

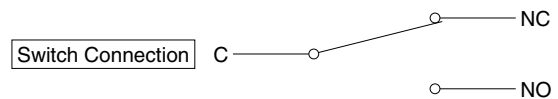
XH Lighted Pushbutton Switch

Only 22.5mm depth behind panel with built-in resistor

Sophisticated design with soft and streamlined shape gives excellent panel appearance.

■ FEATURES

- Depth behind panel : Only 22.5mm
- LED Full-Face, Split-Face, Dual-Color Illumination available.
- Hi-Bright LED Super Blue, Super White, Super Green added to Red, Green, Yellow.
- Built-in resistor for 5V,12V,24V use.
- Light Cartridge is removable from front panel.
- Button Size: 19mm square type, 19 × 26mm rectangular type
- Precision-snap action switch movement with coil spring assures long life and outstanding tactile feedback.
- Silver Contact(Gold-Plated) and W/E Alloy #1 Cross-bar Contact provided.
- Accessories: Barriers, Guard Covers, Sockets, etc.



SPECIFICATIONS

| Contact | Silver Contact (Gold-Plated) | W/E Alloy #1 Cross-bar Contact |
|-----------------------|---|--|
| Electrical Rating | AC125V,250V 5A(Resistive) | AC125V0.1A, DC30V 0.1A(Resistive) |
| Insulation Resistance | More than 100MΩ at 500V DC | |
| Dielectric Strength | 1000V AC RMS between NC and NO terminal 2000V AC RMS between terminals and ground 50/60Hz for 60sec. at normal ambient temperature and humidity | 600V AC RMS between NC and NO terminal 2000V AC RMS between terminals and ground 50/60Hz for 60sec. at normal ambient temperature and humidity |
| Contact Resistance | Less than 30mΩ (Initial) at DC6V 1A | Less than 50mΩ (Initial) at DC6V 0.1A |
| Mechanical Life | Momentary Action :more than 1,000,000 operations | Alternate Action : more than 200,000 operations |
| Electrical Life | More than 50,000 operations at max. rated load | More than 100,000 operations at max. rated load |
| Ambient Temperature | - 15°C to +50°C | |
| Ambient Humidity | 80% RH (max.) | |

OPERATING CHARACTERISTICS

| | | | |
|------------------------|------|---------------------|-------|
| Operating Force (max.) | 4.9N | Total Travel (max.) | 3.5mm |
|------------------------|------|---------------------|-------|

STRUCTURE

LIGHT CARTRIDGE

BUTTON (Poly-Carbonate)



6. FILTER (For clear button only)



CARTRIDGE BASE (LED mounted)



SWITCH UNIT

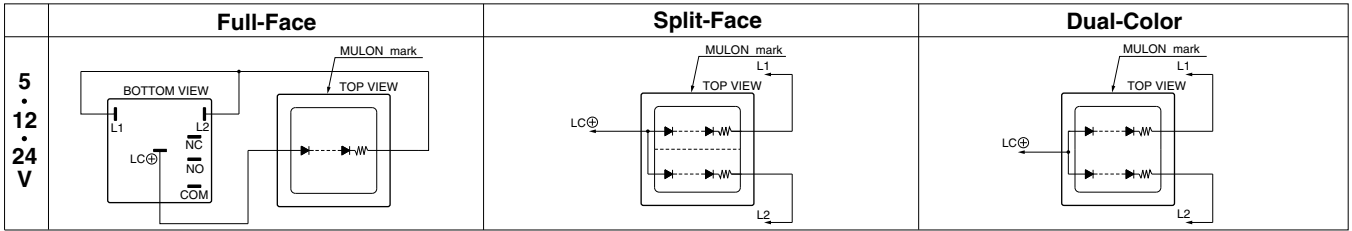


DIMENSIONS

| | | | | |
|--|--|--|--|-----------------|
| <p>19mm Square Button (Full-Face)</p> | | | | <p>Top View</p> |
| <p>19×26mm Rect. Button (Full-Face)</p> | | | | <p>Top View</p> |

INTERNAL CONNECTION ARRANGEMENTS

● 19mm Square Button

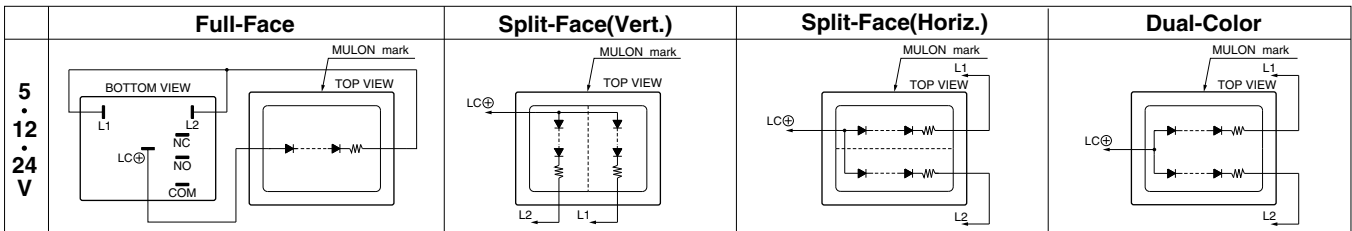


Dual-Color Combination

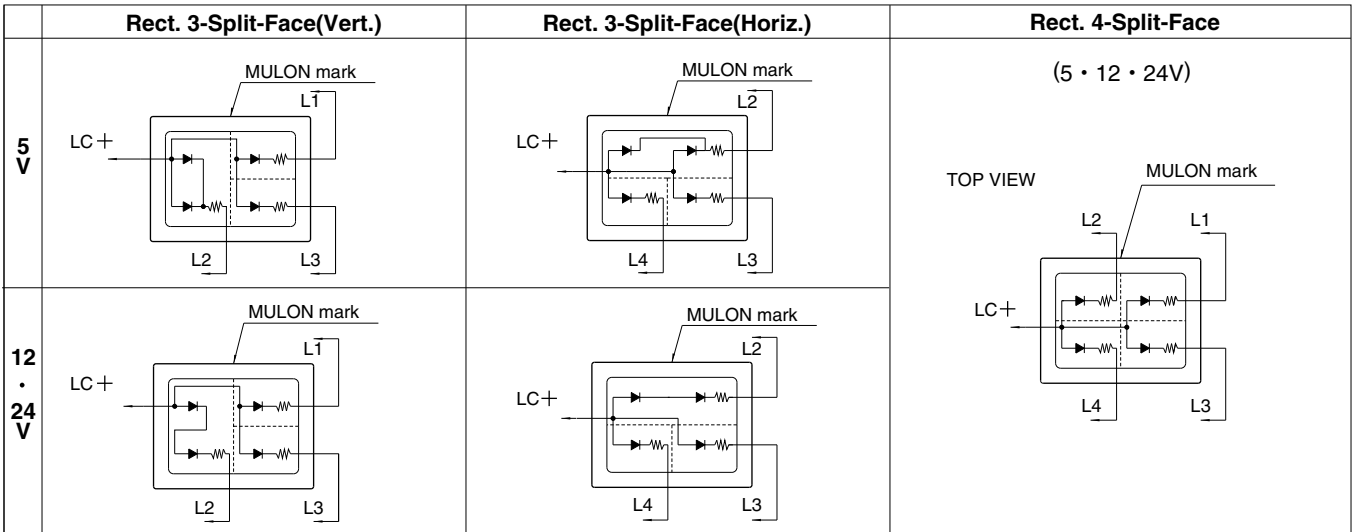
| | | | | | | | | | | | | |
|-------|---|---|---|----|----|----|----|----|----|----|----|----|
| LC-L1 | R | R | Y | SB | SB | SG | R | Y | R | Y | R | Y |
| LC-L2 | G | Y | G | SG | SW | SW | SB | SB | SG | SG | SW | SW |

R=Red Y=Yellow G=Green SB=Super Blue SW=Super White SG=Super Green

● 19×26mm Rect. Button



● 19×26mm Rect. Button



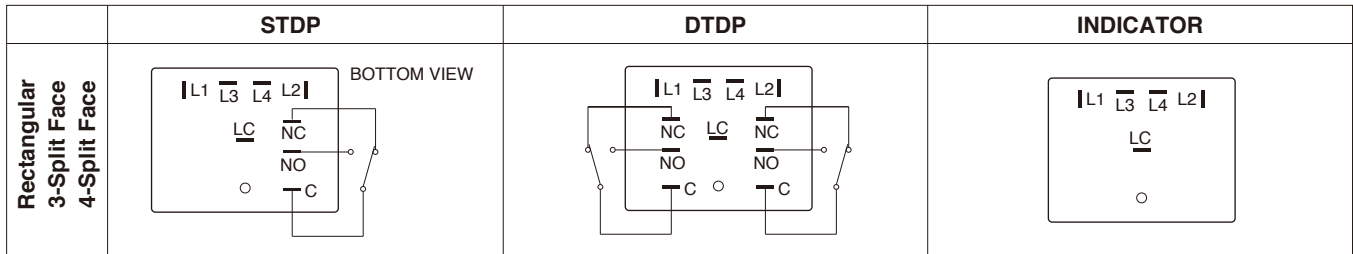
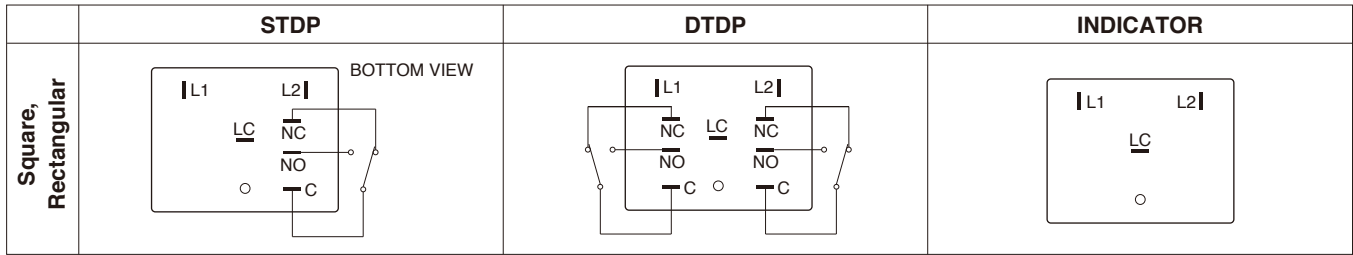
Dual-Color Combination

| | | | | | | | | | | | | |
|-------|---|---|---|----|----|----|----|----|----|----|----|----|
| LC-L1 | R | R | Y | SB | SB | SG | SB | SB | SG | SG | SW | SW |
| LC-L2 | G | Y | G | SG | SW | SW | R | Y | R | Y | R | Y |

R=Red Y=Yellow G=Green SB=Super Blue SW=Super White SG=Super Green

TERMINALS LAYOUT

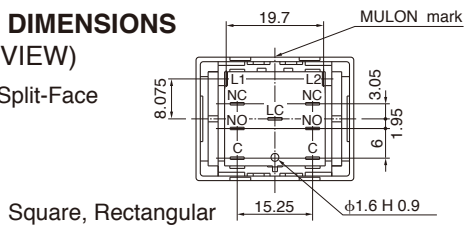
● TERMINALS LAYOUT



TERMINAL DIMENSIONS

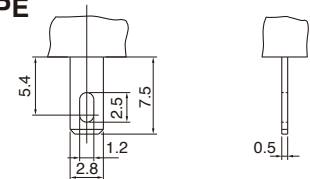
● TERMINAL DIMENSIONS (BOTTOM VIEW)

Full-Face, Split-Face
Dual-Color



TERMINAL SHAPE

● TERMINAL SHAPE



#110 Tab, Soldering Terminal

Tolerance : ±0.4mm

LED DATA

● LED DATA

| 19mm Square Button | DC Supply Voltage (V) | Current Rating (mA) | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|-----------------------|---------------------|----|----|----|----|----|------------|----|----|----|----|----|-----------------|----|----|--------------------------------|----|----|------------------------|----|----|----|----|----|
| | | Full-Face | | | | | | Split-Face | | | | | | Dual-Color | | | | | | | | | | | |
| | | R | G | Y | SB | SW | SG | R | G | Y | SB | SW | SG | RGY combination | | | R,Y and SB, SW, SG combination | | | SB, SW, SG combination | | | | | |
| | | | | | | | | | | | | | | R | G | Y | R | Y | SB | SW | SG | SB | SW | SG | |
| 5V | 20 | 52 | 35 | 23 | 20 | 18 | 15 | 32 | 20 | | | | 20 | 52 | 35 | 20 | 35 | 23 | 20 | 18 | 23 | 20 | 18 | | |
| 12V | 15 | 30 | 20 | | 13 | 10 | 10 | 8 | 15 | 10 | 13 | 10 | 10 | 15 | 30 | 20 | 15 | 20 | | 13 | 10 | 10 | 13 | 10 | 10 |
| 24V | 8 | 15 | 10 | | | | | | | | | | 8 | 15 | 10 | 8 | 10 | | | | | | | | |

| 19×26mm Rect. Button | DC Supply Voltage (V) | Current Rating (mA) | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|-----------------------|---------------------|----|----|----|----|----|------------|----|----|----|----|----|-----------------|----|----|--------------------------------|----|----|------------------------|----|--------------|-----|------------|-----------|------------|------|
| | | Full-Face | | | | | | Split-Face | | | | | | Dual-Color | | | | | | 3-Split-Face | | 4-Split-Face | | | | | |
| | | R | G | Y | SB | SW | SG | R | G | Y | SB | SW | SG | RGY combination | | | R,Y and SB, SW, SG combination | | | SB, SW, SG combination | | | RGY | SB, SW, SG | RGY | SB, SW, SG | |
| | | | | | | | | | | | | | | R | G | Y | R | Y | SB | SW | SG | SB | | | | | SW |
| 5V | 30 | 70 | 45 | 45 | 37 | 33 | 15 | 35 | 23 | 25 | 20 | 18 | 30 | 70 | 45 | 30 | 55 | 45 | 37 | 33 | 45 | 37 | 33 | 10×2.20×1 | 10×2.20×1 | 10×4 | 10×4 |
| 12V | 15 | 30 | 20 | 23 | 20 | 18 | | | | | | | 15 | 30 | 20 | 15 | 30 | 23 | 20 | 18 | 23 | 20 | 18 | 10×3 | 10×3 | 10×4 | 10×4 |
| 24V | 8 | 17 | 10 | 13 | 10 | 10 | 8 | 15 | 9 | 13 | 10 | 10 | 8 | 17 | 10 | 8 | 10 | 13 | 10 | 10 | 13 | 10 | 10 | 10×3 | 10×3 | 10×4 | 10×4 |

LED DATA

● EXTERNAL RESISTOR

Switches are normally fitted with internal resistors to operate on 5, 12, 24V DC supply. In case of non-resistor type, suitable external current limiting resistors must be installed as shown by the table and formula.

★ 19mm Square Button

| | Full-Face | | | | | | | | | | | | | | | Split-Face | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|-----------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|------------|-----|-----|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|
| | R | | | G | | | Y | | | SB | | | SW | | | SG | | | R | | | G | | | Y | | | SB | | | SW | | | SG | | | | | |
| | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | | | |
| Max. operating current IFM (mA) | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 |
| DC reverse voltage VR (V) | 8 | 12 | 24 | 8 | 12 | 24 | 8 | 12 | 24 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 | 8 | 12 | 24 | 8 | 12 | 24 | 8 | 12 | 24 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 |
| Forward voltage VF (V) | 3.6 | 5.4 | 10.8 | 4.2 | 6.3 | 12.6 | 3.6 | 5.4 | 10.8 | 2.9 | 5.8 | 11.6 | 2.9 | 5.8 | 11.6 | 3 | 6 | 12 | 3.6 | 5.4 | 10.8 | 3.6 | 5.4 | 10.8 | 3.6 | 5.4 | 10.8 | 3.6 | 5.4 | 10.8 | 2.9 | 5.8 | 11.6 | 2.9 | 5.8 | 11.6 | 2.9 | 5.8 | 11.6 |
| Recommended operating current IF (mA) | 20 | 15 | 8 | 40 | 30 | 15 | 25 | 20 | 10 | 23 | 13 | 20 | 10 | 23 | 13 | 15 | 8 | 32 | 15 | 20 | 10 | 20 | 10 | 13 | 10 | 13 | 10 | 13 | 10 | 10 | 10 | 13 | 10 | 10 | 13 | 10 | | | |
| Current Reduced Factor | 1 | 0.7 | 0.4 | 1 | 0.7 | 0.4 | 1 | 0.7 | 0.4 | 0.6 | 0.3 | 0.6 | 0.3 | 0.6 | 0.3 | 0.7 | 0.4 | 0.7 | 0.4 | 0.7 | 0.4 | 0.7 | 0.4 | 0.7 | 0.4 | 0.7 | 0.4 | 0.3 | 0.6 | 0.3 | 0.3 | 0.6 | 0.3 | 0.3 | 0.6 | 0.3 | | | |
| Wiring diagram | Fig. 1 | | | | | | | | | | | | | | | Fig. 2 | | | | | | | | | | | | | | | | | | | | | | | |

| | Dual-Color | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|-----------------|-----|------|-----|-----|------|---------------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|------------------------|-----|-----|-----|-----|-----|-----|-----|------|
| | RGY combination | | | | | | R, Y and SB, SW, SG combination | | | | | | | | | | | | SB, SW, SG combination | | | | | | | | |
| | R | | G | | Y | | R | | Y | | SB | | SW | | SG | | SB | | SW | | SG | | | | | | |
| | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | | | |
| Max. operating current IFM (mA) | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 | 60 | 40 | 20 |
| DC reverse voltage VR (V) | 8 | 12 | 24 | 8 | 12 | 24 | 8 | 12 | 24 | 8 | 12 | 24 | 8 | 12 | 24 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 |
| Forward voltage VF (V) | 3.6 | 5.4 | 10.8 | 4.2 | 6.3 | 12.6 | 3.6 | 5.4 | 10.8 | 3.6 | 5.4 | 10.8 | 2.9 | 5.8 | 11.6 | 2.9 | 5.8 | 11.6 | 3 | 6 | 12 | 3 | 6 | 12 | 2.9 | 5.8 | 11.6 |
| Recommended operating current IF (mA) | 20 | 15 | 8 | 40 | 30 | 15 | 25 | 20 | 10 | 20 | 15 | 8 | 25 | 20 | 10 | 23 | 13 | 20 | 10 | 18 | 10 | 10 | 23 | 13 | 20 | 10 | 18 |
| Current Reduced Factor | 1 | 0.7 | 0.4 | 1 | 0.7 | 0.4 | 1 | 0.7 | 0.4 | 1 | 0.7 | 0.4 | 0.6 | 0.3 | 0.6 | 0.3 | 0.6 | 0.3 | 0.6 | 0.3 | 0.6 | 0.3 | 0.6 | 0.3 | 0.6 | 0.3 | 0.6 |
| Wiring diagram | Fig. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |

★ 19×26mm Rect. Button

| | Full-Face | | | | | | | | | | | | | | | Split-Face | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|-----------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|------------|-----|-----|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|
| | R | | | G | | | Y | | | SB | | | SW | | | SG | | | R | | | G | | | Y | | | SB | | | SW | | | SG | | |
| | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | | | |
| Max. operating current IFM (mA) | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 |
| DC reverse voltage VR (V) | 8 | 16 | 32 | 8 | 16 | 32 | 8 | 16 | 32 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 | 8 | 16 | 32 | 8 | 16 | 32 | 8 | 16 | 32 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 |
| Forward voltage VF (V) | 3.6 | 7.2 | 14.4 | 4.2 | 8.4 | 16.8 | 3.6 | 7.2 | 14.4 | 2.9 | 5.8 | 11.6 | 2.9 | 5.8 | 11.6 | 3 | 6 | 12 | 3.6 | 7.2 | 14.4 | 3.6 | 7.2 | 14.4 | 3.6 | 7.2 | 14.4 | 2.9 | 5.8 | 11.6 | 2.9 | 5.8 | 11.6 | 2.9 | 5.8 | 11.6 |
| Recommended operating current IF (mA) | 30 | 15 | 8 | 70 | 30 | 17 | 45 | 18 | 10 | 45 | 23 | 13 | 37 | 20 | 10 | 33 | 18 | 10 | 15 | 8 | 18 | 15 | 18 | 10 | 15 | 18 | 9 | 25 | 13 | 20 | 10 | 25 | 10 | | | |
| Current Reduced Factor | 1.4 | 0.7 | 0.4 | 1.4 | 0.7 | 0.4 | 1.4 | 0.7 | 0.4 | 1.2 | 0.6 | 0.3 | 1.2 | 0.6 | 0.3 | 1.2 | 0.6 | 0.3 | 0.7 | 0.4 | 0.7 | 0.4 | 0.7 | 0.4 | 0.7 | 0.4 | 0.7 | 0.4 | 0.6 | 0.3 | 0.6 | 0.3 | 0.6 | | | |
| Wiring diagram | Fig. 1 | | | | | | | | | | | | | | | Fig. 2 | | | | | | | | | | | | | | | | | | | | |

| | Dual-Color | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|-----------------|-----|------|-----|-----|------|---------------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|------------------------|-----|-----|-----|-----|-----|-----|-----|------|
| | RGY combination | | | | | | R, Y and SB, SW, SG combination | | | | | | | | | | | | SB, SW, SG combination | | | | | | | | |
| | R | | G | | Y | | R | | Y | | SB | | SW | | SG | | SB | | SW | | SG | | | | | | |
| | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V | | | |
| Max. operating current IFM (mA) | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 | 80 | 40 | 20 |
| DC reverse voltage VR (V) | 8 | 16 | 32 | 8 | 16 | 32 | 8 | 16 | 32 | 8 | 16 | 32 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 | 5 | 10 | 20 |
| Forward voltage VF (V) | 3.6 | 7.2 | 14.4 | 4.2 | 8.4 | 16.8 | 3.6 | 7.2 | 14.4 | 3.6 | 7.2 | 14.4 | 2.9 | 5.8 | 11.6 | 2.9 | 5.8 | 11.6 | 3 | 6 | 12 | 3 | 6 | 12 | 2.9 | 5.8 | 11.6 |
| Recommended operating current IF (mA) | 30 | 15 | 8 | 70 | 30 | 17 | 45 | 18 | 10 | 30 | 15 | 8 | 45 | 18 | 10 | 45 | 23 | 13 | 37 | 20 | 10 | 33 | 18 | 10 | 45 | 23 | 13 |
| Current Reduced Factor | 1.4 | 0.7 | 0.4 | 1.4 | 0.7 | 0.4 | 1.4 | 0.7 | 0.4 | 1.4 | 0.7 | 0.4 | 1.2 | 0.6 | 0.3 | 1.2 | 0.6 | 0.3 | 1.2 | 0.6 | 0.3 | 0.7 | 0.4 | 0.7 | 0.4 | 0.6 | 0.3 |
| Wiring diagram | Fig. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | 3-Split-Face | | | | | | | | | | | | 4-Split-Face | | |
|---------------------------------------|--------------|-----|-----|-----|-----|-----|------------|-----|-----|-----|-----|-----|--------------|-----|------------|
| | R, G, Y | | | | | | SB, SW, SG | | | | | | RGY | | SB, SW, SG |
| | 5V | | 12V | | 24V | | 5V | | 12V | | 24V | | 5V | 12V | 24V |
| Max. operating current IFM (mA) | 20 | 20 | 40 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| DC reverse voltage VR (V) | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 8 | 5 | 5 | 5 | 5 | 5 | 10 |
| Forward voltage VF (V) | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 7.6 | 3.8 | 3.8 | 7.6 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 5.8 |
| Recommended operating current IF (mA) | 10 | 10 | 20 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Current Reduced Factor | 0.4 | 0.7 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 |
| Wiring diagram | Fig. 3 | | | | | | | | | | | | Fig. 4 | | |

Panel Layout / Panel Cut Dimensions

● 19mm Square Button

Panel thickness : 1.0 ~ 4mm

| | | Panel Layout | Panel Cut Dimensions |
|------------------|-------------|--------------|----------------------|
| Without Barriers | Independent | | |
| | Serial | | |
| With Barriers | Independent | | |
| | Serial | | |

● 19×26mm Rect. Button

| | | Panel Layout | Panel Cut Dimensions |
|------------------|-------------|--------------|----------------------|
| Without Barriers | Independent | | |
| | Serial | | |
| With Barriers | Independent | | |
| | Serial | | |

※ Panel Cut Dimension should be after panel paintings.

※ Vertical serial mounting is not available.

n : number of switches

● In case of group mounting, please leave space as below

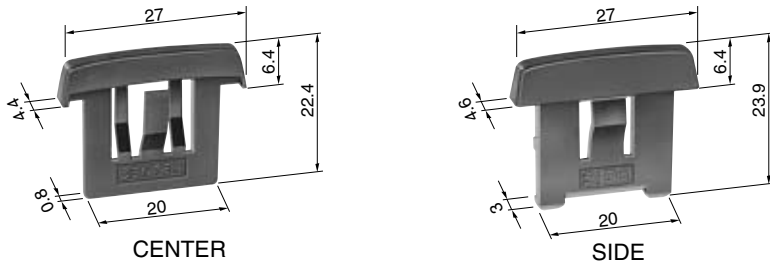
| | Square Without Barriers | Square With Barriers | Rect. Without Barriers | Rect. With Barriers |
|-------------|-------------------------|----------------------|------------------------|---------------------|
| Note | | | | |

Tolerance : ±0.4mm

ACCESSORIES

BARRIERS

In case of mounting switches in series, barriers can be used to prevent inadvertent pushing neighbor switch.



| PART NO. | | |
|----------|----------------|--------------|
| | Center Barrier | Side Barrier |
| Black | XH-1872-K | XH-1873-K |
| Gray | XH-1872-H | XH-1873-H |

GUARD COVER

Guard Cover prevents inadvertent and unintentional operations. Easy to install by one-touch, also possible to install after switch be mounted on panel.

- 19mm Square
- 19×26mm Rectangular



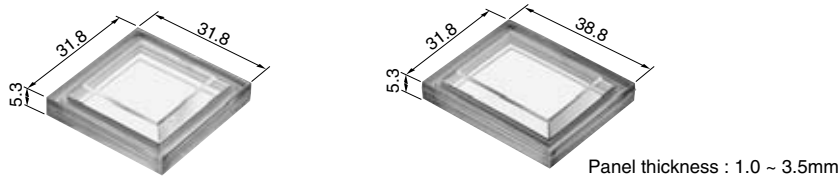
※ The cover to be opened 180° and returned by spring force.

| PART NO. | |
|-------------|---------------------|
| 19mm Square | 19×26mm Rectangular |
| XH-2024 | XH-2025 |

Dust-Proof/Oil Water-tight Cover

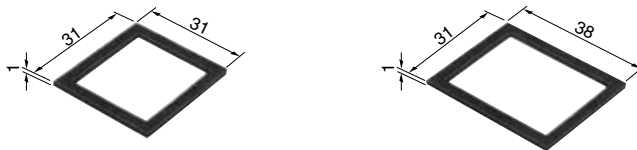
Cover, to prevent from Dust, Oil, Water (IP63)

- 19mm Square
- 19×26mm Rectangular

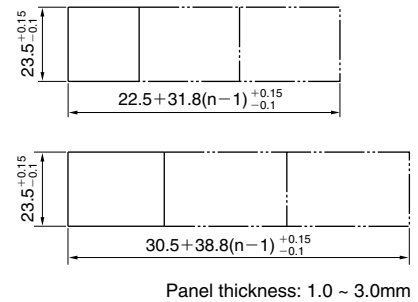


In case of using for Oil Water-tight, following rubber packing needed. However, it is not effective for serial mounting.

- 19mm Square
- 19×26mm Rectangular



● Panel Cut Dimensions

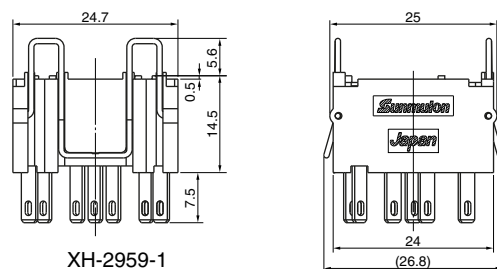


| PART NO. | | |
|----------------|---------|-------------|
| | Square | Rectangular |
| Cover | WH-0783 | WH-0784 |
| Rubber packing | WH-0767 | WH-0768 |

SOCKET

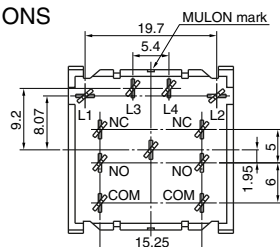
For easy maintenance. (Can be used for both square and rectangular)

- Soldering Terminal



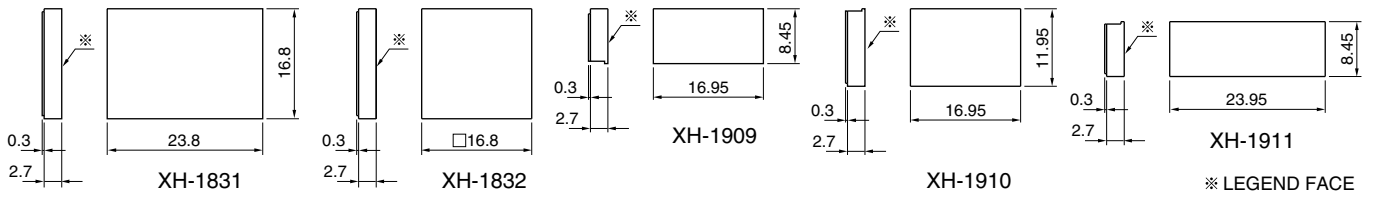
| PART NO. | |
|-----------|--|
| XH-2959-1 | |

● TERMINAL DIMENSIONS



Tolerance : ±0.4mm

FILTER DIMENSIONS



REPLACEMENT PARTS

● **FILTER** For 3 or 4-Split-Face, Please inquiry us how to order.

| Item | Square Full-Face | Square Split-Face | Rect. Full-Face | Rect. Split-Face(vertical) | Rect. Split-Face(horizontal) | |
|-------|------------------|-------------------|-----------------|----------------------------|------------------------------|------------|
| color | R | XH-1832-LR | XH-1909-LR | XH-1831-LR | XH-1910-LR | XH-1911-LR |
| | G | XH-1832-LG | XH-1909-LG | XH-1831-LG | XH-1910-LG | XH-1911-LG |
| | Y | XH-1832-LY | XH-1909-LY | XH-1831-LY | XH-1910-LY | XH-1911-LY |
| | Milk-White | XH-1832-LM | XH-1909-LM | XH-1831-LM | XH-1910-LM | XH-1911-LM |
| | Blue | XH-1832-LB | XH-1909-LB | XH-1831-LB | XH-1910-LB | XH-1911-LB |

● **Divider**

| | Part No. Position |
|-------------------------------|-------------------|
| Square Split-Face | XH-2814 |
| Rect. Split-Face (vertical) | XH-2814 |
| Rect. Split-Face (horizontal) | XH-2889 |

● **BUTTON**

| Item | color | Red | Green | Yellow | Milk-White | Clear | Blue |
|------------------------|-------|------------|------------|------------|------------|------------|------------|
| 19mm Square Button | | XH-1834-LR | XH-1834-LG | XH-1834-LY | XH-1834-LM | XH-1834-CC | XH-1834-LB |
| 19 × 26mm Rect. Button | | XH-1833-LR | XH-1833-LG | XH-1833-LY | XH-1833-LM | XH-1833-CC | XH-1833-LB |

ASSEMBLY & DISASSEMBLY

1. Removing Light Cartridge

Hang the cartridge with hooking fingernails in the groove, and pull out.

2. Removing Button

Hook fingernails at A and gently release the clip, and release another side as well.

3. Fitting Filter(s)

Set Filter(s) as shown onto cartridge carefully, then put button on.

4. Fitting Button

Fit the button as shown until click.

5. Fitting Light Cartridge

Insert Light Cartridge into Housing with right direction and push in until click.

6. Installing Barriers (Independent)

Install Side Barriers with Switch as shown.

● **Installing Barriers (Serial)**

Install Side Barriers with Switch and install Center Barrier between Switches.

7. Installing Dust-Proof Cover

1) Put the switch through the cover frame, and mount on panel. Afterwards install soft cover accordingly.

2) In case of Oil and Water-tight use, please apply rubber packing between panel and cover frame.

8. Installing Guard Cover

Just install as shown. It is possible to install after switch be mounted on panel.

ORDERING CODE I

LED Illumination

XH — 1 2 1 2 P

● OPERATION

| | |
|-----|----------------|
| M | Momentary |
| A | Alternate |
| L | Indicator |
| ※ F | Flat Indicator |

※ Button level is flat. (locked position)

● CONTACT

| | |
|---|------------------------------|
| 0 | Indicator |
| 3 | SPDT · Silver (Gold-Plated) |
| 4 | DPDT · Silver (Gold-Plated) |
| 5 | SPDT · W/E Alloy #1 Crossbar |
| 6 | DPDT · W/E Alloy #1 Crossbar |

● BUTTON SHAPE · ILLUMINATION TYPE

| | |
|----|-----------------------------|
| S0 | Square Full-Face |
| W0 | Rect. Full-Face |
| W1 | Rect. Split-Face (Vert.) |
| S2 | Square Split-Face (Horiz.) |
| W2 | Rect. Split-Face (Horiz.) |
| S3 | Square Dual-Color |
| W3 | Rect. Dual-Color |
| W5 | Rect. 3-Split-Face (Vert.) |
| W6 | Rect. 3-Split-Face (Horiz.) |
| W7 | Rect. 4-Split-Face |

● LED COLOR

| | | |
|----|-------------|--|
| 70 | Red | Full-Face : Put color no. into the frame 1 Split-Face : Put color no. into the frame 1,2 Dual-Color Put color no. into the frame 1,2 |
| 80 | Green | |
| 90 | Yellow | |
| 14 | Super Blue | Combination: 70 · 80, 80 · 90, 90 · 70 70 · 14, 70 · 16, 70 · 18 90 · 14, 90 · 16, 90 · 18 14 · 16, 16 · 18, 18 · 14 |
| 16 | Super White | |
| 18 | Super Green | |

● Supply Voltage to LED

| | |
|---|------------------|
| 1 | 5V |
| 2 | 12V |
| 3 | 24V |
| 4 | 5V Non-Resistor |
| 5 | 12V Non-Resistor |
| 6 | 24V Non-Resistor |

● FILTER COLOR

| | |
|---|----------------|
| 1 | Red |
| 2 | Green |
| 3 | Yellow |
| 4 | Milk-White |
| 6 | Blue |
| ★ | Without Filter |

★ Full-Face : Put color no. into the frame 1
Split-Face : Put color no. into the frame 1,2
Dual-Color Put color no. 4 (Milk-White) into the frame 1
★ Generally, in case of using color button, filters are not necessary.

● TERMINAL

| | |
|---|---------------------|
| P | #110 Tab, Soldering |
|---|---------------------|

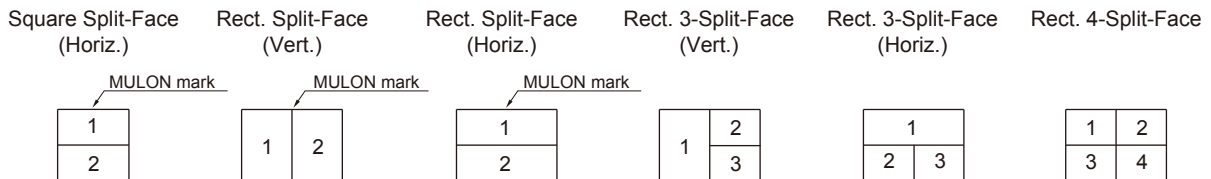
● HOUSING COLOR

| | |
|---|-------|
| K | Black |
| H | Gray |

● BUTTON COLOR

| | |
|---|----------------|
| R | Red |
| G | Green |
| Y | Yellow |
| M | Milk-White |
| B | Blue |
| C | Clear |
| | Without Button |

※ 1) In case of Split-Face, LED and Filter color location should be specified as follow:



※ 2) In case of Split-Face, button color should be C (clear).

※ 3) In case of Dual-Color, button color should be C (clear) with Milk-White filter or Milk-White button.

※ 4) Please be noted that the color of "Yellow" for LED, Button, Filter is actually "Orange Yellow" not Lemon Yellow.

ORDERING CODE II

XH — 1 2 1 2

● **BUTTON SHAPE · ILLUMINATION TYPE**

| | |
|----|-----------------------------|
| S0 | Square Full-Face |
| W0 | Rect. Full-Face |
| W1 | Rect. Split-Face (Vert.) |
| S2 | Square Split-Face (Horiz.) |
| W2 | Rect. Split-Face (Horiz.) |
| S3 | Square Dual-Color |
| W3 | Rect. Dual-Color |
| W5 | Rect. 3-Split-Face (Vert.) |
| W6 | Rect. 3-Split-Face (Horiz.) |
| W7 | Rect. 4-Split-Face |

● **LED COLOR**

| | | |
|----|-------------|---|
| 70 | Red | Full-Face : Put color no. into the frame 1 Split-Face : Put color no. into the frame 1,2 Dual-Color Put color no. 78 into the frame 1,2 |
| 80 | Green | |
| 90 | Yellow | |
| 14 | Super Blue | Combination: 70·80, 80·90, 90·70 70·14, 70·16, 70·18 90·14, 90·16, 90·18 14·16, 16·18, 18·14 |
| 16 | Super White | |
| 18 | Super Green | |
| | | |

● **BUTTON COLOR**

| | |
|---|----------------|
| R | Red |
| G | Green |
| Y | Yellow |
| M | Milk-White |
| B | Blue |
| C | Clear |
| × | Without Button |

● **FILTER COLOR**

| | |
|---|----------------|
| 1 | Red |
| 2 | Green |
| 3 | Yellow |
| 4 | Milk-White |
| 6 | Blue |
| × | Without Filter |

Full-Face : Put color no. into the frame 1
Split-Face : Put color no. into the frame 1,2
Dual-Color Put color no. 4 (Milk-White) into the frame 1

● **Supply Voltage to LED**

| | |
|---|------------------|
| 1 | 5V |
| 2 | 12V |
| 3 | 24V |
| 4 | 5V Non-Resistor |
| 5 | 12V Non-Resistor |
| 6 | 24V Non-Resistor |

HOUSING

XH — P

● **OPERATION**

| | |
|---|----------------|
| M | Momentary |
| A | Alternate |
| L | Indicator |
| F | Flat Indicator |

※ Button level is flat. (locked position)

● **CONTACT**

| | |
|---|-----------------------------|
| 0 | Indicator |
| 3 | SPDT · Silver (Gold-Plated) |
| 4 | DPDT · Silver (Gold-Plated) |
| 5 | SPDT · W/E Alloy #1Crossbar |
| 6 | DPDT · W/E Alloy #1Crossbar |

● **BUTTON SHAPE · ILLUMINATION TYPE**

| | |
|-------|---|
| S0A | Square Full-Face |
| W0A | Rect. Full-Face |
| W1A | Rect. Split-Face (Vert.) |
| S2A | Square Split-Face (Horiz.) |
| W2A | Rect. Split-Face (Horiz.) |
| ※ S3A | Square Dual-Color |
| ※ W3A | Rect. Dual-Color |
| ※ S3B | Square Dual-Color (70,90and 14,16,18 combination and among 14,16,18 combination) |
| ※ W3B | Rect. Dual-Color (70,90and 14,16,18 combination and among 14,16,18 combination) |
| W5A | Rect. 3-Split-Face Rect. 4-Split-Face |

● **Supply Voltage to LED**

| | |
|---|--------------|
| 1 | 5V |
| 2 | 12V |
| 3 | 24V |
| 4 | Non-Resistor |

● **HOUSING COLOR**

| | |
|---|-------|
| K | Black |
| H | Gray |

※Please be noted that Dual-Color type has 2 different code nos. depend on LED color.