V for 1 minute        |   |      |      |
|  |                           | LED                   |  | 2,000V for 1 minute        |   |      |      |
|  | Vibration Resistant       | Durability            |  | 500m/s²                    |   |      |      |
|  |                           | Malfunction           |  | 200m/s²                    |   |      |      |
| Life Cycles  | Mechanical                |                       | Push Button Switch: 2,000,000 time                             |                            | Selector , Key, Emergency Stop : 500,000 time |      |      |
|  | Electrical                |                       | 100,000 time   |                            |   |      |      |
| Contact Ratings  | Rated Insulation Voltage  |                       | 600W   |                            |   |      |      |
|  | Maximum switching current |                       | 10A  |                            |   |      |      |
|  | Rated current @ voltage   |                       |  | 24V                        | 120V  | 240V | 380V |
|  |                           | AC 50/60Hz            | Resistive Load(AC-12)  | 10A                        | 10A   | 6A   | 2A   |
|  |                           |                       | Inductive Load(AC-15)  | 10A                        | 6A  | 3A   | 1.9A |
|  | DC                        | Resistive Load(AC-12) | 8A   | 2.2A                       | 1.1A  | -    |      |
|  |                           | Resistive Load(AC-13) | 4A   | 1.1A                       | 0.55A   | -    |      |
| Terminal bolt  |                           |                       | M3.5 (Torque : 1.3N·m)   |                            |   |      |      |
| Suitable wire standard   |                           |                       | 14 ~ 16AWG   |                            |   |      |      |
| *Min using load reference 3VAC/DC 5mA (can use range depends on the environment and the load type) The contact is silver contact |                           |                       |  |                            |   |      |      |
| *Contact Material : Ag alloy (24K gold plate)  |                           |                       |  |                            |   |      |      |
| LED  | Color                     |                       | R : Red, G : Green, Y : Yellow, S : Blue, W : White, B : Black |                            |   |      |      |
|  | Specifications            |                       | 6VAC/DC, 12VAC/DC, 24VAC/DC, 110VAC/DC, 220VAC/DC              |                            |   |      |      |
|  |                           |                       |  | D6 : 6VDC                  |   |      |      |
|  | Rated Voltage             |                       |  | D12 : 12VDC                |   |      |      |
|  |                           |                       |  | D4 : 24VDC                 |   |      |      |
|  | Rated Current             |                       |  | A1 : 100 ~ 120VAC(50/60Hz) |   |      |      |
| Life Cycles  |                           |                       | A2 : 200 ~ 240VAC(50/60Hz)                                     |                            |   |      |      |
|  |                           |                       | 15mA   |                            |   |      |      |
|  |                           |                       | 50,000hrs  |                            |   |      |      |
| * LED working 50% less than the original brightness after 50000 hours.   |                           |                       |  |                            |   |      |      |

# Emergency Stop Switches



## Part Number Description

G 1 2 3 - 4 5 6 R

1 **φ22 Series** W: φ22 Series


2 **Bezel** 1: Plastic

3 **Type** B: Non-Illuminated Push Button

4 **Type** V: Emergency Stop Switches

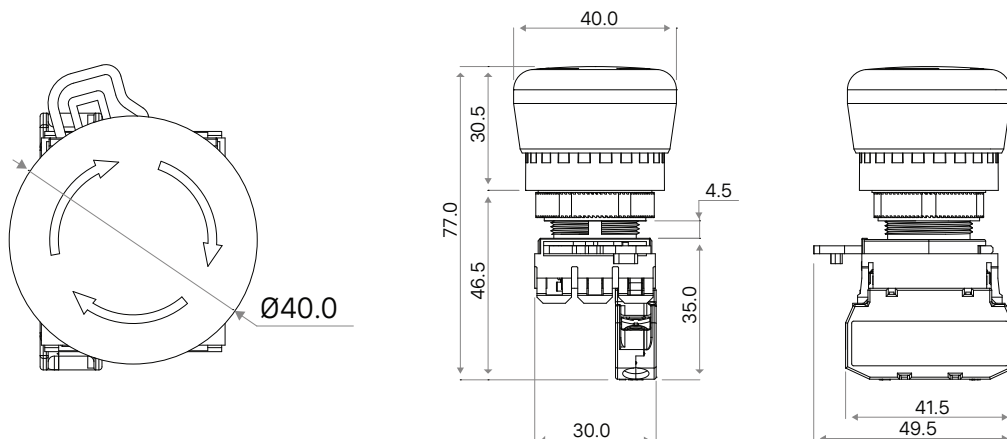
5 **Shape** 4: Mushroom

6 **Contact** E01: 1NC E02: 2NC E03: 3NC  
 E11: 1NO + 1NC E12: 1NO + 2NC E21: 2NO + 1NC

| Shape   | Contact   | Contact Block Mounting Position |   |    | Part No.    | Button Color Code ① |
|---|-----------|---------------------------------|---|----|-------------|---------------------|
|   |           | 1                               | 2 | 3  |             |                     |
|  | 1NC       | -                               | - | NC | GW1B-V4E01R | Red only            |
|   | 1NO + 1NC | NO                              | - | NC | GW1B-V4E11R |                     |

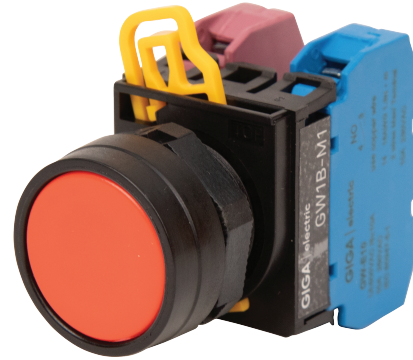
## Dimension

Unit: mm





# Non-Illuminated Push Button



## Part Number Description

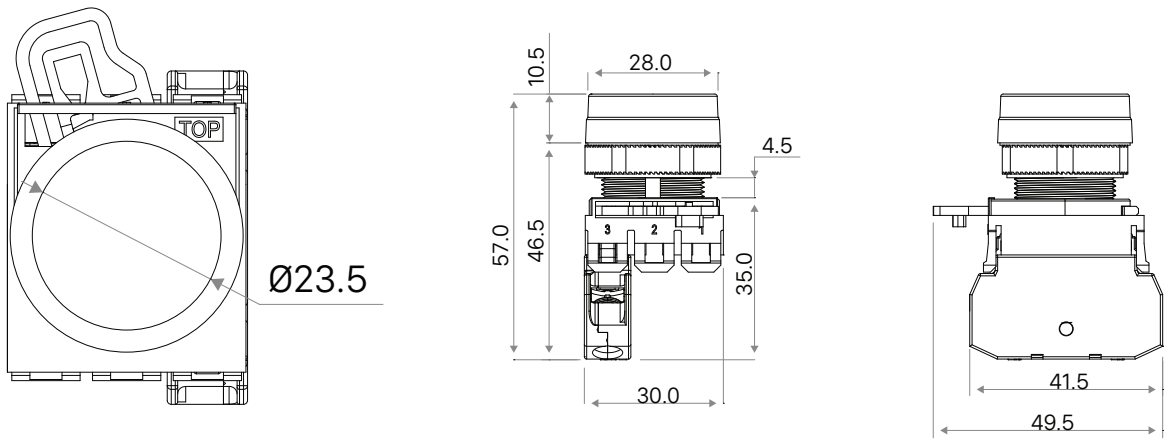
G 1 2 3 - 4 5 6 7

|   |                   |                                |               |           |
|---|-------------------|--------------------------------|---------------|-----------|
| 1 | <b>φ22 Series</b> | W: φ22 Series                  |               |           |
| 2 | <b>Bezel</b>      | 1: Plastic                     |               |           |
| 3 | <b>Type</b>       | B: Non-Illuminated Push Button |               |           |
| 4 | <b>Operation</b>  | M: Momentary                   | A: Maintained |           |
| 5 | <b>Shape</b>      | 1: Flush                       |               |           |
| 6 | <b>Contact</b>    | E01: 1NC                       | E10: 1NO      |           |
|   |                   | E11: 1NO + 1NC                 | E02: 2NC      | E20: 2NO  |
| 7 | <b>Color</b>      | G: Green                       | R: Red        | Y: Yellow |
|   |                   | S: Blue                        | W: White      | B: Black  |

| Shape | Operation  | Contact   | Contact Block Mounting Position |   |    | Part No.    | Button Color Code ①  |
|-------|------------|-----------|---------------------------------|---|----|-------------|--|
|       |            |           | 1                               | 2 | 3  |             |  |
|       | Momentary  | 1NC       | -                               | - | NC | GW1B-M1E01① | G: Green<br>R: Red<br>Y: Yellow<br>S: Blue<br>W: White<br>B: Black |
|       |            | 1NO       | NO                              | - | -  | GW1B-M1E10① |  |
|       |            | 1NO + 1NC | NO                              | - | NC | GW1B-M1E11① |  |
|       | Maintained | 1NC       | -                               | - | NC | GW1B-A1E01① |  |
|       |            | 1NO       | NO                              | - | -  | GW1B-A1E10① |  |

Dimension

Unit: mm



# Illuminated Push Button



G 1 2 3 - 4 5 6 7 8 9

1 **φ22 Series** W: φ22 Series

2 **Bezel** 1: Plastic

3 **Lamp** L: LED

4 **Operation** M: Momentary A: Maintained

5 **Shape** F2: Flush 2: Dome

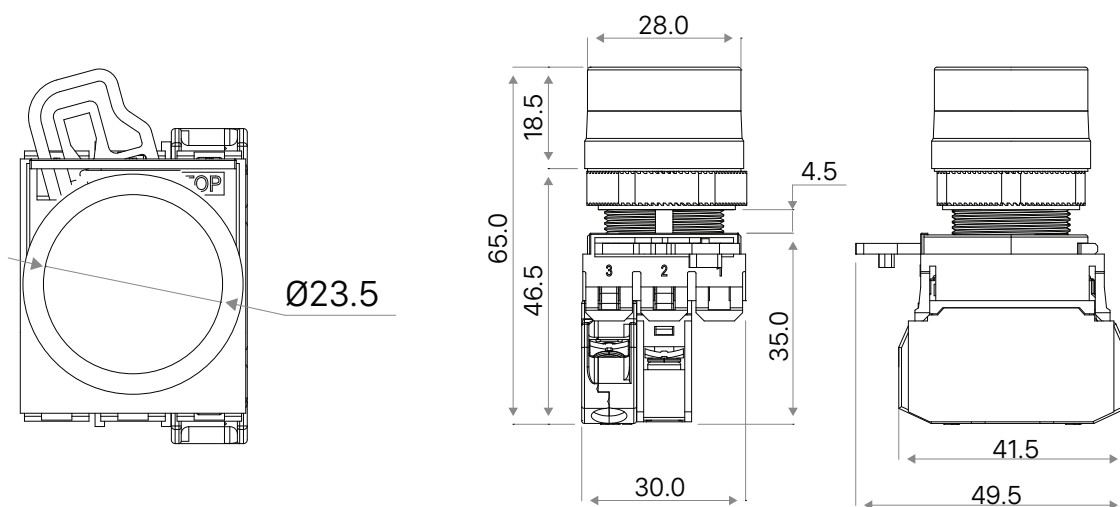
6 **Contact** E01: 1NC E10: 1NO  
E11: 1NO + 1NC E02: 2NC E20: 2NO

7 **Transformer** Q: No Transformer

8 **Voltage** M3: 220 VAC 4: 24VDC H: 110VAC

9 **Color** G: Green R: Red  
Y: Yellow S: Blue W: White

| Shape | Operation  | Contact   | Contact Block Mounting Position |   |    | Part No.         | Operating Voltage Code ①            | Button Color Code ②                                    |
|-------|------------|-----------|---------------------------------|---|----|------------------|-------------------------------------|--|
|       |            |           | 1                               | 2 | 3  |                  |                                     |  |
|       | Momentary  | 1NC       | -                               | - | NC | GW1L-MF2E01Q ① ② | 4: 24VDC<br>H: 110VAC<br>M3: 220VAC | G: Green<br>R: Red<br>Y: Yellow<br>S: Blue<br>W: White |
|       |            | 1NO       | NO                              | - | -  | GW1L-MF2E10Q ① ② |                                     |  |
|       |            | 1NO + 1NC | NO                              | - | NC | GW1L-MF2E11Q ① ② |                                     |  |
|       | Maintained | 1NC       | -                               | - | NC | GW1L-AF2E01Q ① ② |                                     |  |
|       |            | 1NO       | NO                              | - | -  | GW1L-AF2E10Q ① ② |                                     |  |
|       |            | 1NO + 1NC | NO                              | - | NC | GW1L-AF2E11Q ① ② |                                     |  |



# Pilot Light



## Part Number Description

G 1 2 3 - 4 5 6 7

1 **φ22 Series** W: φ22 Series

2 **Bezel** 1: Plastic


3 **Type** P: Pilot Lights

4 **Shape** 1E: Round Flush

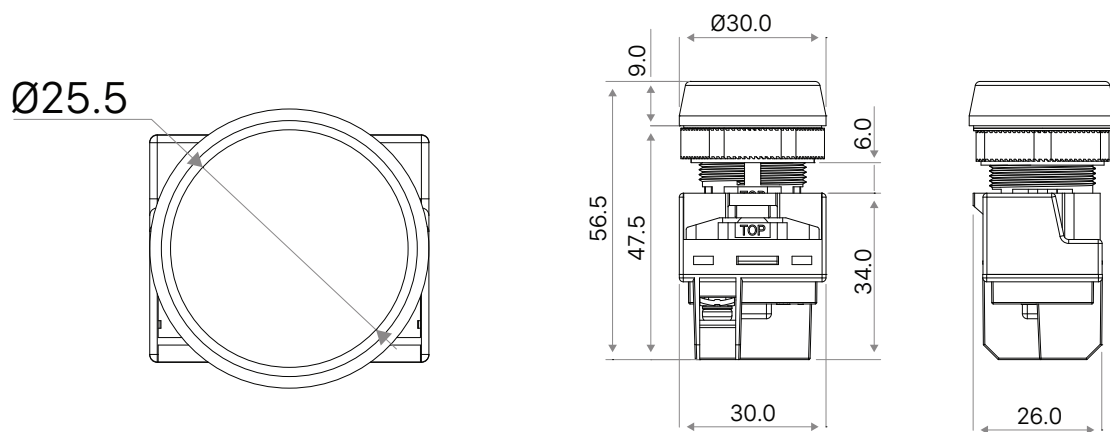
5 **Transformer** Q: No Transformer

6 **Voltage** M3: 220VAC 4: 24VDC H: 110VAC

7 **Color** G: Green R: Red  
Y: Yellow S: Blue W: White

| Shape   | Part No.   | Operating Voltage ①                 | Lens Color Code ②                                      |
|---|------------|-------------------------------------|--|
|  | GW1P-1EQ①② | 4: 24VDC<br>H: 110VAC<br>M3: 220VAC | G: Green<br>R: Red<br>Y: Yellow<br>S: Blue<br>W: White |







# Selector Switch



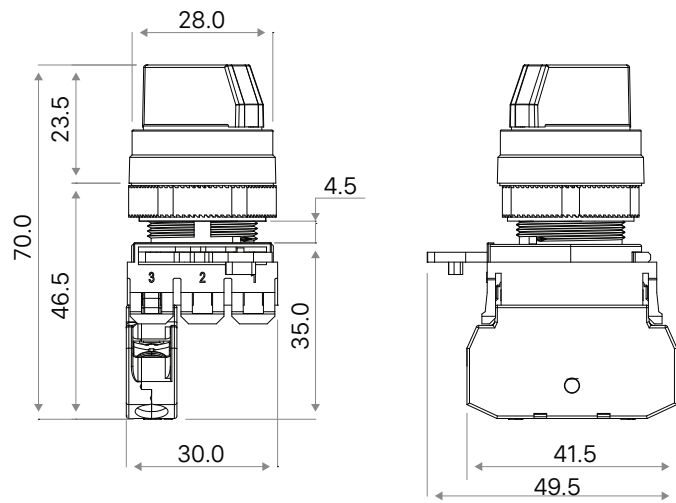
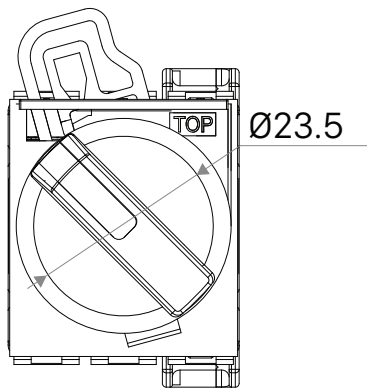
## Part Number Description

G 1 2 3 - 4 5

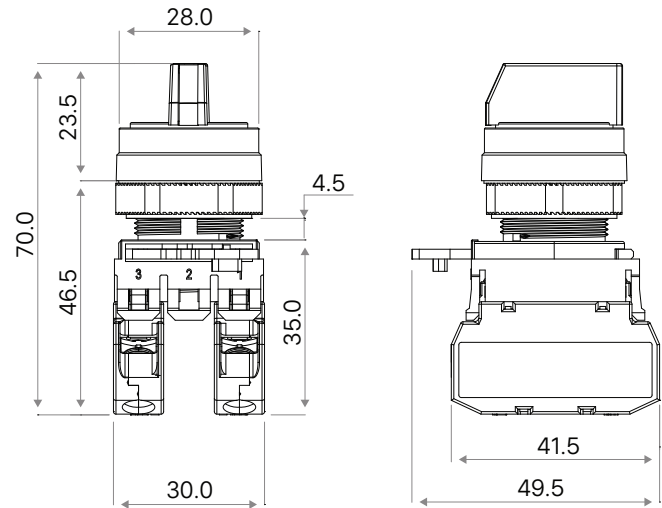
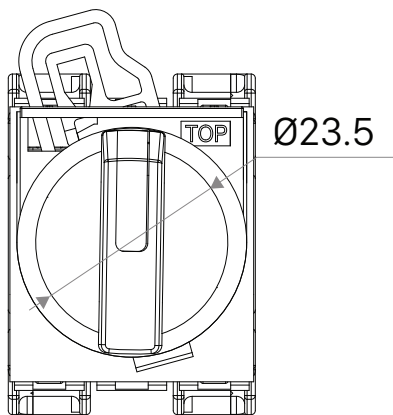
|   |                   |  |
|---|-------------------|--|
| 1 | φ22 Series        | W: φ22 Series  |
| 2 | Bezel             | 1: Plastic   |
| 3 | Type              | S: Selector Switch   |
| 4 | Operator Position | 2: 2 positions, maintained      21: 2 positions, spring return from right<br>3: 3 positions, maintained      31: 3 positions, spring return from right<br>32: 3 positions, spring return from left<br>33: 3 positions, spring return two-way |
| 5 | Contact           | E01: 1NC                                  E10: 1NO<br>E11: 1NO + 1NC                          E02: 2NC                                  E20: 2NO   |

| No. of Positions  | Contact Configuration | Contact Block Mounting Position |    | Operator Position |   |           | Maintained | Spring Return from Right |
|---|-----------------------|---------------------------------|----|-------------------|---|-----------|------------|--------------------------|
|   |                       |                                 |    | L                 | R | -         |            |                          |
|  | 1NO (10)              | 1                               | NO |                   | ● |           | GW1S-2E10  | GW1S-21E10               |
|   |                       | 2                               |    |                   |   |           |            |                          |
|   |                       | 3                               |    |                   |   |           |            |                          |
|   | 1NO + 1NC (11)        | 1                               | NO |                   | ● |           | GW1S-2E11  | GW1S-21E11               |
|   |                       | 2                               |    |                   |   |           |            |                          |
|   |                       | 3                               | NC | ●                 |   |           |            |                          |
| 2NO (20)  | 1                     | NO                              |    | ●                 |   | GW1S-2E20 | GW1S-21E20 |                          |
|   | 2                     |                                 |    |                   |   |           |            |                          |
|   | 3                     | NO                              |    |                   | ● |           |            |                          |
| No. of Positions  | Contact Configuration | Contact Block Mounting Position |    | Operator Position |   |           | Maintained | Spring Return from Right |
|   |                       |                                 |    | L                 | C | R         |            |                          |
|  | 1NO + 1NC (11)        | 1                               | NO | ●                 |   |           | GW1S-3E11  | GW1S-31E11               |
|   |                       | 2                               |    |                   |   |           |            |                          |
|   |                       | 3                               | NC |                   |   | ●         |            |                          |
|   | 2NO (20)              | 1                               | NO | ●                 |   |           | GW1S-3E20  | GW1S-31E20               |
|   |                       | 2                               |    |                   |   |           |            |                          |
|   |                       | 3                               | NO |                   |   | ●         |            |                          |

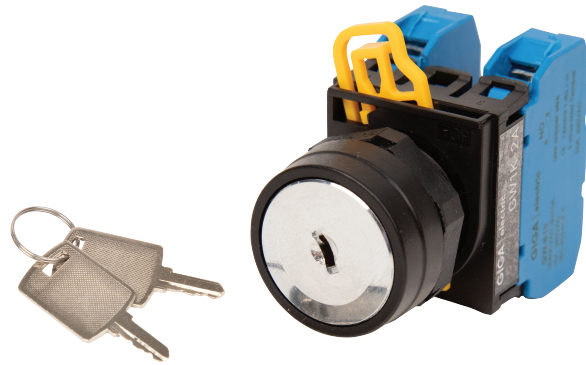
2 positions



3 positions



# Key Selector Switch



## Part Number Description

G ① ② ③ - ④ ⑤



① **φ22 Series**    W: φ22 Series

② **Type**                    1: Selector Switch

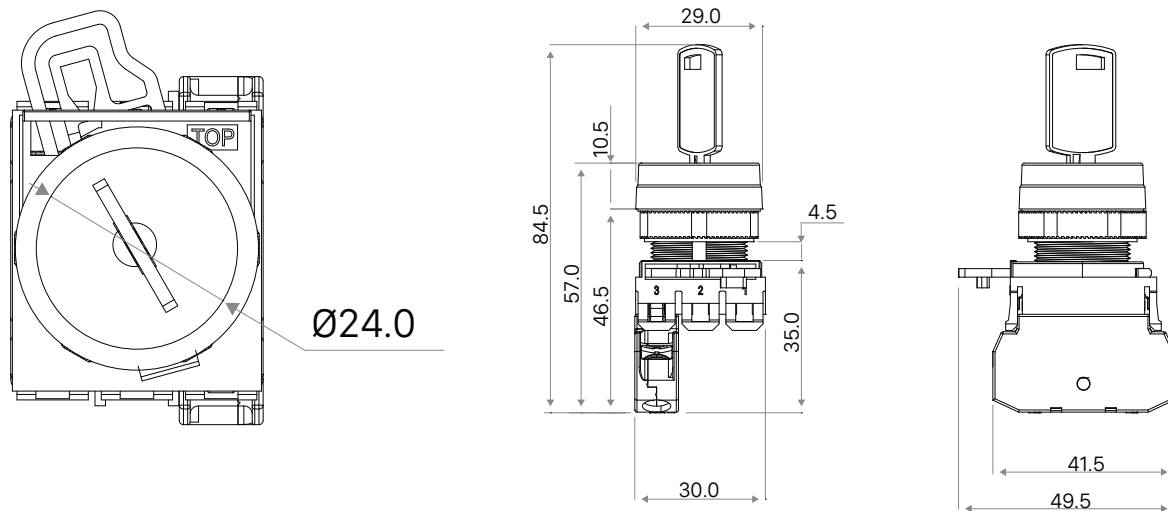
③ **Key Type**                K: Key Type

④ **Operator Position**      2A: 2 positions, maintained    21B: 2 positions, spring return from right  
    3A: 3 positions, maintained    31B: 3 positions, spring return from right  
    32C: 3 positions, spring return from left  
    33D: 3 positions, spring return two-way

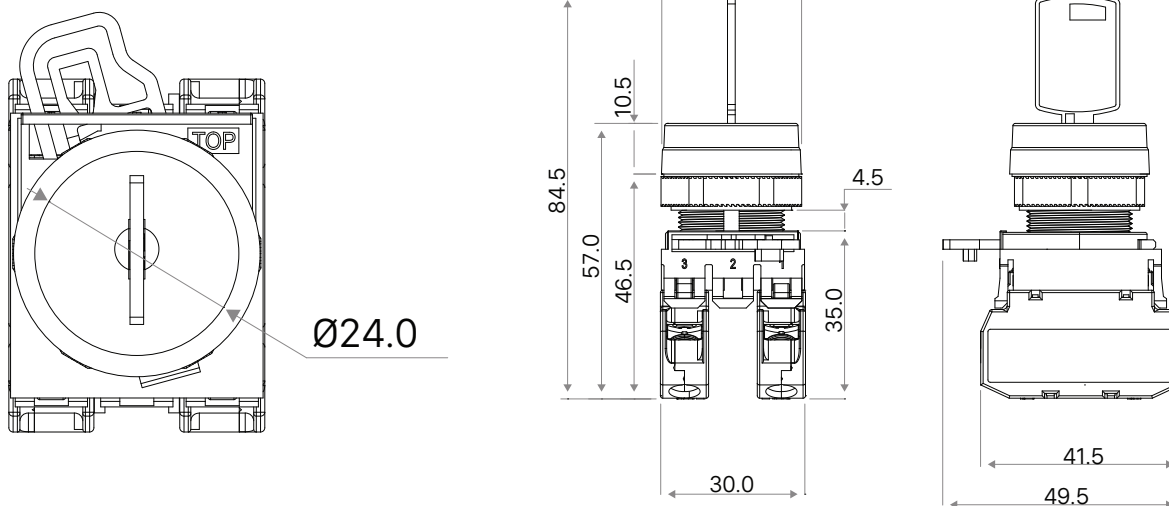
⑤ **Contact**                E01: 1NC                                E10: 1NO  
    E11: 1NO + 1NC                      E02: 2NC                                E20: 2NO

| No. of Positions  | Contact Configuration | Contact Block Mounting Position |    | Operator Position |   | Part No. (Plastic Bezel) |                          |
|---|-----------------------|---------------------------------|----|-------------------|---|--------------------------|--------------------------|
|   |                       |                                 |    | L                 | R |                          |                          |
|  | 1NO (10)              | 1                               | NO |                   | ● | GW1K-2AE10               |                          |
|   |                       | 2                               |    |                   |   |                          |                          |
|   |                       | 3                               |    |                   |   |                          |                          |
|   | 1NO + 1NC (11)        | 1                               | NO |                   | ● | GW1K-2AE11               |                          |
|   |                       | 2                               |    |                   |   |                          |                          |
|   |                       | 3                               | NC | ●                 |   |                          |                          |
|   | 2NO (20)              | 1                               | NO |                   | ● | GW1K-2AE20               |                          |
|   |                       | 2                               |    |                   |   |                          |                          |
|   |                       | 3                               | NO |                   | ● |                          |                          |
| No. of Positions  | Contact Configuration | Contact Block Mounting Position |    | Operator Position |   |                          | Part No. (Plastic Bezel) |
|   |                       |                                 |    | L                 | C | R                        |                          |
|  | 2NO (20)              | 1                               | NO | ●                 |   |                          | GW1K-3AE20               |
|   |                       | 2                               |    |                   |   |                          |                          |
|   |                       | 3                               | NO |                   |   |                          |                          |

2 positions





3 positions









## Accessories

### Contact

| Shape   | Operator Type         | Contact   | Part No. |
|---|-----------------------|-----------|----------|
|  | Contact Block         | 1NC       | GW-E01   |
|   |                       | 1NO       | GW-E10   |
|  | Contact Configuration | 1NC + 1NO | GW-EW11  |
|   |                       | 2NC       | GW-EW02  |
|   |                       | 2NO       | GW-EW20  |

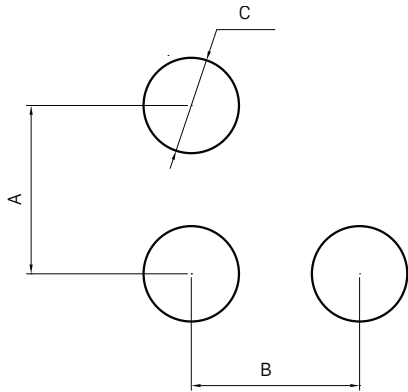
### Others

| Shape   | Operator Type    | Size (WxDxH)                    | Color                              | Part No. |
|---|------------------|---------------------------------|------------------------------------|----------|
|  | Protection Cover | Φ49.5x69x32<br>(except EPB/MPB) | Cover: C (Clear) Bottom: C (Clear) | GW9Z-KL1 |
|  | Name Plate       | Φ62 t=0.2mm                     | Product: Yellow Letter: Red        | GWAV-27  |
|  | Safety Guard     | Φ90 H39.1                       | Yellow                             | GW9Z-KG2 |
|  | Full Cover Guard | 76.5x65x43 Φ22                  | Yellow                             | GW9Z-KG1 |

CAUTION: If the support of the redundant protective guard is not cut, the emergency stop switch cannot be pressed

# Pre-Caution

## Panel Cut-Out



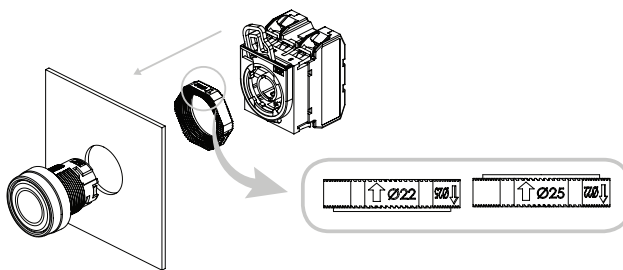
|                  | A       | B       |
|------------------|---------|---------|
| Push Button      |         |         |
| Key Selector     | Min. 50 | Min. 30 |
| Selector         |         |         |
| Pilot Lamp       | Min. 30 | Min. 30 |
| Mushroom Push    | Min. 50 | Min. 40 |
| Emergency Switch | Min. 50 | Min. 50 |
| Panel Hole       | C       |         |
| Ø22              | 22.3    |         |
| Ø25              | 25.3    |         |

Panel Thickness (Unit: mm)

With Switch Alone: 1.0 ~ 4.0

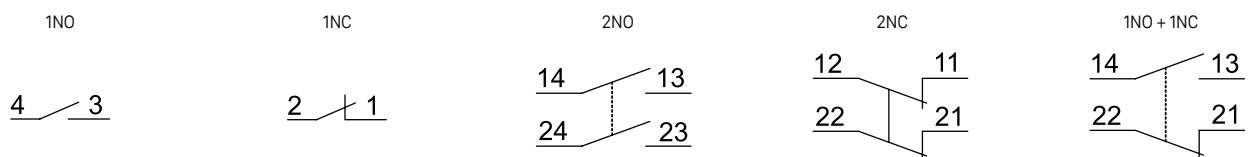
With Optional Product: 1.0 ~ 4.0

## Caution when fixing ring panel is attached



Ø22 compatible fixing Ring  
Please check numbers on side of the ring for suitable mounting to panel hole.

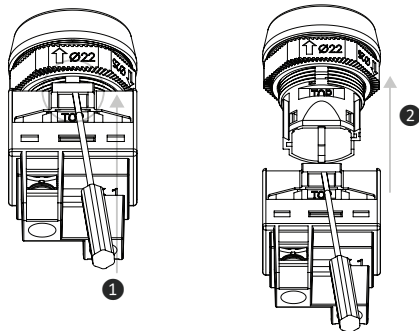
## Terminal Arrangement



Pre-Caution

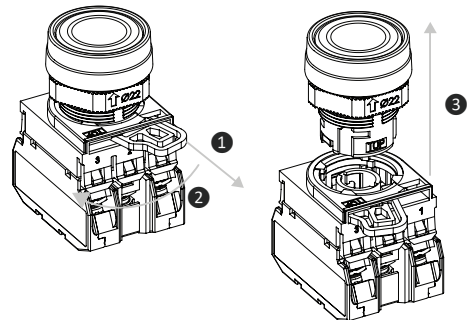
Seperation of control unit and main unit

Pilot Light



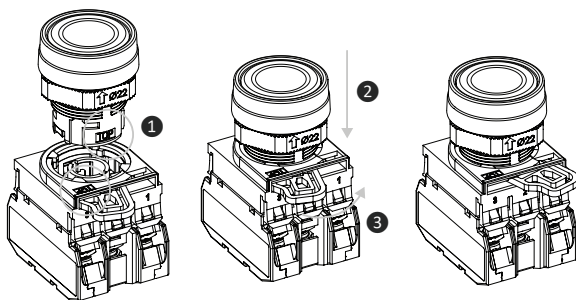
- 1 Push the hook on a body to upper direction as figure 1
- 2 Than LED lens shall be disassembled from the body

Push Button, Selector Key, Emergency Switch



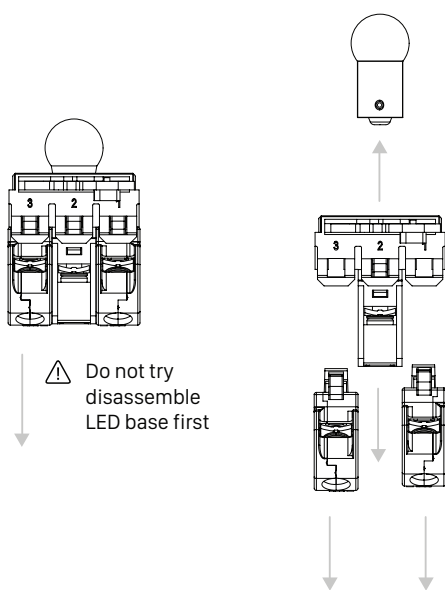
- 1 Pull and turn the lever as figure 1
- 2 Rotate it in direction 2 to unlock it
- 3 Pull out the operator from the body

How to assemble



- 1 Match the same direct with 'TOP' indication between operator & body as figure 1
- 2 Assemble operator to body as figure 2
- 3 Lock the operator by turning the lever too right as figure 3

How to change LED



⚠ Do not try disassemble LED base first

1. Please disassemble as following instruction as figures Remove (1) LED -> (2) Contact block -> (3) LED base
2. If you do not following the instruction it shall be a cause of broken switches

Key, Selector Switches contact block configuration

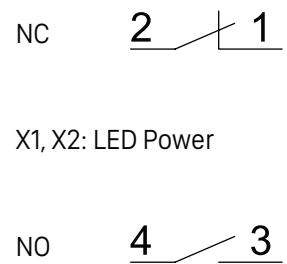
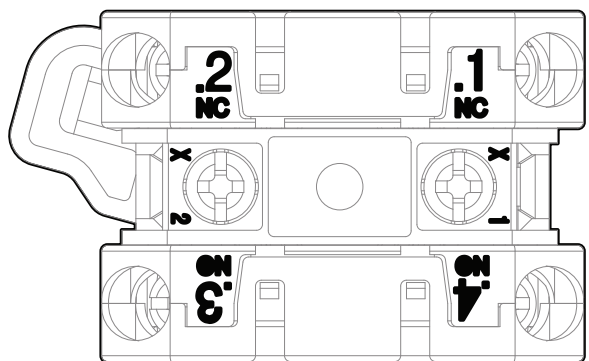
2 Step

| Contact block | Parts number Example | Position | Contact | Lever |       |
|---------------|----------------------|----------|---------|-------|-------|
|               |                      |          |         | Left  | Right |
| 1NO + 1NO     | GW-E10 + GW-E10      | R        | NO      |       | •     |
|               |                      | L        | NO      |       | •     |
| 1NO + 1NC     | GW-E10 + GW-E01      | R        | NO      |       | •     |
|               |                      | L        | NC      | •     |       |
| 1NC + 1NC     | GW-E01 + GW-E01      | R        | NC      | •     |       |
|               |                      | L        | NC      | •     |       |
| 2NO + 2NC     | GW-E20 + GW-E02      | R        | NO      |       | •     |
|               |                      |          | NO      |       | •     |
|               |                      | L        | NC      | •     |       |
|               |                      |          | NC      | •     |       |

3 Step

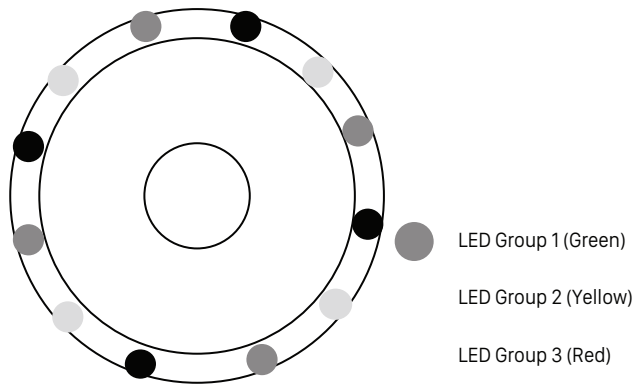
| Contact block | Parts number Example | Position | Contact | Lever |        |       |
|---------------|----------------------|----------|---------|-------|--------|-------|
|               |                      |          |         | Left  | Center | Right |
| 1NO + 1NO     | GW-E10 + GW-E10      | R        | NO      |       |        | •     |
|               |                      | L        | NO      | •     |        |       |
| 1NO + 1NC     | GW-E10 + GW-E01      | R        | NO      |       |        | •     |
|               |                      | L        | NC      |       | —————  |       |
| 1NC + 1NC     | GW-E01 + GW-E01      | R        | NC      | ————— |        |       |
|               |                      | L        | NC      |       | —————  |       |
| 2NO + 2NC     | GW-E02+ GW-E20       | R        | NO      |       |        | •     |
|               |                      |          | NO      |       |        | •     |
|               |                      | L        | NC      |       | —————  |       |
|               |                      |          | NC      |       | —————  |       |

Illuminated type terminal arrangement



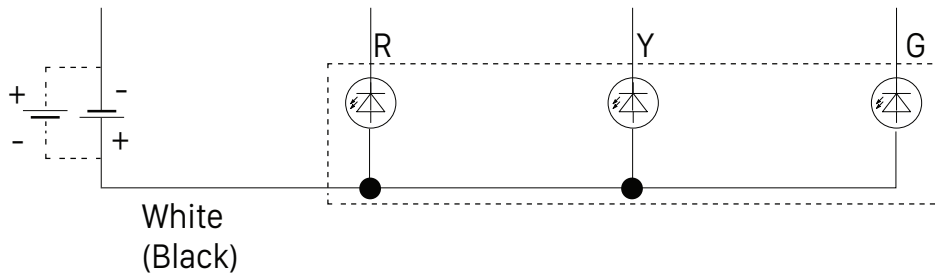
Group layout circuit composition

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Circuit wiring example

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# Control Switch

Ø 16



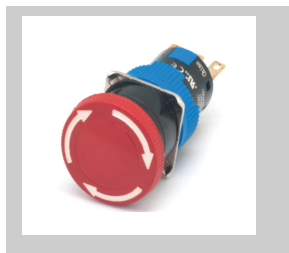
Non-Illuminated Push Button



Illuminated Push Button



Pilot Light



Non-Illuminated Emergency Stop Switch



Non-Illuminated Selector Switch

| General Specification     |                                |  |   |            |            |  |
|---------------------------|--------------------------------|--|---|------------|------------|--|
| Contact Ratings           | Contact Form                   | 1C, 2C   |   |            |            |  |
|                           | Contact Material               | Ag Alloy (24K gold plate)  |   |            |            |  |
|                           | Maximum Switching Current      | 3A   |   |            |            |  |
|                           | Maximum Rated Voltage          | 250VAC, 110VDC   |   |            |            |  |
|                           | Rated Current                  | 1A 24VDC / 120 VAC<br>0.5A 250VAC                                |   |            |            |  |
| LED Module Ratings        | Minimum Switching Current      | 1mA 5VDC   |   |            |            |  |
|                           | Color                          | Red, Green, Yellow, Blue, White, Black                           |   |            |            |  |
|                           | Rated Voltage                  | 6VDC, 24VDC, 12VDC, 220VAC                                       |   |            |            |  |
|                           | Rated Current                  | Approx. 10mA   |   |            |            |  |
| Buzzer Ratings            | Life Cycle (1)                 | 50,000 hrs   |   |            |            |  |
|                           | Tone                           | Continuous   |   |            |            |  |
|                           | Amplitude                      | 80dB(phon) / 0.1m  | 65dB(phon) / 1m   |            |            |  |
|                           | Rated Voltage                  | 24VDC  |   |            |            |  |
|                           | Rated Current                  | Approx. 15mA   |   |            |            |  |
| General Ratings           | Life Cycle                     |  | 1,000 hours   |            |            |  |
|                           | Contact Resistance             | Max. 50mΩ  |   |            |            |  |
|                           | Insulation Resistance          | Min. 100MΩ (500VDC)  |   |            |            |  |
|                           | Dielectric Strength            | 2,000VAC (1 minute)  |   |            |            |  |
|                           | Vibration Resistance           | 5 ~ 55Hz dual amplitude : 0.75mm                                 |   |            |            |  |
|                           | Shock Resistance               | Endurance : 500m/s <sup>2</sup> , Opera on : 200m/s <sup>2</sup> |   |            |            |  |
|                           | Life Cycle                     | Mechanical   | Push button (release) : Min. 1,000,000                            |            |            |  |
|                           |                                |  | Selector, key : Min. 250,000                                      |            |            |  |
|                           | Life Cycle                     | Electrical   | Others : Min. 100,000   |            |            |  |
|                           |                                |  | Maintained : Min 50,000 (frequency of on/ off 1,200 times / hour) |            |            |  |
| Operating Characteristics | Others : Min. 100,000          |  |   |            |            |  |
|                           | Ambient Temperature            | -25°C ~ +55°C (with no icing or condensing)                      |   |            |            |  |
|                           | Ambient Humidity               | 45% ~ 85%RH  |   |            |            |  |
|                           | Degree Of Protection           | IP65 waterproof  | IP40 : Key, Selector  |            |            |  |
|                           | Termination                    | #110 quick-fit / solder  |   |            |            |  |
|                           | Terminal Soldering Temperature | 260°C 3sec   |   |            |            |  |
|                           | Operator Type                  | 1C   | 2C  | 2 Position | 3 Position |  |
| OF                        | 250g                           | 450g   | 1,000g-cm   |            |            |  |
| RF                        | 30g                            |  | -   |            |            |  |
| PT                        | 2.5mm                          |  | -   |            |            |  |
| SP                        | -                              |  | 90 degree   | 45 degree  |            |  |

(1) After 50,000 hours of continuous lighting, the brightness decreases to 50%.  
\* LED is to be used with DC only. Watch the polarity when using them.


# Non-Illuminated Push Button

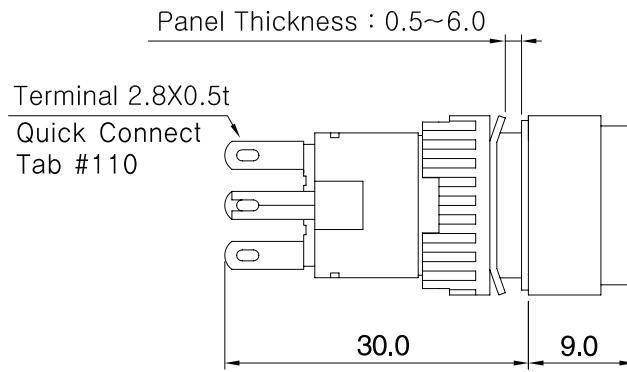
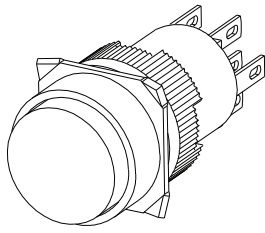


## Part Number Description

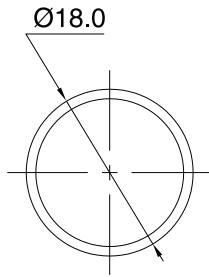
G 1 2 3 - 4 5 6

|   |                   |                                |                    |                       |
|---|-------------------|--------------------------------|--------------------|-----------------------|
| 1 | <b>Type</b>       | B: Non-Illuminated Push Button |                    |                       |
| 2 | <b>φ16 Series</b> | 6: φ16 Series                  |                    |                       |
| 3 | <b>Shape</b>      | M: Round                       | H: Rectangular     | Q: Square             |
| 4 | <b>Operation</b>  | M: Momentary                   | A: Maintained      |                       |
| 5 | <b>Contact</b>    | 1: SPDT                        | 2: DPDT            |                       |
| 6 | <b>Color</b>      | G: Green<br>S: Blue            | R: Red<br>W: White | Y: Yellow<br>B: Black |

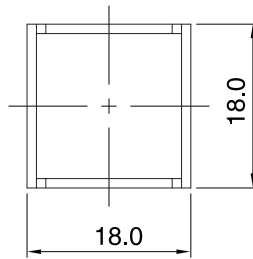
| Shape   | Operation  | Contact | Part No. | Color Code ①   |
|---|------------|---------|----------|--|
|  | Momentary  | SPDT    | GB6M-M1① | G: Green<br>R: Red<br>Y: Yellow<br>S: Blue<br>W: White<br>B: Black |
|   |            | DPDT    | GB6M-M2① |  |
|   | Maintained | SPDT    | GB6M-A1① |  |
|   |            | DPDT    | GB6M-A2① |  |



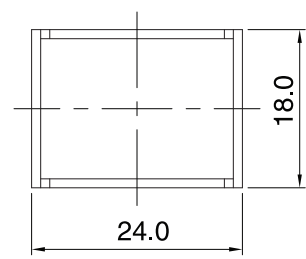
Round



Square



Rectangular






# Illuminated Push Button

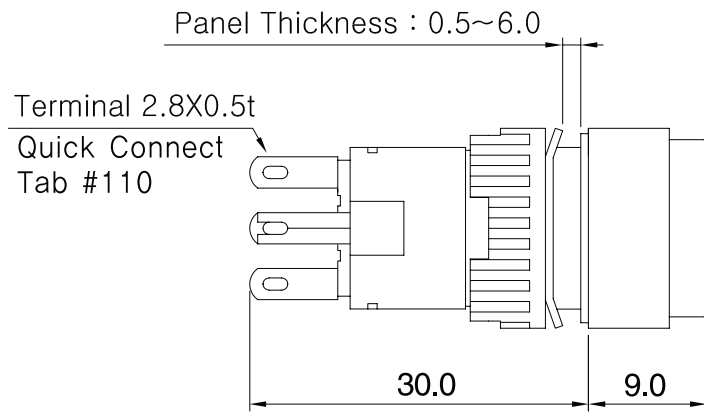
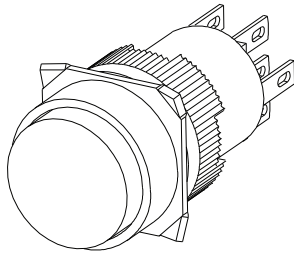


## Part Number Description

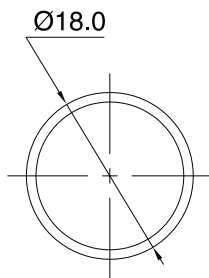
G ① ② ③ - ④ ⑤ ⑥ ⑦

|                    |                     |                    |           |
|--------------------|---------------------|--------------------|-----------|
| ① Lamp             | L: LED              |                    |           |
| ② $\phi$ 16 Series | 6: $\phi$ 16 Series |                    |           |
| ③ Shape            | M: Round            | H: Rectangular     | Q: Square |
| ④ Operation        | M: Momentary        | A: Maintained      |           |
| ⑤ Contact          | 1: SPDT             | 2: DPDT            |           |
| ⑥ Voltage          | 2: 6VDC             | 3: 12VDC           | 4: 24VDC  |
| ⑦ Color            | G: Green<br>S: Blue | R: Red<br>W: White | Y: Yellow |

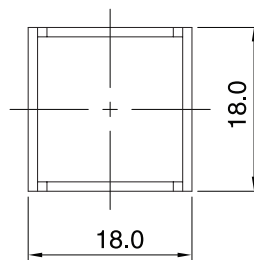
| Shape   | Operation  | Contact   | Part No.  | Operating Voltage ①             | Illumination Color Code ②                              |
|---|------------|-----------|-----------|---------------------------------|--|
|  | Momentary  | SPDT      | GL6M-M1①② | 2: 6VDC<br>3: 12VDC<br>4: 24VDC | G: Green<br>R: Red<br>Y: Yellow<br>S: Blue<br>W: White |
|   |            | DPDT      | GL6M-M2①② |                                 |  |
| Maintained  | SPDT       | GL6M-A1①② |           |                                 |  |
|   | DPDT       | GL6M-A2①② |           |                                 |  |
|  | Momentary  | SPDT      | GL6H-M1①② |                                 |  |
|   |            | DPDT      | GL6H-M2①② |                                 |  |
|   | Maintained | SPDT      | GL6H-A1①② |                                 |  |
|   |            | DPDT      | GL6H-A2①② |                                 |  |
|  | Momentary  | SPDT      | GL6Q-M1①② |                                 |  |
|   |            | DPDT      | GL6Q-M2①② |                                 |  |
|   | Maintained | SPDT      | GL6Q-A1①② |                                 |  |
|   |            | DPDT      | GL6Q-A2①② |                                 |  |



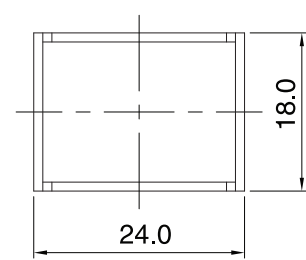
Round



Square



Rectangular





# Pilot Light



## Part Number Description

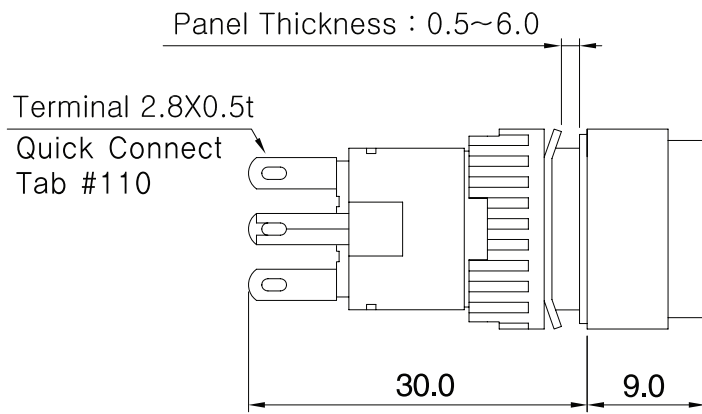
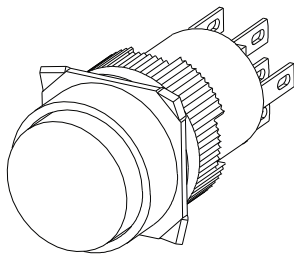
G 1 2 3 - 4 5 6

|                    |                     |                    |                       |
|--------------------|---------------------|--------------------|-----------------------|
| 1 Lamp             | L: LED              |                    |                       |
| 2 $\phi$ 16 Series | 6: $\phi$ 16 Series |                    |                       |
| 3 Shape            | M: Round            | H: Rectangular     | Q: Square             |
| 4 Pilot Lights     | P: Pilot Lights     |                    |                       |
| 5 Voltage          | 2: 6VDC             | 3: 12VDC           | 4: 24VDC              |
| 6 Color            | G: Green<br>S: Blue | R: Red<br>W: White | Y: Yellow<br>B: Black |

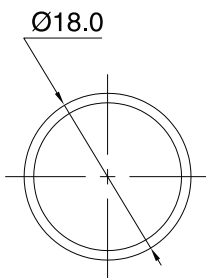
| Shape | Part No. | Operating Voltage ①             | Illumination Color Code ②                              |
|-------|----------|---------------------------------|--|
|       | GL6M-P①② | 2: 6VDC<br>3: 12VDC<br>4: 24VDC | G: Green<br>R: Red<br>Y: Yellow<br>S: Blue<br>W: White |
|       | GL6H-P①② |                                 |  |
|       | GL6Q-P①② |                                 |  |

Dimension

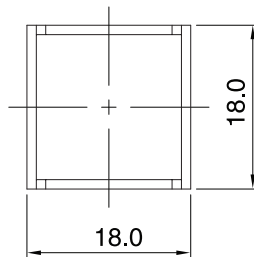
Unit: mm



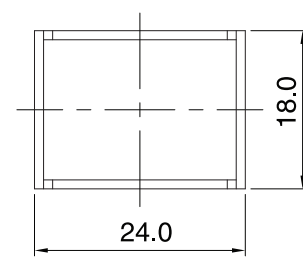
Round



Square



Rectangular



# Non- Illuminated Emergency Stop Switch



## Part Number Description

G 1 2 3 - 4 5 6 7

1 **Type** B: Non-Illuminated Push Button

2 **φ16 Series** 6: φ16 Series

3 **Shape** M: Round

4 **Type** V: Emergency Stop Switches

5 **Shape** 4: Mushroom

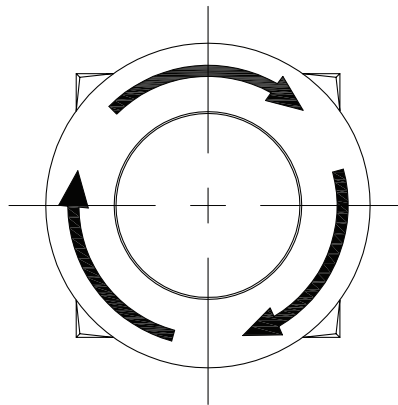
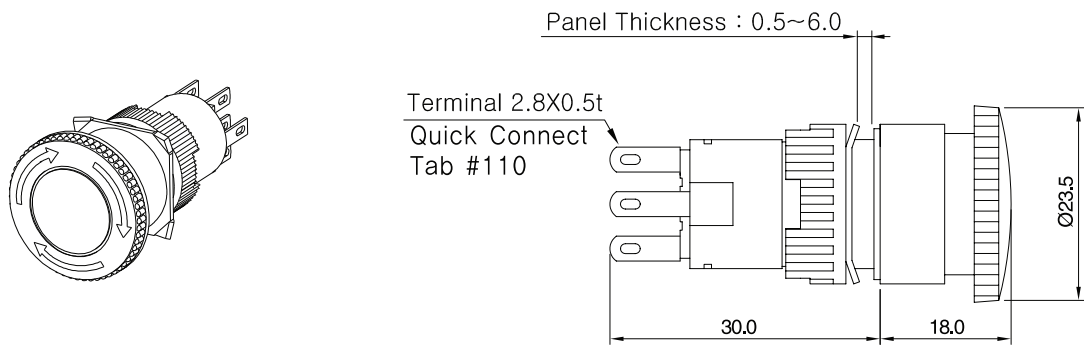
6 **Contact** 1: SPDT 2: DPDT

7 **Color** R: Red

| Shape   | Contact Form | Color | Part No.  | Rated Voltage |
|---|--------------|-------|-----------|---------------|
|  | SPDT         | Red   | GB6M-V41R | -             |
|   | DPDT         |       | GB6M-V42R |               |

Dimension

Unit: mm



# Non-Illuminated Selector Switch

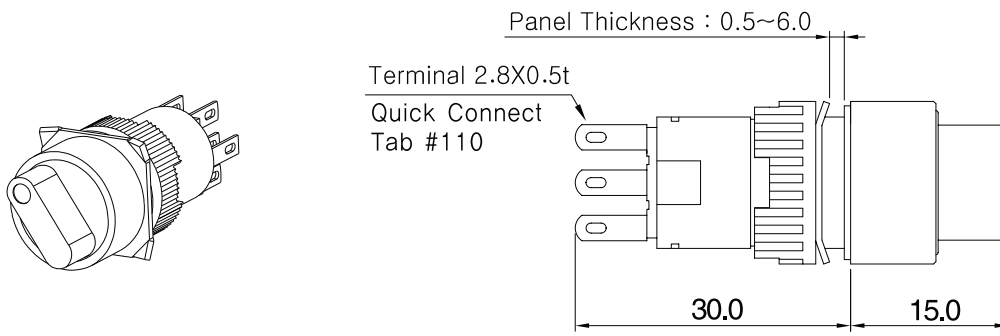


## Part Number Description

G 1 2 3 - 4 Y 5

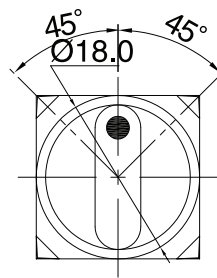
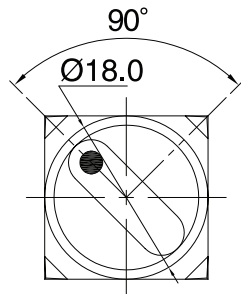
|                            |  |                |           |
|----------------------------|--|----------------|-----------|
| <b>1 Type</b>              | S: Selector Switch                                       |                |           |
| <b>2 φ16 Series</b>        | 6: φ16 Series  |                |           |
| <b>3 Shape</b>             | M: Round   | H: Rectangular | Q: Square |
| <b>4 Operator Position</b> | 2: 2 positions, maintained<br>3: 3 positions, maintained |                |           |
| <b>5 Contact</b>           | 1: SPDT  |                | 2: DPDT   |

| No. of Positions | Contact Form | Color | Part No. | Rated Voltage |
|------------------|--------------|-------|----------|---------------|
|                  | SPDT         | Black | GS6M-2Y1 | -             |
|                  | DPDT         |       | GS6M-2Y2 | -             |
|                  | SPDT         |       | GS6Q-2Y1 | -             |
|                  | DPDT         |       | GS6Q-2Y2 | -             |
|                  | SPDT         |       | GS6H-2Y1 | -             |
|                  | DPDT         |       | GS6H-2Y2 | -             |
| No. of Positions | Contact Form | Color | Part No. | Rated Voltage |
|                  | DPDT         | Black | GS6M-3Y2 | -             |
|                  | DPDT         |       | GS6Q-3Y2 | -             |
|                  | DPDT         |       | GS6H-3Y2 | -             |



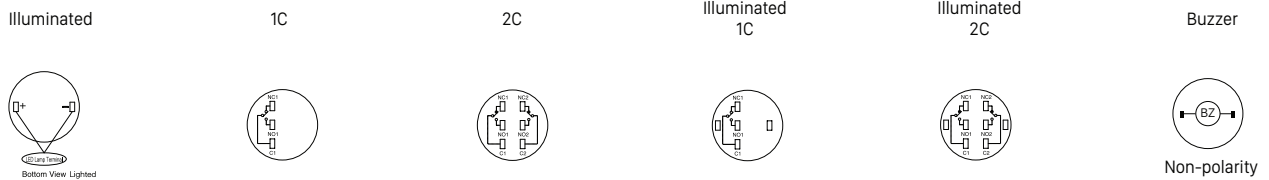
2 Position Round

3 Position Round

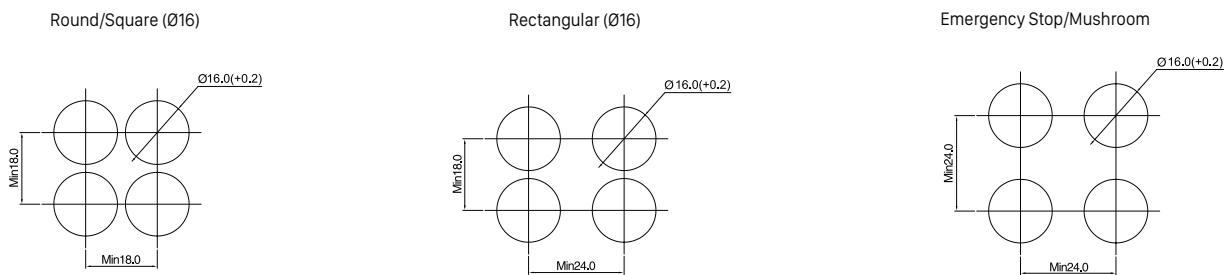


# Pre-Caution

## Wiring Diagram



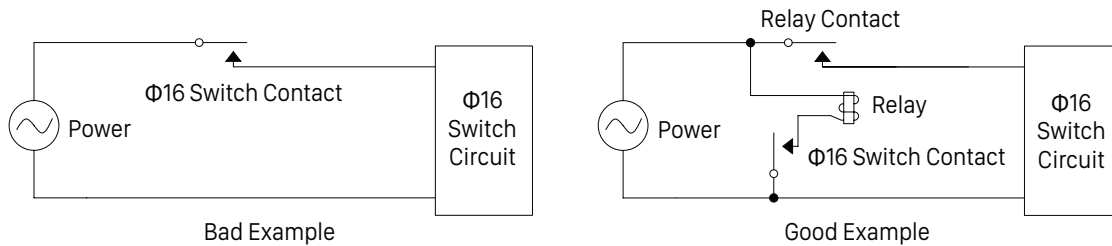
## Panel Cut-Out



- Note. 1. When processing panels, determine the distance between holes considering the user's workability  
 2. The hole processing dimension must be  $\text{Ø}16.0 \pm 0.2$   
 (if the hole processing dimension is greater than the specified value, the product may not operate normally)

## Caution

When using  $\text{Ø}16$  small Control Switch as the power switch for the control unit, please follow instruction for longer product lifespan and reliability



- If you are using a DC power source which is regulated from an AC source, the ripple of the DC power source should be within 10%.
    - If the power source does not have a stable voltage, the life span of the LED will be considerably shortened.
  - Do not use excessive force or strike the products, which could cause damages.  
 (Driving torque for fixing panels 0.6~1N·m or lower)
  - When soldering the wires, excessive heat or extensive use of soldering equipment can distort the shape of the product, which may result in damages.
  - There is a build-in current limiting resistance in the product, so no more additional resistances are need to be connected.
  - The brightness of LED could be reduce up to 50% after rated lifespan.
- The specification and the material of the products can be change without notice for the improvement of the quality.











