IDEC

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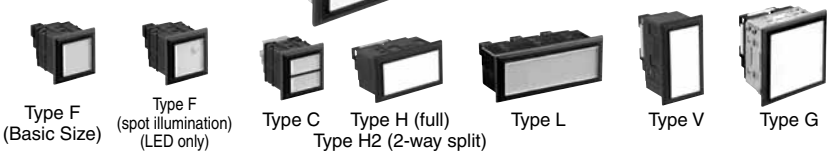
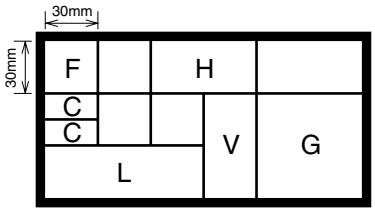
# SLC Series
# Combination Display Units

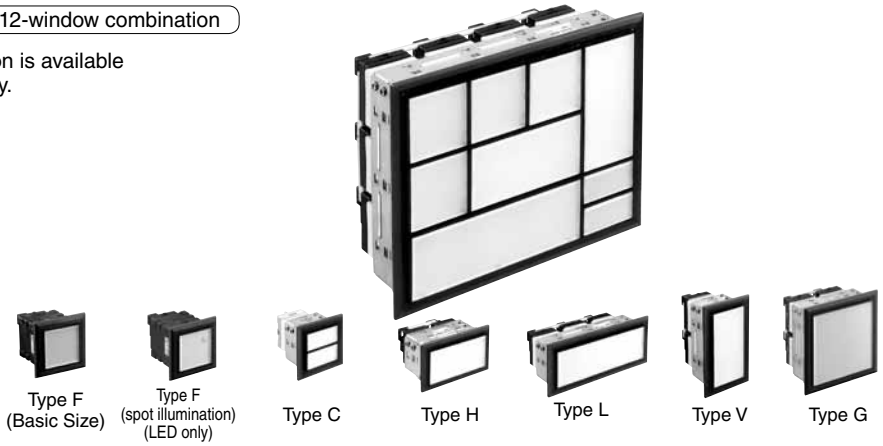
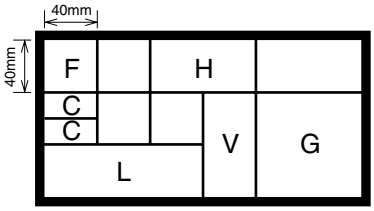
IDEC CORPORATION

(14/09/10)

# SLC30/40 Series Combination Display Lights Selection Guide

| Series | SLC Series Combination Display Lights | | | |
|---|---|---|---|---|
| Model | SLC30 | | | |
| Shape | An example of 15-window combination<br>Spot illumination is available with Type F only.<br>  <br>  <br>Type F (Basic Size) / Type F (spot illumination) (LED only) / Type C / Type H (full) / Type H2 (2-way split) / Type L / Type V / Type G | | | |
| Light Source | LED Unit | | LED lamp (LFTD) (SX6S/8 base) | Incandescent Lamp (LS) (BA9S/13 base, 1W) |
| No. of Units | Basic (Type F)<br>1 for 1 window | | Half Size (Type C)<br>1 for 1 window | Basic (Type F)<br>1 for 1 window |
| Illumination Face Size | F, H, L, V, G | | C only | F, H, L, V, G |
| |  | | | Type F (30 × 30mm)<br>Type H (30 × 60mm)<br>Type L (30 × 90mm)<br>Type V (60 × 30mm)<br>Type G (60 × 60mm)<br>Type C (15 × 30mm) (split-window) |
| Illumination Color | A (amber), G (green),<br>PW (pure white) ∗, R (red),<br>S (blue), W (white), Y (yellow),<br>Red (R)/G (green)<br>∗ PW is available with Type F only | | A (amber), G (green),<br>PW (pure white), R (red),<br>S (blue), W (white), Y (yellow) | A (amber), G (green), R (red),<br>S (blue), W (white), Y (yellow) |
| Rated Voltage | 6, 12, 24V AC/DC (full voltage)<br>100/110, 200/220V AC (transformer)<br>110V DC (DC-DC converter)<br>100/110V AC/DC (resistor) | | 6, 12, 24V AC/DC (full voltage) | 6, 12, 24V AC/DC (full voltage)<br>100/110, 200/220V AC (transformer)<br>100/110V AC/DC (resistor) |
| Lens Frame Color & Frame Cover Color | Black (Munsell N1.5 equivalent) | | | |
| Terminal Screw | M3.5<br>Incandescent resistor: M4 nut<br>2-color illumination, Type C, Check terminal: M3 | | | |
| No. of Windows — Full Voltage | 1 to 200 (Type F equivalent) | | 1 to 50 (Type F equivalent) | 1 to 200 (Type F equivalent) |
| No. of Windows — Transformer/Resistor | 1 to 75 (Type F equivalent) | | — | 1 to 50 (Type F equivalent) |
| No. of Windows — Flasher/DC-DC Converter | 1 to 75 (Type F equivalent) | | — | — |
| Degree of Protection | IP40 (IEC 60529) | | | |
| Remarks | • Jumper available<br>• 2-color alternate, check terminal, flasher (LED illuminated only) | | | |
| Approvals | UL, c-UL, DEMKO, CE (Note) | | — | |
| Page | 5 | | | |

Note: Except for DC-DC converter and resistor

| | SLC Series Combination Display Lights | | | |
|---|---|---|---|---|
| | SLC40 | | | |
| | An example of 12-window combination<br>Spot illumination is available with Type F only.<br>  <br>Type F (Basic Size) / Type F (spot illumination) (LED only) / Type C / Type H / Type L / Type V / Type G | | | |
| | LED Unit | LED lamp (LSTD) (BA9S/13 base) | Incandescent Lamp (LE) (E12/15 base, 2W) | Incandescent Lamp (LS) (BA9S/13 base, 1W) |
| | Basic (Type F)<br>1 for 1 window | Half Size (Type C)<br>1 for 1 window | Basic (Type F)<br>1 for 1 window | Basic (Type F)<br>2 for 1 window |
| | F, H, L, V, G | C only | F, H, L, V, G | F only |
| |  <br>Type F (40 × 40mm)<br>Type H (40 × 80mm)<br>Type L (40 × 120mm)<br>Type V (80 × 40mm)<br>Type G (80 × 80mm)<br>Type C (20 × 40mm) (split-window) | | | |
| | A (amber), G (green), PW (pure white) ∗, R (red), S (blue), W (white), Y (yellow), Red (R)/G (green)<br>∗ PW is available with Type F only | A (amber), G (green), PW (pure white), R (red), S (blue), W (white), Y (yellow) | A (amber), G (green), R (red), S (blue), W (white), Y (yellow) | |
| | 12, 24V AC/DC (full voltage)<br>100/110, 200/220V AC (transformer)<br>110V DC (DC-DC converter)<br>100/110V AC/DC (resistor) | 6, 12, 24V AC/DC (full voltage) | 6, 12, 18, 24V AC/DC (full voltage)<br>100/110, 200/220V AC (transformer)<br>100/110V AC/DC (resistor) | 6, 12, 18, 24V AC/DC (full voltage) |
| | Black (Munsell N1.5 equivalent) | | | |
| | M3.5<br>Incandescent resistor: M4 nut<br>2-color illumination, Type C, Check terminal: M3 | | | |
| | 1 to 126 (Type F equivalent) | 1 to 105 (Type F equivalent) | 1 to 105 (Type F equivalent) | 1 to 105 (Type F equivalent) |
| | 1 to 60 (Type F equivalent) | — | 1 to 50 (Type F equivalent) | — |
| | | | — | |
| | IP40 (IEC 60529) | | | |
| | • Extensive windows are easy to recognize at high places.<br>• Jumper available<br>• 2-color alternate, flasher (LED illuminated only), check terminal, dual-lamp (incandescent lamp only) | | | |
| | UL, c-UL, DEMKO, CE (Note) | — | | |
| | 15 | | | |

Note: Except DC-DC converter, resistor

# SLC30/40 Series Combination Display Lights Selection Guide

| Series | | Combination Display with Control Units |
|---|---|---|
| Model | | SLC30 Series (SLC30 + SLC-LW) |
| Shape | |  |
| No. of Windows | | • Combination display lights: 29 maximum<br>• Control units: 10 maximum (the bottom row only) ] Total 30 maximum |
| Combination Display Lights | | • SLC30 series LED one-color (window 30 × 30mm)<br>• Illumination color: A (amber), G (green), PW (pure white), R (red), S (blue), W (white), Y (yellow) |
| | Ratings | Rated voltage: 24V AC/DC<br>Operating voltage: 24V AC/DC ±10% |
| Control Unit | | • Pushbutton (square, round with square bezel, momentary)<br>• Illuminated pushbutton (square, round with square bezel, momentary)<br>• Selector switch (2, 3 positions, round with square bezel)<br>• Key selector switch (2, 3 positions, round with square bezel) |
| | Contact Ratings (Resistive Load) | • Rated insulation voltage: 250V AC/DC<br>• Rated current: 3A/gold, 5A/silver<br>• Gold contact: 125V AC/0.1A, 30V DC/0.1A<br>• Silver contact: 125V AC/3A, 250V AC/2A, 30V DC/2A, 125V DC/0.4A |
| Lens Frame Color & Frame Cover Color | | Black (Munsell N1.5 equivalent) |
| Degree of Protection | | IP40 (IEC 60529) |
| Page | | 40 |

## <IP65 Degree of Protection Pilot Lights>

The following control square flush pilot lights can be mounted collectively to design a panel similar to combination display lights.

SLC30 series equivalent
HW2P-1

| | |
|---|---|
| Flange size | □30 |
| Mounting hole | ø22 |
| Degree of protection | IP65 (IEC 60529) |

**Collective Mounting Example (HN2P)**

Front

Back

# SLC30 Series Combination Display Lights

## Highly bright "Super LED" unit improves visibility and safety.

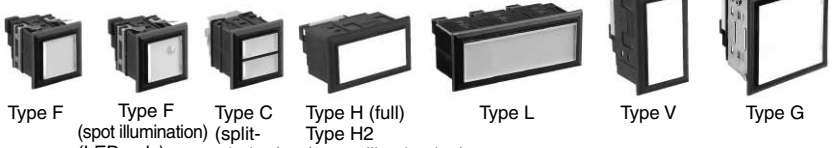
- Eight types of illumination faces to choose from. Compact combination display lights.
- Super bright Super LED.
- The fingersafe spring-up terminals reduce wiring time and prevent electrical shocks.
- The insulated jumper, when used on fingersafe spring-up terminals, eliminates the need of terminal cover.
- Legends can be engraved on the attached marking plate. One or two thin marking sheets (not attached) can also be installed (Type F only).
- Spot illumination available for easy recognition in bright environment (Type F only)
- UL and c-UL recognized, EN compliant.

| Applicable Standards | Mark | File No. or Organization |
|---|---|---|
| UL508<br>CSA C22.2 No.14 | c UL us | UL/c-UL Recognized<br>File No. E68961 |
| EN60947-1<br>EN60947-5-1<br>(Note) | TÜV | TÜV SÜD |
| | CE | EU Low Voltage Directive |

Note: Except for DC-DC converter and resistor types.

**An Example of 15-window size**

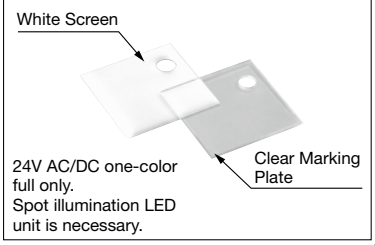
Spot illumination is available with type F only.



Type F | Type F (spot illumination) (LED only) | Type C (split-window) | Type H (full) Type H2 (2-way illumination) | Type L | Type V | Type G

A wide variety of illumination face sizes
Type F: 30H × 30W mm (Basic size)
Type F spot illumination: 30H × 30W mm
Type C: 15H × 30W mm × 2 (Split-window)
Type H: 30H × 60W mm
Type H2: 30H × 60W (2-way split)
Type L: 30H × 90W mm
Type V: 60H × 30W mm
Type G: 60H × 60W mm
Combined construction is available.

Type F Window Spot Illumination Kit

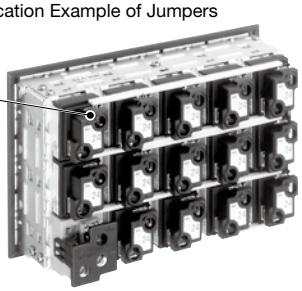


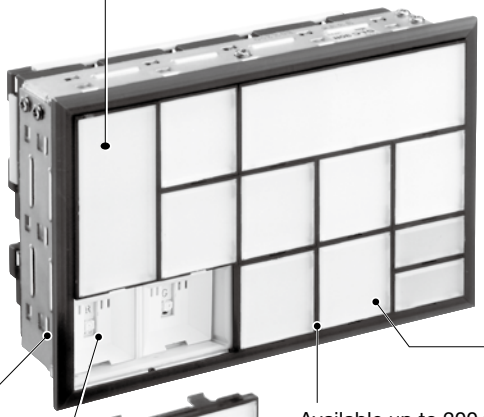

24V AC/DC one-color full only.
Spot illumination LED unit is necessary.

The fingersafe, spring-up terminals reduce wiring time.

The integrated terminal cover and insulated jumpers prevent electic shocks.

Application Example of Jumpers





Marking films can be used for Type F only

Frame (metal)
The frame cover and frame are molded in one piece for one-, two-, and three-window types.

Available up to 200 windows
LED: 10 rows by 26 columns maximum
Incandescent: 10 rows by 20 columns maximum
(Type F – LED illumination: 6, 12, 24V AC/DC
Incandescent illumination: 6, 12, 18, 24V AC/DC
See page 36 for details.

Choice of LED or incandescent illumination

LED

LED Unit

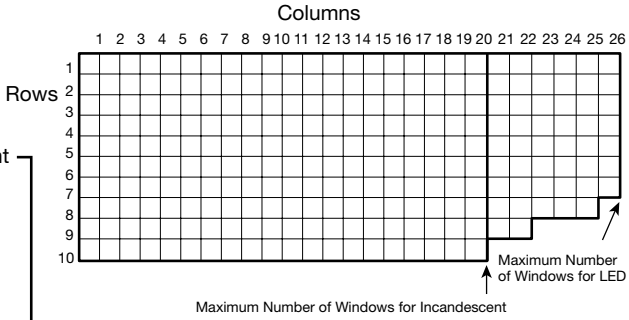
Spot Illumination LED Unit

LED Lamp (SX6S/8 base) For Type C only

Incandescent

BA9S/13 Base Lamp

Columns




Maximum Number of Windows for Incandescent

- For LED illuminated 110/220V AC type, up to 75 windows (Type F equivalent) can be mounted.
- For incandescent illuminated 110/220V AC type and for Type C, up to 50 windows (Type F equivalent) can be mounted.
- Lighting limitations should be considered in any application. For details see page 32.

## Configuration

**LED Illuminated**

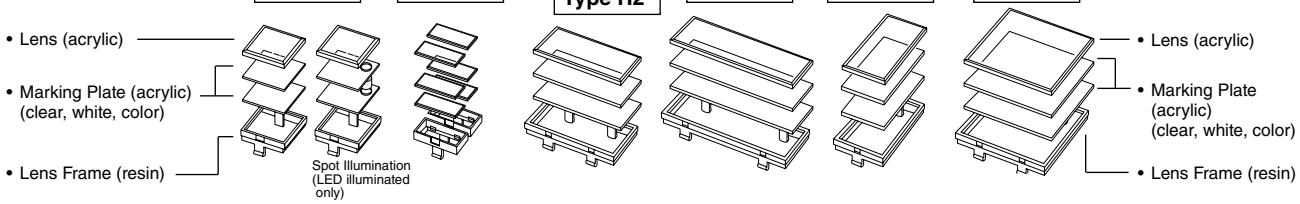
- See page 34 for the combination of illumination windows.

Illumination Face

**Incandescent Illuminated**

- See page 34 for details about lens combination.

**Type F** **Type C** **Type H Type H2** **Type L** **Type V** **Type G**




### Type F, H, H2, L, V, G

| Display Color Type | Light Source | Marking Plate/ Color Screen (one each) (Note 3) | Lens | ON Color (Color Code) | | | OFF Color |
|---|---|---|---|---|---|---|---|
| Standard (using clear lens) | LED Unit | clear / white | Clear Lens | amber (A), blue (S), green (G), pure white (PW) (Note 1), red (R), white (W), yellow (Y), red/green 2-color alternate (RG) (Note 2) | | | White |
| | Incandescent Lamp | color / white | | amber (A), blue (S), green (G), red (R), yellow (Y), | | | |
| | | clear / white | | white (W) | | | |
| Color Screen | LED Unit | color / white | | amber (TA), blue (TS), green (TG), pure white (TPW), red (TR), white (TW), yellow (TY) | | | Same as ON color |
| Gray Lens | LED Unit | black (Note 4) / clear | Gray Lens | Lens: gray | Legend Color | amber (SA), blue (SS), green (SG), pure white (SPW) (Note 1), red (SR), white (SW), yellow (SY) | Gray |
| | Incandescent Lamp | | | | | white (SW) | |

Note 1: Pure white (PW) is available with Type F only.
Note 2: Spot illumination is not available with red/green 2-color alternate (RG).
Note 3: The order to insert clear marking plate, color screen, and white screen can be interchanged if necessary.
Marking plate/color screen are interchangeable. Engrave markings on the flat surface of the plate or screen next to the lens.
Note 4: Black marking plate has black coating. Engrave a reverse legend on the black-coated surface.

### Type C (split-window)

| Display Color Type | Light Source | Marking Plate/ Color Screens (one each)(Note 1) | Lens | ON Color (Color Code) | | | OFF Color |
|---|---|---|---|---|---|---|---|
| Standard (using clear lens) | LED Lamp | color / white | Clear Lens | amber (A), blue (S), green (G), red (R), yellow (Y), | | | White |
| | | clear / white | | pure white (PW), white (W) | | | |
| Gray Lens | | black (Note 2) / color | Gray Lens | Lens: gray | Legend Color | amber (SA), blue (SS), green (SG), red (SR), yellow (SY), | Gray |
| | | black (Note 2) / clear | | | | pure white (SPW), white (SW) | |

Note 1: The order to insert clear marking plate, color screen, and white screen can be interchanged if necessary.
Marking plate/color screen are interchangeable. Engrave markings on the flat surface of the plate or screen next to the lens.
Note 2: Black marking plate has black coating. Engrave a reverse legend on the black-coated surface.

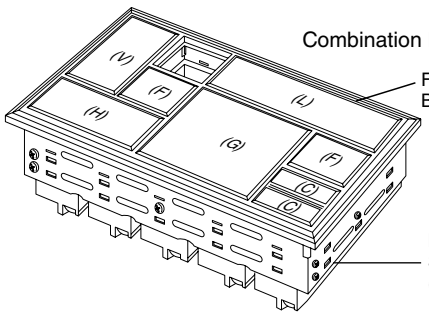
• LED Unit

• LED Unit for Spot Illumination

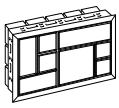
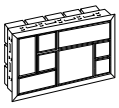
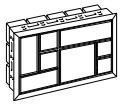
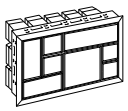
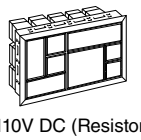
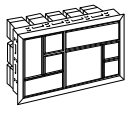
• LED Lamp (for Type C only, SX6S/8 base) (2 lamps for 1 window equivalent to Type F)

• Incandescent Lamp (BA9S/13 base)

Combination Example of 15 Windows

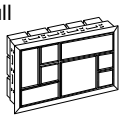



**LED Illuminated**

| One-color full | One-color full (w/check terminal) | One-color full (Flasher) | Two-color Alternate |
|---|---|---|---|
|  |  |  |  |
| 6, 12, 24V AC/DC | 24V DC (Except Type C) | 24V DC (Type F only) | 24V AC/DC (Except Type C) |
| One-color full | One-color full | One-color full | |
|  |  |  | |
| 100/110V, 200/220V AC (Except Type C) | 100/110V DC (Resistor Type) (Except Type C) | 110V DC (DC-DC Converter) (Except Type C) | |

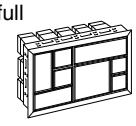
**Incandescent Illuminated**

One-color full



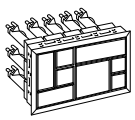
6, 12, 18, 24V AC/DC (Except Type C)

One-color full



100/110, 200/220V AC (Except Type C)

One-color full



100/110V AC/DC (Resistor) (Except Type C)

- 2-way split is also available in Type H2.
- The illustration above shows combination examples of windows. One-window type is available in Type F (see page 10 and 11).

# Specifications

## LED Illuminated

| Light Source | | LED Unit | | | | | | | | LED Lamp | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Input | | Full Voltage | | | | | Transformer | DC-DC Converter | Resistor | Full Voltage | | |
| Illumination | | One-color<br>One-color w/check terminal (Note 1) | | | Two-color Alternate | Flasher | One-color | | | One-color × 2<br>Split-window (Type C) | | |
| Fingersafe Spring-up Terminal | | Provided (except for check terminal) | | | (Note 2) | Provided | Provided | | | —<br>(Note 2) | | |
| Rated Voltage (AC: 50/60Hz) | | 6V AC/DC ±5% | 12V AC/DC ±10% | 24V AC/DC ±10% | 24V AC/DC ±10% | 24V DC ±10% | 100/110V AC ±10%<br>200/220V AC ±10% | 110V DC (90 to 140V DC) | 100/110V AC/DC ±10% | 6V AC/DC ±10% | 12V AC/DC ±10% | 24V AC/DC ±10% |
| Maximum Current Draw (VA) | | Same as internal LED Unit | | | | 0.5W + internal LED | 1.7 | 1.4 | 1.5 | Same as internal LED | | |
| Illumination Color | | Amber, green, red, white, yellow | | Amber, blue, green, pure white, red, white, yellow | Red/green Alternate | Amber, blue, green, pure white, red, white, yellow | | | | Amber, blue, green, pure white, red, white, yellow | | |
| Standards | | UL, c-UL listed, EN compliant | | | | | | — | | — | | |
| Built-in LED Unit/Lamp | Rated Voltage | 6V AC/DC | 12V AC/DC | 24V AC/DC | 24V DC | 24V AC/DC | | | | 6V AC/DC | 12V AC/DC | 24V AC/DC |
| | Rated Current: Amber, red | 12 mA | 12 mA | 12 mA (Note 6) | Red: 12 mA<br>Green: 11 mA | 12 mA (Note 6) | | | | 7 mA (Note 7) | 8 mA (Note 7) | 8 mA (Note 7) |
| | Rated Current: White | 21 mA | 12 mA | 12 mA (Note 6) | | 12 mA (Note 6) | | | | | | |
| | Rated Current: Blue, green, pure white, yellow | 12 mA | 12 mA | 11 mA (Note 6) | | 11 mA (Note 6) | | | | | | |
| | Illumination Color (code) | Amber (A), blue (S), green (G), red (R), pure white (PW), white (W), yellow (Y) (Note 5) | | | Red (R)/ green (G) | Amber (A), blue (S), green (G), pure white (PW), red (R), white (W), yellow (Y) | | | | Amber (A), blue (S), green (G), pure white (PW) (Note 1), red (R), white (W), yellow (Y) | | |
| | Base | Plug-in unit type | | | | | | | | SX6S/8 | | |
| | LED Life (reference) | Approx. 50,000 hours (when used on complete DC, luminance reduces to 50% of the initial intensity) | | | | | | | | | | |
| | Part No. | SLDN-36M-∗ | SLDN-31M-∗ | SLDN-32M-∗ | SLDN-32MW-RG | SLDN-32M-∗ | | | | LFTD-6∗ | LFTD-1∗ | LFTD-2∗ |
| | No. of Units | 1 LED unit per window of basic Type F | | | | | | | | 1 LED lamp per split-window type | | |
| Flashing Period (Note 3) | | — | | | | 0.5 ±0.2 sec | — | | | — | | |
| Insulation Resistance | | 100 MΩ between live and dead parts (500V DC megger) | | | | | | | | | | |
| Dielectric Strength | | 2000V AC (1 minute) between live and dead parts | | | | 2500V AC (1 minute) between live and dead parts | | | 2000V AC (1 minute) | 2000V AC (1 minute) between live and dead parts | | |
| Operating Temperature (Note 4) | | –20 to +40°C | | | | –10 to +40°C | –20 to +40°C | –10 to +40°C | –20 to +40°C | –20 to +40°C | | |
| Storage Temperature | | –25 to +60°C (no freezing) | | | | | | | | | | |
| Operating Humidity | | 45 to 85% RH (no condensation) | | | | | | | | | | |

Specify a color code in place of ∗.

Note 1: The rated voltage for w/check terminal type is 24V DC only.
Note 2: Terminal cover is available (see page 26).
Note 3: Duty 1:1. Multiple flasher type units do not synchronize with each other. Use Type F only.
Note 4: No freezing
Note 5: Blue and pure white LED is 24V AC/DC only.
Note 6: Spot illumination uses the spot illumination LED unit (SLCN-32ST-*). See page 29 for rated current.
Note 7: Rated current for DC. See page 29 for AC.

## Incandescent Illuminated

| Illumination | | One-color Full Voltage | | | | One-color Transformer | One-color Resistor |
|---|---|---|---|---|---|---|---|
| Rated Voltage (AC: 50/60Hz) | | 6V AC/DC | 12V AC/DC | 18V AC/DC | 24V AC/DC | 100/110, 200/220V AC 50/60 Hz | 100/110V AC/DC |
| Illumination Color | | Amber, blue, green, red, white, yellow | | | | | |
| Built-in Lamp | Rated Voltage | 6.3V·1W lamp | 18V·1W lamp | 24V·1W lamp | 30V·1W lamp | 6.3V·1W lamp | 18V·1W lamp |
| | Operating Voltage | 5 to 6V | 12 to 18V | 18 to 24V | 24 to 30V | 5 to 6V | 12 to 18V |
| | Base | BA9S/13 | | | | | |
| | Lamp Life | Approx. 1,000 hours minimum (mean value when used on the rated voltage) | | | | | |
| | Part No. | LS-6 | LS-8 | LS-2 | LS-3 | LS-6 | LS-8 |
| | No. of Lamps | 1 lamp per window of basic Type F | | | | | |
| Insulation Voltage | | 100 MΩ between live and dead parts (500V DC megger) | | | | | |
| Dielectric Strength | | 2000V AC (1 minute) between live and dead parts | | | | 2500V AC (1 minute) between live and dead parts | 2000V AC (1 minute) between live and dead parts |
| Operating Temperature | | –20 to +40°C (no freezing) | | | | | |
| Storage Temperature | | –25 to +60°C (no freezing) | | | | | |
| Operating Humidity | | 45 to 85% RH (no condensation) | | | | | |

Terminal cover is available for all incandescent illuminated types (see page 26), except for the resistor type.

## LED/Incandescent Illuminated

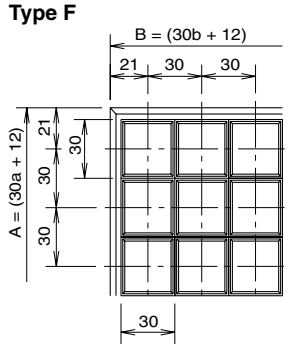
| Illumination Face | | Type F (Note 1, 2) (Basic) | Type C (Split-window) | Type H / Type H2 (Note 3) | Type L | Type V | Type G |
|---|---|---|---|---|---|---|---|
| Illumination Unit Size (mm) | Window (H × W) | 30 × 30 | 15 × 30 | 30 × 60 | 30 × 90 | 60 × 30 | 60 × 60 |
| | Illumination Face (H × W) | 28 × 28 | 13 × 28 | 28 × 58 | 28 × 88 | 58 × 28 | 58 × 58 |
| | White color screen, clear marking plate, color screen (H × W × t) | 27 × 27 × 1.0 | 12 × 27 × 1.0 | 27 × 57 × 1.0 (Note 2) | 27 × 87 × 1.0 | 57 × 27 × 1.0 | 57 × 57 × 1.0 |
| | Marking Film | Applicable | — | — | — | — | — |
| | Engraving Area (white, transparent, color plates) | 25 × 25 | 10 × 25 | 25 × 55 | 25 × 85 | 55 × 25 | 55 × 55 |
| Material of Marking Plate & Color Screen | | Acrylic | | | | | |
| Lens Frame Color & Frame Cover Color | | Black (Munsell N1.5 equivalent) | | | | | |
| Connection Wire | | Solid wire: ø1.6 × 2, Stranded 2 mm² × 2 | | | | | |
| Terminal Screw | | M3.5 screw, Incandescent resistor: M4 nut, Check terminal: M3 | | | | | |
| Degree of Protection | | IP40 (IEC 60529) | | | | | |
| Pollution Degree | | 3 | | | | | |

Note 1: Flasher type, pure white illumination, and spot illumination types are available in Type F only.
Note 2: Spot illumination uses designated clear plate and color screen.
Note 3: 2-way split type (Type H2) can use 2-way split color screen only.

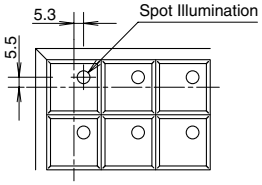
## Dimensions

**[Front View]** a: No. of Rows b: No. of Columns

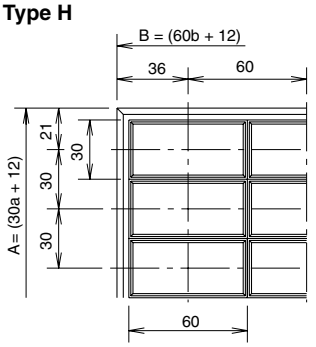
**Type F**



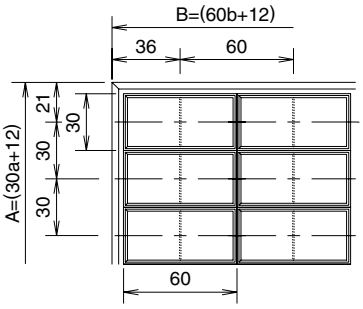

**Type F (Spot Illumination)**



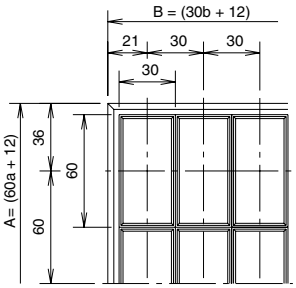

**Type H**



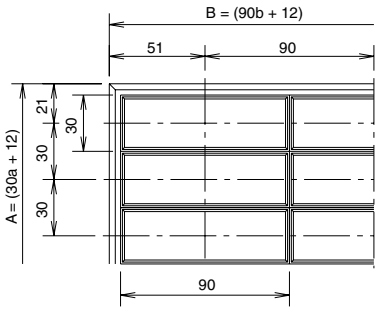

**Type H2 (2-way split)**



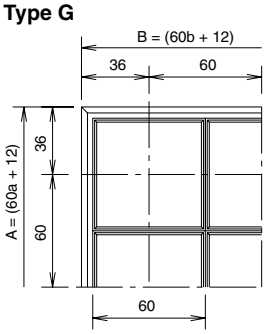

**Type V**



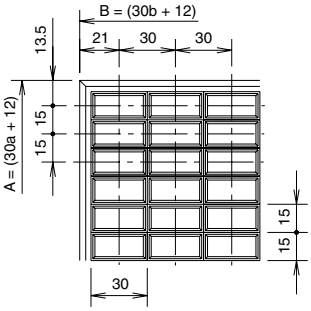

**Type L**




**Type G**




**Type C (split-window)**




All dimensions in mm.

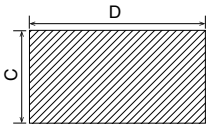
### Type F Dimensions & No. of Windows (Type C, H, L, V, and G can be converted into Type F.)

| Rows | Columns | b | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Dimensions** | **B** | **42** | **72** | **102** | **132** | **162** | **192** | **222** | **252** | **282** | **312** | **342** | **372** | **402** | **432** | **462** | **492** | **522** | **552** | **582** | **612** | **642** | **672** | **702** | **732** | **762** | **792** |
| | Panel Cut-out (D) | | (35) | (65) | (95) | (125) | (155) | (185) | (215) | (245) | (275) | (305) | (335) | (365) | (395) | (425) | (455) | (485) | (515) | (545) | (575) | (605) | (635) | (665) | (695) | (725) | (755) | (785) |
| a | **A** | (C) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | **42** | (35) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 02 | **72** | (65) | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 |
| 03 | **102** | (95) | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 42 | 45 | 48 | 51 | 54 | 57 | 60 | 63 | 66 | 69 | 72 | 75 | 78 |
| 04 | **132** | (125) | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 | 56 | 60 | 64 | 68 | 72 | 76 | 80 | 84 | 88 | 92 | 96 | 100 | 104 |
| 05 | **162** | (155) | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 |
| 06 | **192** | (185) | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 90 | 96 | 102 | 108 | 114 | 120 | 126 | 132 | 138 | 144 | 150 | 156 |
| 07 | **222** | (215) | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 | 91 | 98 | 105 | 112 | 119 | 126 | 133 | 140 | 147 | 154 | 161 | 168 | 175 | 182 |
| 08 | **252** | (245) | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 | 104 | 112 | 120 | 128 | 136 | 144 | 152 | 160 | 168 | 176 | 184 | 192 | 200 | — |
| 09 | **282** | (275) | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 | 117 | 126 | 135 | 144 | 153 | 162 | 171 | 180 | 189 | 198 | — | — | — | — |
| 10 | **312** | (305) | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | — | — | — | — | — | — |

**How to Read the Table**

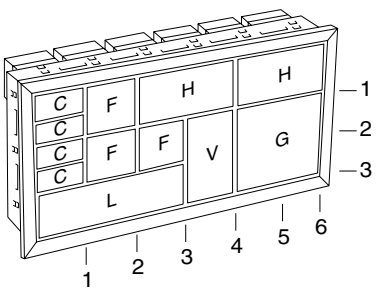
1. The number of windows equals rows multiplied by columns. For example, for 5 rows by 7 columns, the number of windows is 35, external dimensions are 162mm high by 22mm wide, and panel cut-out is 155mm high by 215mm wide.
2. External dimensions are represented by A for rows and B for columns in boldface.
3. Panel cut-out dimensions are shown in ( ), for height (C) and width (D). Panel cut-out tolerance is +1.0 to –0 mm (for one window: +0.6 to –0.4mm).

**Panel Cut-out (SLC30)**




Determine the panel thickness in consideration of the weight of display lights and wires (see page 26).

[Example]




4. Total number of windows, dimensions, panel cut-out

① For Type C, H, L, V, and G, convert the numbers of rows and columns into Type F (basic size) equivalents.

- Type C — Type F equivalent: 2 split-windows consist of one window.

- Type H — Type F equivalent: 2 windows
  Height: 1 row
  Width: 2 columns

- Type V — Type F equivalent: 2 windows.
  Height: 2 rows
  Width: 1 column

- Type L — Type F equivalent: 3 windows
  Height: 1 row
  Width: 3 columns

- Type G — Type F equivalent: 4 windows
  Height: 2 rows
  Width: 2 columns



② The combination example at left consists of 3 rows by 6 columns.

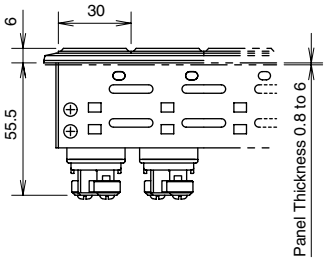
③ The above table shows: No. of windows: 18
Dimensions: 102H × 192W mm
Panel cut-out: 95H × 185W mm

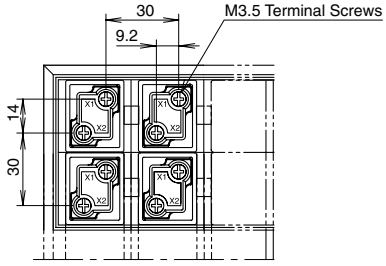
## Dimensions

### LED Illuminated [Side & Rear Views]

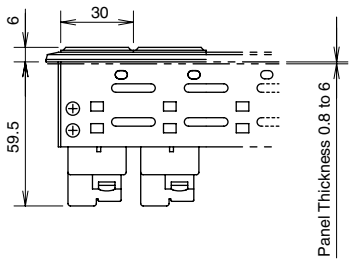
**Type F (Type H, L, V, and G are the same in side and rear views as Type F.)**

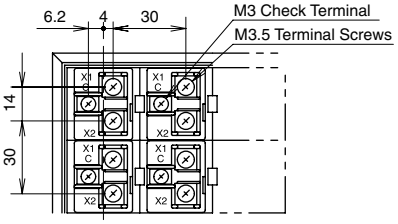
- Full Voltage
- 6, 12, 24V AC/DC
- One-color full
- Spot Illumination 24V AC/DC



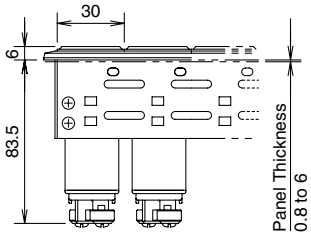

- Full Voltage
- One-color full w/Check Terminal 24V DC
- Two-color alternate 24V AC/DC
- For applicable terminal cover, see page 26.

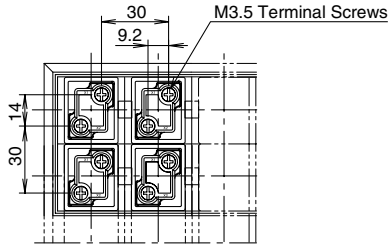



- w/Check Terminal
  Terminal X1 is a positive pole; Terminal X2 and C (check terminal) are negative poles.
- Two-color Alternate
  Red (R) illumination: X1 positive, C negative
  Green (G) illumination: X1 positive, X2 negative

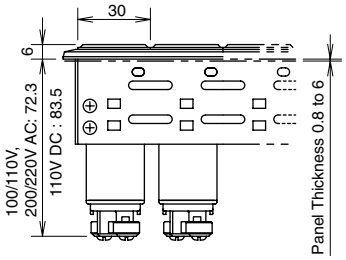
- Full Voltage
- One-color full
- Flasher Type (Type F only)
- For applicable terminal cover, see page 26.

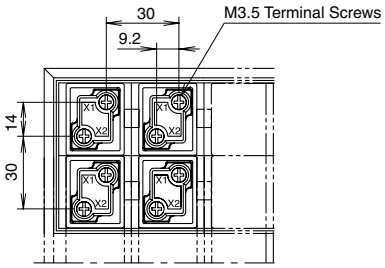



- Terminals X1 and X2 are positive and negative poles, respectively.

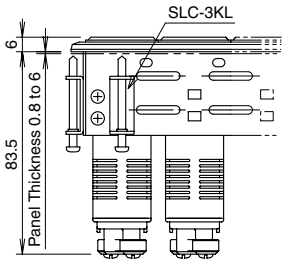
- Transformer
- One-color full
- 100/110, 200/220V AC/DC
- 110VDC (DC-DC Converter)

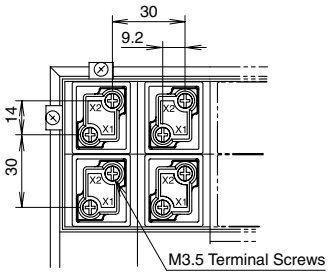



- On LED illuminated DC-DC Converter type units, Terminals X1 and X2 are positive and negative poles, respectively.

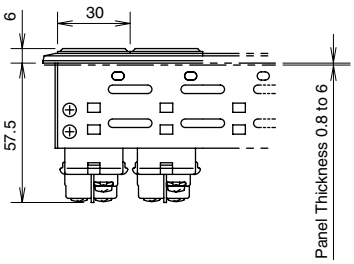
- Resistor
- One-color full
- 100/110V AC/DC

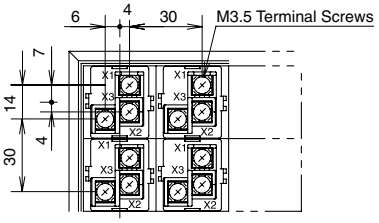



### Type C (split-window)

- Full Voltage
- 6, 12, 24V AC/DC
- One-color full, 2 × LED lamps, Split-window type



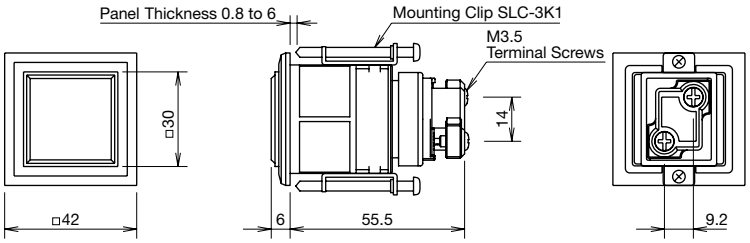

- Terminal X1 is COM terminal.
- For applicable terminal cover, see page 26.

All dimensions in mm.

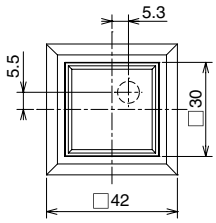
## Dimensions

### LED Illuminated [One-window, Type F only]

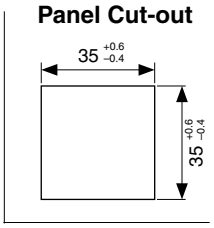
**Full Voltage 6, 12, 24V AC/DC, One-color Full**



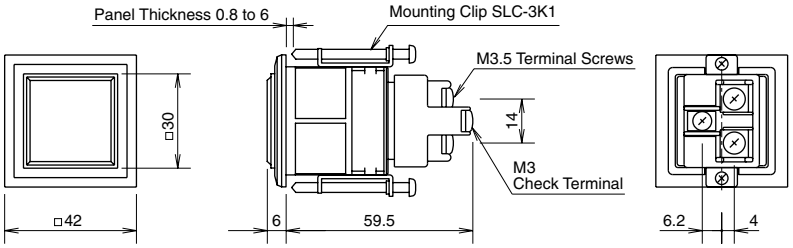

**Spot Illumination**




**Panel Cut-out**

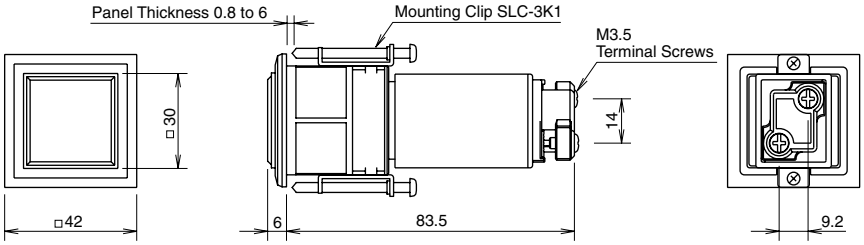



**Full Voltage w/Check Terminal 24V DC / Two-color Alternate 24V AC/DC**



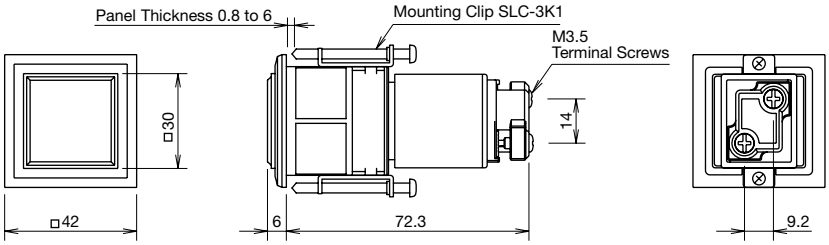

- w/Check Terminal Type
  Terminal X1 is a positive pole; Terminals X2 and C (check terminal) are negative poles.
- Two-color Alternate Type
  Red (R) illumination: X1 positive, C negative
  Green (G) illumination: X1 positive, X2 negative
- See page 26 for terminal covers.

**Flasher 24V DC**

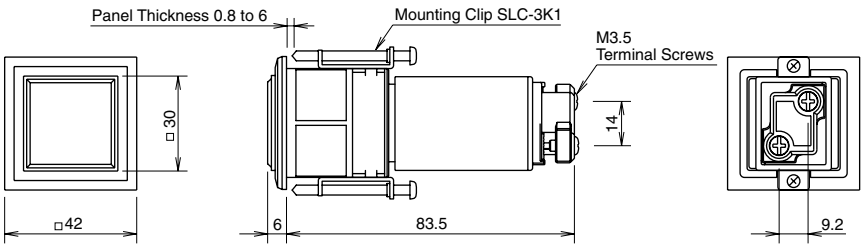



- On LED illuminated flasher type, Terminals X1 and X2 are positive and negative poles, respectively.
- See page 26 for terminal covers.

**Transformer 100/110, 200/220V AC**

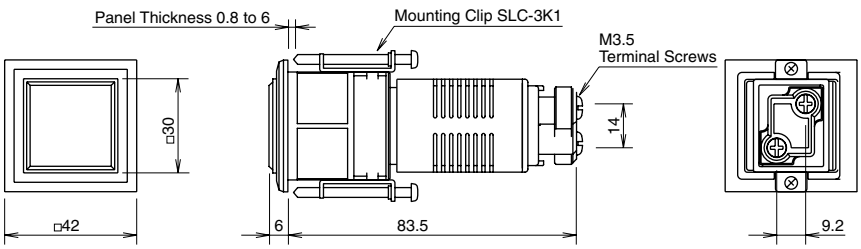



**DC-DC Converter 110V DC**




- On LED illuminated DC-DC converter type, Terminals X1 and X2 are positive and negative poles, respectively.

**Resistor 100/110V AC/DC**



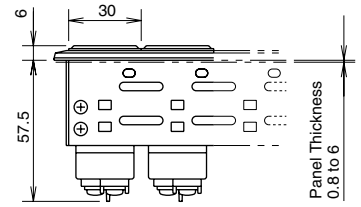

(Resistance)
LED illuminated type: 7.2 kΩ, 4W

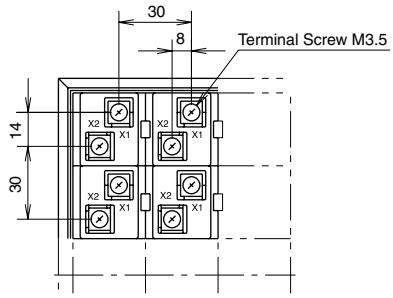
All dimensions in mm.

## Dimensions

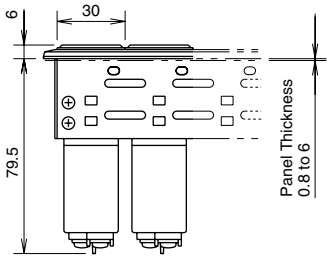
### Incandescent Illuminated [Side & Rear Views]

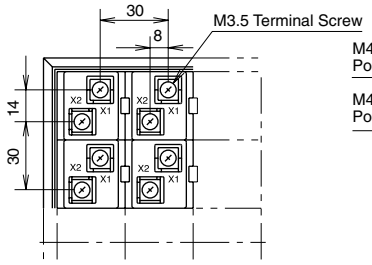
- Full Voltage
- 6, 12, 18, 24V AC/DC
- One-color full



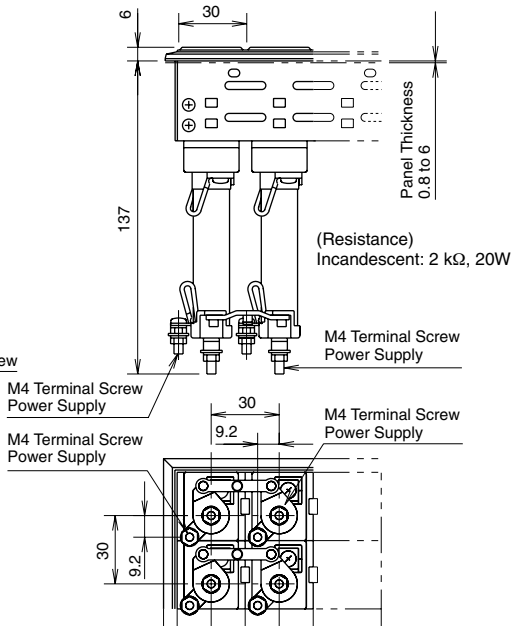




- Transformer
- 100/110, 200/220V AC



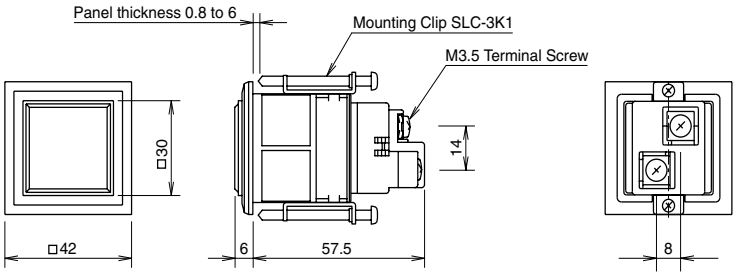

- Resistor
- 110V AC/DC



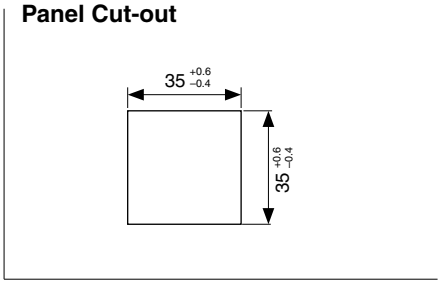

- Terminal cover is available. For dimensions, see page 26.

### Incandescent Illuminated [One-window, Type F only]

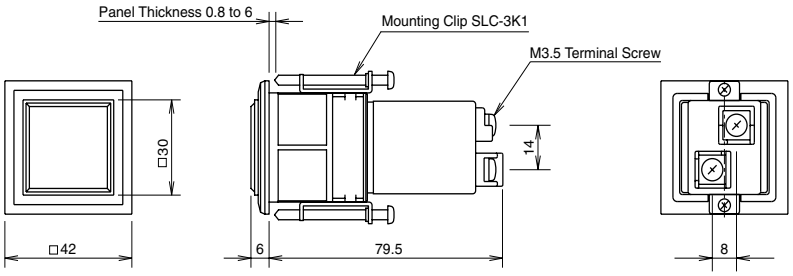
#### Full Voltage 6, 12, 18, 24V AC/DC, One-color Full



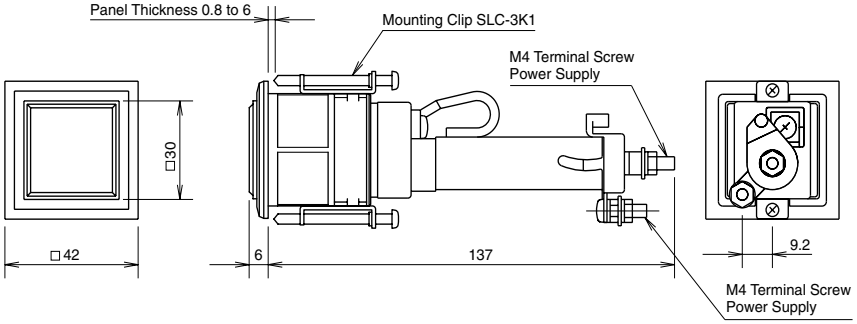

**Panel Cut-out**




#### Transformer 100/110, 200/220V AC




#### Resistor 100/110V AC/DC

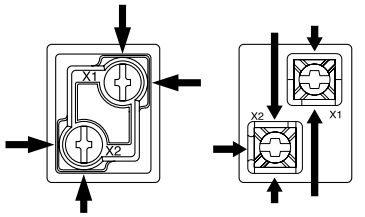



(Resistance)
Incandescent: 2 kΩ, 20W

All dimensions in mm.

## Terminal Connection (LED Illuminated)

• For one-color full LED Illuminated with check terminal, DC-DC converter, and resistor, Terminals X1 and X2 are positive and negative poles, respectively.

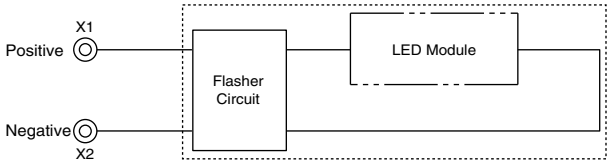



Fingersafe, Spring-up Terminal

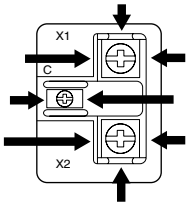
Other terminals

Arrows indicate access directions for wiring terminals.

(Flasher Type Connection Diagram)

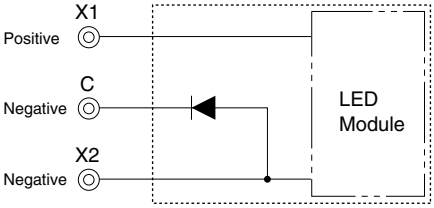



• For w/check terminal and two-color alternate units, terminal X1 is a positive pole; Terminals X2 and C (check terminal) are negative poles.



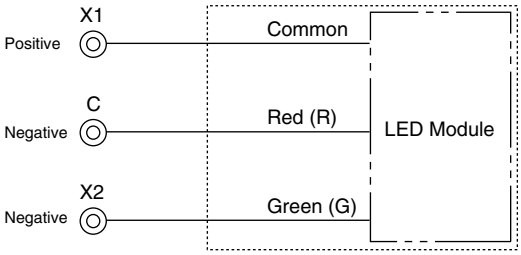

Arrows indicate access directions for wiring terminals.

(w/Check Terminal Type Connection Diagram)

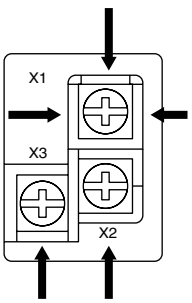



• Connection for two-color alternate is as follows.
Red (R) — Terminal X1: positive, Terminal C: negative
Green (G) — Terminal X1: positive, Terminal X2: negative

(Two-color alternate Type Connection Diagram)

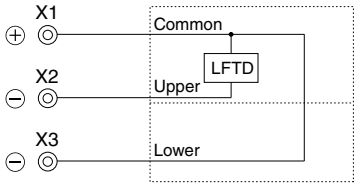



• For the LED illuminated split-window (Type C), Terminal X1 (+) is a common terminal. Terminal X2 is a negative pole of upper illumination and Terminal X3 is a negative pole of lower illumination.




Arrows indicate access directions for wiring terminals.

(Type C Spolit-window Connection Diagram)




## Terminal Connection Using Jumpers

• For terminal connection of types F, H, L, V, and G (except Type C), jumpers can be used as shown below.

**SLC30 Series**

| | | Terminal X1 | Terminal X2 | Terminal C |
|---|---|---|---|---|
| LED Illuminated (Note 2) | Fingersafe, Spring-up Terminal (Note 1) | SLCN-JP34<br>SLCN-JP35 | SLCN-JP34<br>SLCN-JP35 | — |
| | Others | SLC-JP30 | SLC-JP33 | SLC-JP32 |
| Incandescent Illuminated | | SLC-JP30 | SLC-JP33 | SLC-JP32 |

Note 1: fingersafe, spring-up terminals are used in one-color full illuminated type (6, 12, 24V AC/DC, 100/110, 200/220V AC, 110V DC).
Note 2: No jumper is used on resistor type.

• For Type C, jumpers can be used on Terminal X1 only as shown below.

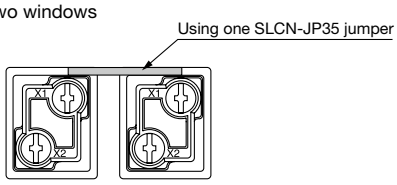
| Direction | • When using Type C only<br>• When using Type C and Two-color alternate |
|---|---|
| Vertical | SLC-JP33 |
| Horizontal | SLC-JP30 |

Note: Jumpers cannot be used when using both Type C and fingersafe spring-up terminals.

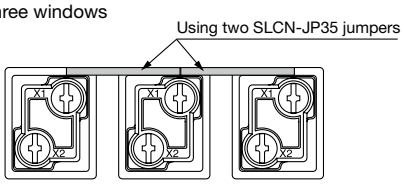
## [Examples of Using Jumpers]

LED Illuminated (Fingersafe Spring-up Terminal)

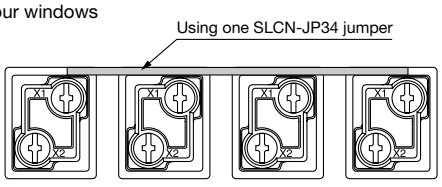
When connecting two windows

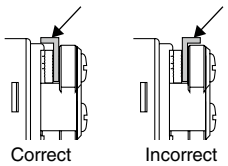



When connecting three windows




When connecting four windows




Jumpers (SLCN-JP34/35) have an orientation. Ensure that jumpers are installed correctly.

## Part No. Development

SLC30N – 0 4 0 5 – DD 2 F B –

Example: G (5), R (5), W (10)
Specify the color code and the number of windows.

30 Series

When ordering Type H, L, V, G, or C units, enter the equivalents of Type F.

Frame Color
Black: B

| Equivalent of Basic Size Windows | |
|---|---|
| Rows | Columns |
| 01 | 01 |
| 02 | 02 |
| 03 | 03 |
| 04 | 04 |
| 05 | 05 |
| 06 | 06 |
| 07 | 07 |
| 08 | 08 |
| 09 | 09 |
| 10 | 10 |
| | 11 |
| | 12 |
| | 13 |
| | 14 |
| | 15 |
| | 16 |
| | 17 |
| | 18 |
| | 19 |
| | 20 |
| | 21 |
| | 22 |
| | 23 |
| | 24 |
| | 25 |
| | 26 |

| Unit | | | | (Code) | Operating Voltage (Built-in Lamp) | (Code) |
|---|---|---|---|---|---|---|
| LED Illuminated | LED Unit | Full Voltage (A, G, R, W, Y) | | DD | 6V AC/DC ±5% | 6 |
| | | | | | 12V AC/DC ±10% | 1 |
| | | | | | 24V AC/DC ±10% | 2 |
| | | Full Voltage (PW, S) | | DDA | 24V AC/DC ±10% | 2 |
| | | Full Voltage / Type H2 only (Combination of S and A, G, R, W, Y) | | DDC | 24V AC/DC ±10% | 2 |
| | | Full Voltage w/Check Terminal (A, G, R, W, Y) | | DHM | 24V DC ±10% | 2 |
| | | Full Voltage Two-color Alternate (R/G) | | DW | 24V AC/DC ±10% | 2 |
| | | Full Voltage Flasher (A, G, R, W, Y) (Type F only) | | DF | 24V DC ±10% | 2 |
| | | Transformer (A, G, R, W, Y) | | TD | 100/110V AC ±10% | 1 |
| | | | | | 200/220V AC ±10% | 2 |
| | | Transformer (PW, S) | | TDA | 100/110V AC ±10% | 1 |
| | | | | | 200/220V AC ±10% | 2 |
| | | Transformer / Type H2 only (Combination of S and A, G, R, W, Y) | | TDC | 100/110V AC ±10% | 1 |
| | | | | | 200/220V AC ±10% | 2 |
| | | DC-DC Converter (A, G, R, W, Y) | | CD | 110V DC (90 to 140V DC) | 1 |
| | | Resistor (A, G, R, W, Y) | | RN | 100/110V AC/DC ±10% | 1 |
| | LED Lamp | One-color Full × 2 split window (Type C) (A, G, R, W, Y) | SX6S/8 Base | DP | 6V AC/DC ±10% (LFTD-6*) | 6 |
| | | | | | 12V AC/DC ±10% (LFTD-1*) | 1 |
| | | | | | 24V AC/DC ±10% (LFTD-2*) | 2 |
| Incandescent Illuminated | | Full Voltage | BA9S/13 Base | DS | 5 to 6V AC/DC (LS-6) | 6 |
| | | | | | 12 to 18V AC/DC (LS-8) | 8 |
| | | | | | 18 to 24V AC/DC (LS-2) (Note 1) | 2 |
| | | | | | 24 to 30V AC/DC (LS-3) | 3 |
| | | Transformer | | TS | 100/110V AC ±10% (LS-6) | 1 |
| | | | | | 200/220V AC ±10% (LS-6) | 2 |
| | | Resistor | | RS | 100/110V AC/DC ±10% (LS-8) | 1 |

The following color/voltage selections are also available.

| Unit | | | | (Code) | Operating Voltage (Built-in Lamp) | (Code) |
|---|---|---|---|---|---|---|
| LED Illuminated | LED Unit | Full Voltage w/Check Terminal (PW, S) | | DHMA | 24V DC ±10% | 2 |
| | | Full Voltage Flasher (PW, S) | | DFA | 24V AC/DC ±10% | 2 |
| | | Transformer (A, G, R, W, Y) | | TD | 115/120V AC ±10% | 12 |
| | | | | | 230/240V AC ±10% | 24 |
| | | Transformer (PW, S) | | TDA | 115/120V AC ±10% | 12 |
| | | | | | 230/240V AC ±10% | 24 |
| | | Transformer / Type H2 only (Combination of S and A, G, R, W, Y) | | TDC | 115/120V AC ±10% | 12 |
| | | | | | 230/240V AC ±10% | 24 |
| | | DC-DC Converter (PW, S) | | CDA | 110V DC (90 to 140V DC) | 1 |
| | | Resistor (PW, S) | | RNA | 100/110V AC/DC ±10% | 1 |
| | LED Lamp | One-color Full × 2 split window (Type C) (combination of PW, S only) | SX6S/8 Base | DPA | 6V AC/DC ±5% (LFTD-6S) × 2 | 6 |
| | | | | | 12V AC/DC ±10% (LFTD-1S) × 2 | 1 |
| | | | | | 24V AC/DC ±10% (LFTD-2S) × 2 | 2 |
| | | One-color Full × 2 split window (Type C) (combination of PW, S and A, G, R, W, Y) | | DPC | 6V AC/DC ±5% (LFTD-6*) | 6 |
| | | | | | 12V AC/DC ±10% (LFTD-1*) | 1 |
| | | | | | 24V AC/DC ±10% (LFTD-2*) | 2 |
| Incandescent Illuminated | | Transformer | BA9S/13 Base | TS | 115V AC ±10% (LS-6) | 11 |
| | | | | | 120V AC ±10% (LS-6) | 12 |
| | | | | | 230V AC ±10% (LS-6) | 23 |
| | | | | | 240V AC ±10% (LS-6) | 24 |
| | | | | | 380V AC ±10% (LS-6) | 38 |
| | | | | | 400/440V AC ±10% (LS-6) | 4 |
| | | | | | 480V AC ±10% (LS-6) | 48 |

| Illumination Face Size | (Code) |
|---|---|
| • Type F<br>30 × 30 mm | F |
| • Type H<br>30 × 60 mm | H |
| • Type H2 (Note 2)<br>(2-way split)<br>30 × 60 mm<br>A light barrier, clear marking plate, and color screen for 2-way split illumination are supplied. | H2 |
| • Type L<br>30 × 90 mm | L |
| • Type V<br>60 × 30 mm | V |
| • Type V<br>60 × 60 mm | G |
| • Type C<br>(15 × 30 mm) × 2 | C |
| • Type F Spot Illumination<br>30 × 30 mm | FST |

| Illumination Color | |
|---|---|
| • Standard Clear Lens Combination | (Code) |
| Amber | A |
| Green | G |
| Pure White | PW |
| Red | R |
| Blue | S |
| White | W |
| Yellow | Y |
| Red / Green | RG |

| • Color Screen Combination (LED only) | (Code) |
|---|---|
| When color display is required at power off, order color screens. For details, see page 34. | |
| Amber | TA |
| Green | TG |
| Pure White | TPW |
| Red | TR |
| Blue | TS |
| White | TW |
| Yellow | TY |

| • Gray Lens Combination | (Code) |
|---|---|
| Amber | SA |
| Green | SG |
| Pure White | SPW |
| Red | SR |
| Blue | SS |
| White | SW |
| Yellow | SY |

- Type L, V, and G cannot be split-illuminated.
- Enter the required number of color screens in ( ).

Note 1: For longer lamp life, LS-3 (30V rating, 1W) lamps are recommended when using on 24V AC/DC.

Note 2: Type H2 (2-way split) can be configured with the combination described below.

| Left | Right |
|---|---|
| Standard Clear Lens | Standard Clear Lens |
| Color Screen | Color Screen |
| Grey Lens | Grey Lens |

## Ordering Information

When ordering SLC Series Combination Display Lights, use the specification sheet provided on page 39.

**Designation Procedure**

1. Part No.: Refer to Part No. Development Configuration on page 13.
2. Quantity: Enter the required number of identical assemblies.

**Counting of Windows**

Count the number of windows in the equivalent of Type F (basic size).

**Leaf Spring (for one-window type only)**

Leaf spring for temporary fastening is not attached, and can be supplied free of charge upon request when ordering (Part No. SLD44KVP).

## [Conversion Rate]

- Type H (horizontal)

  Type F equivalent: 2 windows
  Row (1), Column (2)

- Type L (horizontal)

  Type F equivalent: 3 windows
  Row (1), Column (3)

- Type V (vertical)

  Type F equivalent: 2 windows
  Row (2), Column (1)

- Type G (large)

  Type F equivalent: 4 windows
  Row (2), Column (2)

- Type C (split-window)

  Type F equivalent: 1 window
  Row (1), Column (1)

## [Designation Examples]

Ex. 1 SLC30 Series
Type F, 20 windows

Incandescent illuminated type when arrangement of color screen is not designated.

LED illuminated units in one color.

• When more than one color is required for LED.
• When a particular arrangement of color screen is required.

SLC30N-[04][05][ ][ ][F][ ]—G(5), R(5), S(5), Y(5)

Columns / Rows

(Color screen: Type F, 20 windows
G(5) + R(5) + S(5) + Y(5) + = 20)

—R (20)

(Color screen: Type F, 20 windows
R (20) = 20)

• When color screen is required, specify the color screen code.
Ex. T *
Color Code
Color Screen Code

—No entry is required in designations.

Specify each color code on the specification sheet.

| Rows \ Color Code | 1 | 2 | 3 | 4 | 5 | 6 | |
|---|---|---|---|---|---|---|---|
| 1 | R | R | R | R | R | | + |
| 2 | G | G | G | G | G | | + |
| 3 | Y | Y | Y | Y | Y | | + |
| 4 | A | A | A | A | A | | + |
| 5 | + | + | + | + | + | + | |

Ex. 2 SLC30 Series
Type H, 9 windows (Type F equivalent: 3 rows by 6 columns)

SLC30N-[03][06][ ][ ][H][ ]—G(3), R(3), Y(3)

Columns / Rows

(Color screen: Type H, 9 windows
G (3) + R(3) + Y (3) = 9)

—R (9)

(Color screen: Type H, 9 windows
R (9) = 9)

• When color screen is required, specify the color screen code.
Ex. T *
Color Code
Color Screen Code

—No entry is required in designations.

Specify each color code on the specification sheet.

| Rows \ Color Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---|---|---|---|---|---|---|---|---|
| 1 | R | A | A | | | | | + |
| 2 | R | Y | Y | | | | | + |
| 3 | R | G | G | | | | | + |
| 4 | + | + | + | + | + | + | + | |

Ex. 3 SLC30 Series (Type F, 12 windows)

When ordering a combination of units with different operating voltages, specify Part No. as follows.

Type F, 12 windows, Full voltage type — 24V AC/DC — 8 — Transformer Type — 100/110V AC — 4

SLC30N-0304-[DD][2]FB(8) + [TD][1]FB(4) - [W (12)]

Specify the position of the units and each voltage on the specification sheet.

| Rows \ Columns | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| 1 | + | + | + | + | + | DD2 |
| 2 | + | + | + | + | + | TD1 |
| 3 | + | + | + | + | + | |

Ex. 4 When ordering a combination of units with different illumination colors, specify Part No. as follows.

Example: Full voltage LED illuminated 24V AC/DC, Red (6), Pure White (2)

SLC30N-0204-DD2FB(6) + DDA2FB(2) - R(6)PW(2)
Red — Pure White — Designation
Red: 6, Pure White: 2

Specify the position of the units and each color code on the specification sheet.

| Rows \ Color Code | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| 1 | PW | R | R | R | | + |
| 2 | PW | R | R | R | | + |
| | + | + | + | + | + | |

Ex. 5 When ordering a combination of units with different illumination colors for four windows of type C, specify Part No. as follows.

Example: Full voltage LED illuminated 24V AC/DC

SLC30N-0202-DPA2CB(1) DPC2CB(3) - R(1)G(1)A(1)S(1)PW(4)
Blue, Pure white — Red, green, amber, pure white — Designation
Red: 1, green: 1, blue 1, amber 1, pure white 4

Specify the position of the units and each color code on the specification sheet.

| Rows \ Color Code | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| 1 | R PW | G PW | | | | + + + |
| 2 | S PW | A PW | | | | + + + |
| | + | + | + | + | + | |

# SLC40 Series Combination Display Lights

## Highly bright "Super LED" unit improves visibility and safety.

- Eight types of illumination faces in 40mm size.
- Extensible window ensures high visibility when installed at high places (except C, L, G).
- Super bright Super LED.
- The fingersafe spring-up terminals save wiring time and prevent electrical shocks.
- The insulated jumper, when used on fingersafe spring-up terminals, eliminates the need of terminal cover.
- Legends can be engraved on the attached marking plate. One or two thin marking sheets (not attached) can also be installed (Type F only).
- Spot illumination available for easy recognition in bright environment (Type F only).
- UL and c-UL recognized, EN compliant (EN60947-5-1).

| Applicable Standards | Mark | File No. or Organization |
|---|---|---|
| UL508<br>CSA C22.2 No.14 | c UL us | UL/c-UL Recognized<br>File No. E68961 |
| EN60947-1<br>EN60947-5-1<br>(Note) | TÜV | TÜV SÜD |
| | CE | EU Low Voltage Directive |

Note: Except for DC-DC converter and resistor types.

**An Example of 12-window size**

Spot illumination is available with type F only.

Type F | Type F (spot illumination) (LED only) | Type C | Type H | Type L | Type V | Type G

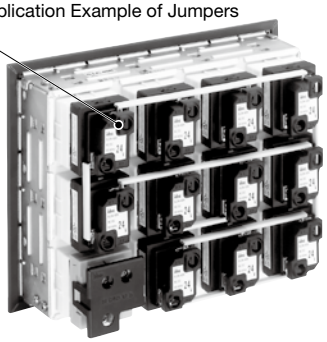
A wide variety of illumination face sizes
Type F: 40H × 40W mm (Basic size)
Type F spot illumination: 40H × 40W mm
Type C: 20H × 40W mm × 2 (Split-window type)
Type H: 40H × 80W mm
Type L: 40H × 120W mm
Type V: 80H × 40W mm
Type G: 80H × 80W mm
Combined construction is availble.

Extensible windows

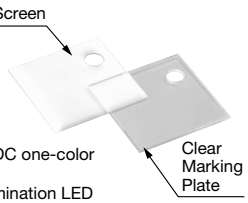
Easy to recognize at high places (except Type C, L, and G)

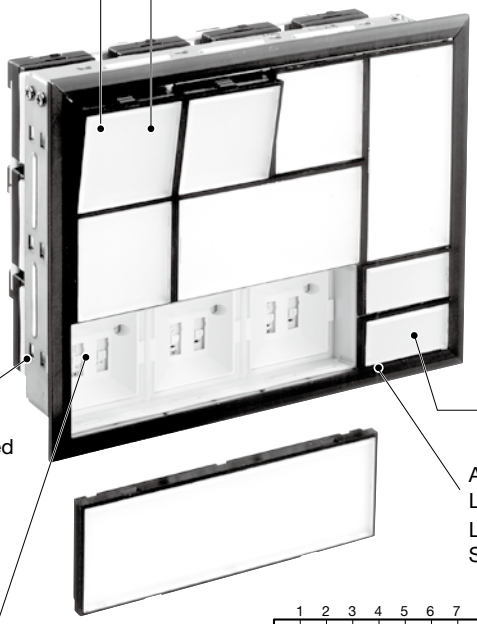
The Fingersafe Spring-up terminals reduce wiring time.
The integrated terminal cover and insulated jumpers prevent electic shocks.

Application Example of Jumpers



Type F Window Spot Illumination Kit



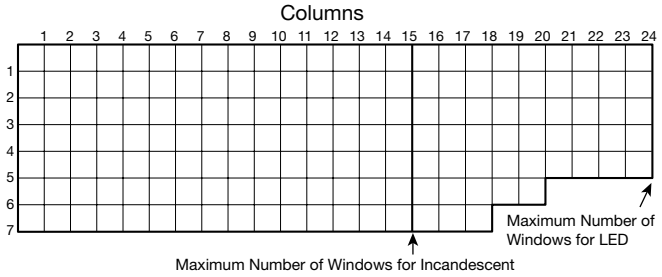



Frame (metal)
The frame cover and frame are integrated and molded of resin for Type F, one-window type.

Split-window reduces installation space.

Available up to 126 windows
LED: 7 rows by 24 columns
LED illumination: 24V AC/DC
See page 36 for details.

Choice of LED or incandescent illumination




LED

LED Unit | Spot Illumination LED Unit | LED Lamp (SX6S/8 base) For Type C only

Incandescent

E12/15 Base Lamp | BA9S/13 Base Lamp For Type C only

- For LED illuminated 110/220V AC type, up to 60 windows (Type F equivalent) can be mounted.
- For incandescent illuminated 110/220V AC type, up to 50 windows (Type F equivalent) can be mounted. For Type C, up to 105 windows (Type F equivalent) can be mounted.
- Lighting limitations should be considered in any applications. For details, see page 32.

## Configuration

**LED Illuminated**

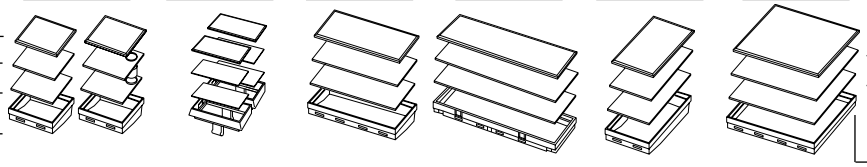
- See page 34 for the combination of illumination windows.

Illumination Face

**Incandescent Illuminated**

- See page 34 for details about lens combination.

**Type F** **Type C** **Type H** **Type L** **Type V** **Type G**



- Lens (acrylic)
- Marking Plate (acrylic) (clear, white, color)
- Lens Frame (plastic)

- Lens (acrylic)
- Marking Plate (acrylic) (clear, white, color)
- Lens Frame (plastic)

### Type F, H, L, V, G

| Display Color Type | Light Source | Marking Plate/Color Screen (one each) (Note 1) (Note 3) | Lens | ON Color (Color Code) | | | OFF Color |
|---|---|---|---|---|---|---|---|
| Standard (using clear lens) | LED Unit | clear / white | Clear Lens | amber (A), blue (S), green (G), pure white (PW) (Note 1), red (R), white (W), yellow (Y), red/green 2-color alternate (RG) (Note 2) | | | White |
| | Incandescent Lamp | color / white | | amber (A), blue (S), green (G), red (R), yellow (Y), | | | |
| | | clear / white | | white (W) | | | |
| Color Screen | LED Unit | color / white | | amber (TA), blue (TS), green (TG), pure white (TPW), red (TR), white (TW), yellow (TY) | | | Same as ON color |
| Gray Lens | LED Unit | black (Note 4) / clear | Gray Lens | Lens: gray | Legend Color | amber (SA), blue (SS), green (SG), pure white (SPW) (Note 1), red (SR), white (SW), yellow (SY) | Gray |
| | Incandescent Lamp | | | | | white (SW) | |

Note 1: Pure white (PW) is available with Type F only.
Note 2: Spot illumination is not available with red/green 2-color alternate (RG).
Note 3: The order to insert clear marking plate, color screen, and white screen can be interchanged if necessary.
Marking plate/color screen are interchangeable. Engrave markings on the flat surface of the plate or screen next to the lens.
Note 4: Black marking plate has black coating. Engrave a reverse legend on the black-coated surface.

### Type C (split-window)

| Display Color Type | Light Source | Marking Plate/Color Screen (one each) (Note 1) | Lens | ON Color (Color Code) | | | OFF Color |
|---|---|---|---|---|---|---|---|
| Standard (using clear lens) | LED Lamp | color / white | Clear Lens | amber (A), blue (S), green (G), red (R), yellow (Y), | | | White |
| | | clear / white | | pure white (PW), white (W) | | | |
| Gray Lens | | black (Note 2) / color | Gray Lens | Lens: gray | Legend Color | amber (SA), blue (SS), green (SG), red (SR), yellow (SY), | Gray |
| | | black (Note 2) / clear | | | | pure white (SPW), white (SW), | |

Note 1: The order to insert clear marking plate, color screen, and white screen can be interchanged if necessary.
Marking plate/color screen are interchangeable. Engrave markings on the flat surface of the plate or screen next to the lens.
Note 2: Black marking plate has black coating. Engrave a reverse legend on the black-coated surface.

- LED Unit

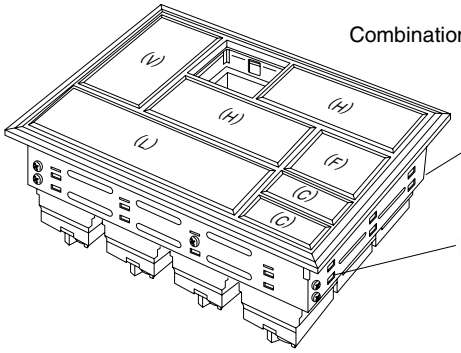
- LED Unit for Spot Illumination

- LED Lamp (for Type C only, SX6S/8 base) (2 lamps for 1 window equivalent to Type F)

- Incandescent Lamp (BA9S/13 base)

Incandescent Lamp (E12/15 base)

Combination Example of 12 Windows

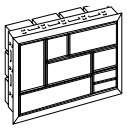



- Frame Cover Black (B)

- Mounting Clip SLC-3K1 (supplied)

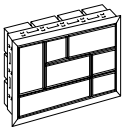
**LED Illuminated**

One-color full



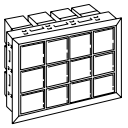
24V AC/DC

One-color full (w/check terminal)



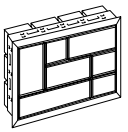
24V DC (Except Type C)

One-color full (Flasher)



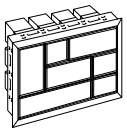
24V DC (Type F only)

Two-color Alternate



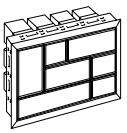
24V AC/DC (Except Type C)

One-color full



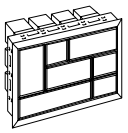
100/110V, 200/220V AC (Except Type C)

One-color full



100/110V DC (Resistor Type) (Except Type C)

One-color full

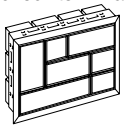


110V DC (DC-DC Converter) (Except Type C)

**Incandescent Illuminated**

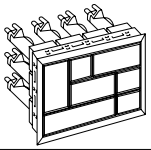
One-color full

One-color full (w/check terminal)



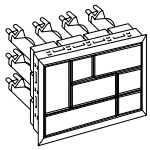
6, 12, 18, 24V AC/DC (Except Type C)

One-color full



100/110, 200/220V AC (Except Type C)

One-color full



100/110V AC/DC (Resistor) (Except Type C)

- The illustration above shows combination examples of windows. One-window is available in Type F.

# Specifications

## LED Illuminated

| Light Source | | LED Unit | | | | | | LED Lamp | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Input | | Full Voltage | | | Transformer | DC-DC Converter | Resistor | Full Voltage | | |
| Illumination | | One-color<br>One-color w/check terminal (Note 1) | Two-color Alternate | Flasher Type | One-color | One-color | One-color | One-color × 2<br>Split-window Type (Type C) | | |
| Fingersafe Spring-up Terminal | | Provided<br>(except for check terminal) | (Note 2) | Provided | Provided | | | —<br>(Note 2) | | |
| Rated Voltage (AC: 50/60Hz) | | 24V AC/DC ±10% | 24V AC/DC ±10% | 24V DC ±10% | 100/110V AC ±10%<br>200/220V AC ±10% | 110V DC (90 to 140V DC) | 100/110V AC/DC ±10% | 6V AC/DC ±10% | 12V AC/DC ±10% | 24V AC/DC ±10% |
| Maximum Current Draw (VA) | | Same as internal LED unit | | — | 4.7 | 1.8 | 2.4 | Same as internal LED lamp | | |
| Illumination Color | | Amber, blue, green, pure white, red, white, yellow | Red/green Alternate | Amber, blue, green, pure white, red, white, yellow | | | | Amber, blue, green, pure white, red, white, yellow | | |
| Standards | | UL, c-UL listed, EN compliant | | | | — | | — | | |
| Built-in LED Unit/Lamp | Rated Voltage | 24V AC/DC | 24V AC/DC | 24V AC/DC | | | | 6V AC/DC | 12V AC/DC | 24V AC/DC |
| | Rated Current (Note 7) Amber | 15 mA (Note 5) | Red: 15 mA<br>Green: 15 mA | 15 mA | | | | 7 mA | 10 mA | 10 mA |
| | Rated Current (Note 7) Blue, Pure White | | | | | | | 5.5 mA | | |
| | Rated Current (Note 7) Green | | | | | | | — | | |
| | Rated Current (Note 7) Red | | | | | | | 7 mA | | |
| | Rated Current (Note 7) White | | | | | | | 7 mA | | |
| | Rated Current (Note 7) Yellow | | | | | | | 5.5 mA | | |
| | Illumination Color (code) | Amber (A), blue (S), green (G), pure white (PW), red (R), white (W), yellow (Y) | Red (R)/ green (G) | Amber (A), blue (S), green (G), pure white (PW), red (R), white (W), yellow (Y) | | | | Amber (A), blue (S), green (G), pure white (PW) (Note 6), red (R), white (W), Y (yellow) | | |
| | LED Life (reference) | Approx. 50,000 hours (when used on complete DC, luminance reduces to 50% of the initial intensity) | | | | | | | | |
| | Base | Plug-in unit type (for SLC40 only) | | | | | | BA9S/13 base | | |
| | Part No. | SLCN-42M-∗ | SLCN-42MW-RG | SLCN-42M-∗ | | | | LSTD-6∗ | LSTD-1∗ | LSTD-2∗ |
| | No. of Units | 1 LED unit per window of basic Type F | | | | | | 1 LED lamp per window of basic Type F | | |
| Flashing Period (Note 3) | | — | | 0.5 ±0.2s | — | | | — | | |
| Insulation Resistance | | 100 MΩ (500V DC megger) | | | | | | | | |
| Dielectric Strength | | 2000V AC (1 minute) between live and dead parts | | 2500V AC (1 minute) between live and dead parts | | | 2000V AC (1 minute) | 2000V AC (1 minute) between live and dead parts | | |
| Operating Temperature (Note 4) | | –20 to +40°C | | –10 to +40°C | –20 to +40°C | –10 to +40°C | –20 to +40°C | –20 to +40°C | | |
| Storage Temperature | | –25 to +60°C (no freezing) | | | | | | | | |
| Operating Humidity | | 45 to 85% RH (no condensation) | | | | | | | | |

Specify a color code in place of ∗.
Note 1: The rated voltage for w/check terminal is 24V DC only.
Note 2: Terminal cover is available (see page 26).
Note 3: Duty 1:1. Multiple flasher units do not synchronize with each other. Use Type F only.
Note 4: No freezing
Note 5: Spot illumination uses the spot illumination LED unit (SLCN-42ST-∗). See page 29 for rated current.
Note 6: Yellow (Y) uses pure white LED lamp.
Note 7: Rated current for LED lamp is for DC. See page 29 for AC.

## Incandescent Illuminated

| Input | | Full Voltage | | | | | | | | Transformer | Resistor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Illumination | | One-color<br>One-color w/Check Terminal (Note 1) | | | | One-color<br>Dual-lamp | | | | One-color | |
| Rated Voltage (AC: 50/60Hz) | | 6V AC/DC | 12V AC/DC | 18V AC/DC | 24V AC/DC | 6V AC/DC | 12V AC/DC | 18V AC/DC | 24V AC/DC | 100/110, 200/220V AC | 100/110V AC/DC |
| Standards | | — | | | | | | | | | |
| Built-in Lamp | Rated Voltage | 6.3V·2W | 18V·2W | 24V·2W | 30V·2W | 6.3V·1W | 18V·1W | 24V·1W | 30V·1W | 18V·2W | |
| | Operating Voltage | 5 to 6V | 12 to 18V | 18 to 24V | 24 to 30V | 5 to 6V | 12 to 18V | 18 to 24V | 24 to 30V | 12 to 18V | |
| | Base | E12/15 | | | | BA9S/13 | | | | E12/15 | |
| | Lamp life | Approx. 1,000 hours minimum (mean value when used on the rated voltage) | | | | | | | | | |
| | Part No. | LE-6 | LE-8 | LE-2 | LE-3 | LS-6 | LS-8 | LS-2 | LS-3 | LE-8 | |
| | No. of Units | 1 lamp per window of basic Type F | | | | 2 lamps per window of basic Type F | | | | 1 lamp per window of basic Type F | |
| Insulation Voltage | | 100 MΩ (500V DC megger) between live and dead parts | | | | | | | | | |
| Dielectric Strength | | 2000V AC (1 minute) between live and dead parts | | | | | | | | 2500V AC (1 minute) between live and dead parts | 2000V AC (1 minute) between live and dead parts |
| Operating Temperature | | –20 to +40°C (no freezing) | | | | | | | | | |
| Storage Temperature | | –25 to +60°C (no freezing) | | | | | | | | | |
| Operating Humidity | | 45 to 85% RH (no condensation) between live and dead parts | | | | | | | | | |

Note 1: Check terminal is for DC input only.
• Terminal cover is available for all incandescent illuminated (see page 26), except for the resistor type.

## LED/Incandescent Illuminated

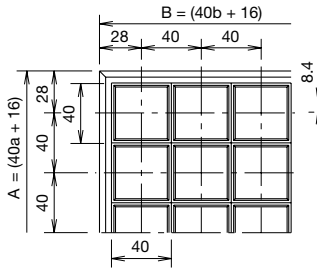
| Illumination Face | | Type F (Note 1) (Basic) | Type C (Split-window) | Type H | Type L | Type V | Type G |
|---|---|---|---|---|---|---|---|
| Illumination Unit Size (mm) | Window (H × W) | 40 × 40 | 20 × 40 | 40 × 80 | 40 × 120 | 80 × 40 | 80 × 80 |
| | Illumination Face (H × W) | 37 × 37 | 17 × 37 | 37 × 77 | 37 × 117 | 77 × 37 | 77 × 77 |
| | White color screen, clear marking plate, color screen (H × W × t) | 35.8 × 35.8 × 1.0 | 15.8 × 35.8 × 1.0 | 35.8 × 75.8 × 1.0 | 35.8 × 115.8 × 1.0 | 75.8 × 35.8 × 1.0 | 75.8 × 75.8 × 1.0 |
| | Marking Film | Applicable | — | — | — | — | — |
| | Engraving Area (white, transparent, color plates) | 34 × 34 | 14 × 34 | 34 × 74 | 34 × 114 | 74 × 34 | 74 × 74 |
| Material of Marking Plate & Color Screen | | Acrylic | | | | | |
| Lens Frame Color & Frame Cover Color | | Black (Munsell N1.5 equivalent) | | | | | |
| Connection Wire | | Solid wire: ø1.6 × 2, Stranded 2 mm² × 2 | | | | | |
| Terminal Screw | | M3.5 screw, Incandescent resistor: M4 nut, Check terminal: M3 | | | | | |
| Degree of Protection | | IP40 (IEC60529) | | | | | |
| Pollution Degree | | 3 | | | | | |

Note 1: Flasher, one-window, pure white illumination, and spot illumination are available in Type F only.

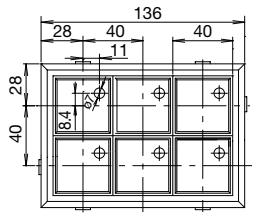
## Dimensions

**[Front View]** a: No. of Rows b: No. of Columns

**Type F**

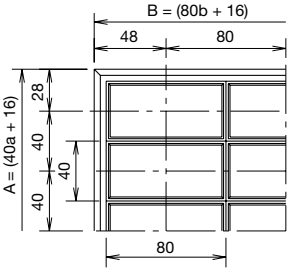



**Type F (Spot Illumination)**

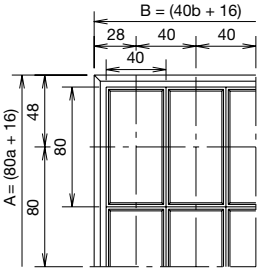



(SLC40N-0203-TD□FSTB)

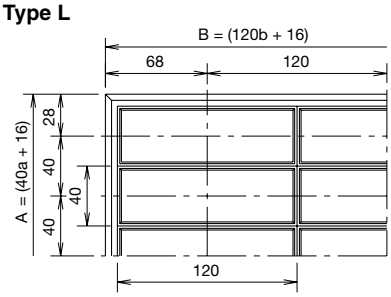
**Type H**



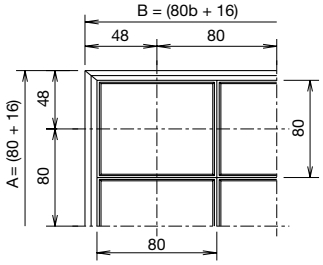

**Type V**



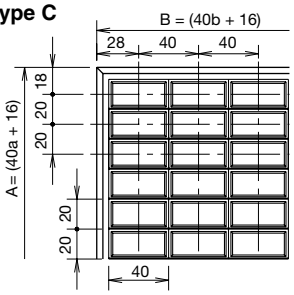

**Type L**




**Type G**




**Type C**




All dimensions in mm.

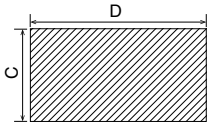
### Type F Dimensions & No. of Windows (Type C, H, L, V, and G can be converted into Type F.)

| | Columns | b | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rows | **Dimensions** | **B** | **56** | **96** | **136** | **176** | **216** | **256** | **296** | **336** | **376** | **416** | **456** | **496** | **536** | **576** | **616** | **656** | **696** | **736** | **776** | **816** | **856** | **896** | **936** | **976** |
| a | **A** | Panel Cut-out (D) / (C) | (45) | (85) | (125) | (165) | (205) | (245) | (285) | (325) | (365) | (405) | (445) | (485) | (525) | (565) | (605) | (645) | (685) | (725) | (765) | (805) | (845) | (885) | (925) | (965) |
| 01 | **56** | (45) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 02 | **96** | (85) | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 |
| 03 | **136** | (125) | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 42 | 45 | 48 | 51 | 54 | 57 | 60 | 63 | 66 | 69 | 72 |
| 04 | **176** | (165) | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 | 56 | 60 | 64 | 68 | 72 | 76 | 80 | 84 | 88 | 92 | 96 |
| 05 | **216** | (205) | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 |
| 06 | **256** | (245) | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 90 | 96 | 102 | 108 | 114 | 120 | — | — | — | — |
| 07 | **296** | (285) | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 | 91 | 98 | 105 | 112 | 119 | 126 | — | — | — | — | — | — |

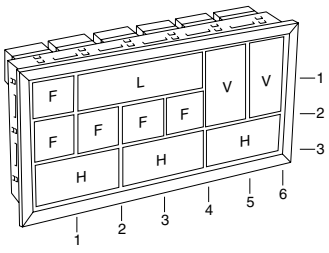
How to Read the Table

1. The number of windows equals rows multiplied by columns. For example, for 5 rows by 7 columns, the number of windows is 35, external dimensions are 216mm high by 296mm wide, and panel cut-out is 205mm high by 285mm wide.
2. External dimensions are represented by A for rows and B for columns in boldface.
3. Panel cut-out dimensions are shown in ( ), for height (C) and width (D). Panel cut-out tolerance is +1.0 to –0 mm (for one window: +0.6 to –0.4mm).

Panel Cut-out (SLC40)




Determine the panel thickness in consideration of the weight of display lights and wires (see page 26).




4. Total number of windows, dimensions, panel cut-out

① For Type C, H, L, V, and G, convert the numbers of rows and columns into Type F (basic size) equivalents.

- Type C — Type F equivalent: 2 split-windows consist of one window.

- Type H — Type F equivalent: 2 windows
  Height: 1 row
  Width: 2 columns

- Type V — Type F equivalent: 2 windows.
  Height: 2 rows
  Width: 1 column

- Type L — Type F equivalent: 3 windows
  Height: 1 row
  Width: 3 columns

- Type G — Type F equivalent: 4 windows
  Height: 2 rows
  Width: 2 columns

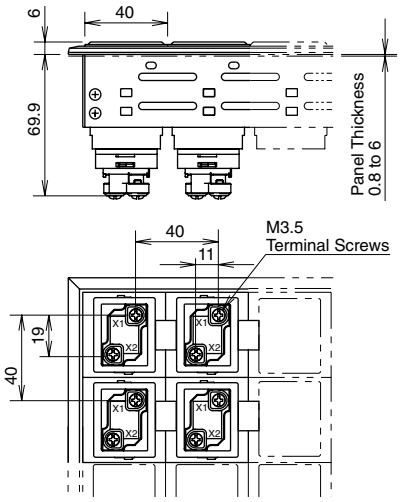
② The combination example at left consists of 3 rows by 6 columns.

③ The above table shows: No. of windows: 18
Dimensions: 136H × 256W mm
Panel cut-out: 125H × 245W mm

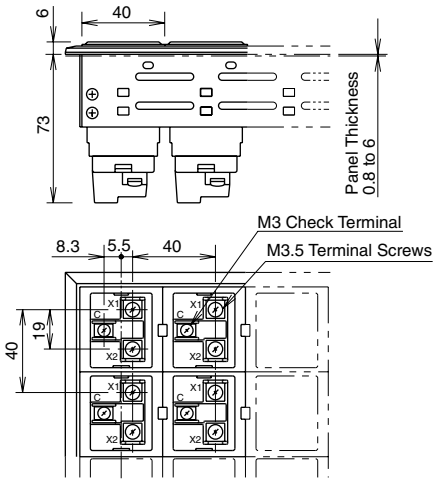
## Dimensions

### LED Illuminated [Side & Rear Views]

- Full Voltage
- 24V AC/DC
- One-color full
- For applicable terminal cover, see page 26.
- Spot illumination 24V AC/DC

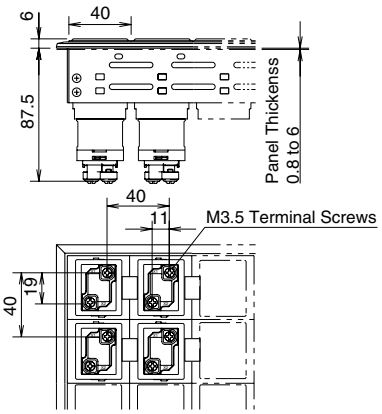



- Full Voltage
- One-color full
- w/Check Terminal 24V DC
- Two-color alternate 24V AC/DC
- For applicable terminal cover, see page 26.



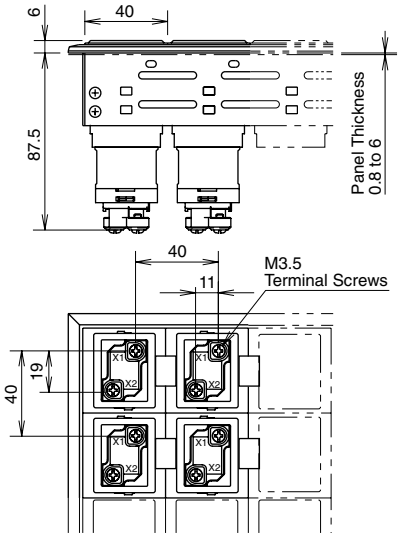

- w/Check Terminal
  Terminal X1 is a positive pole; Terminal X2 and C (check terminal) are negative poles.
- Two-color Alternate
  Terminal X1 is common.
  Red (R) illumination: Terminal C
  Green (G) illumination: Terminal X2

- Full Voltage
- One-color full
- Flasher 24V DC (Type F only)
- For applicable terminal cover, see page 26.



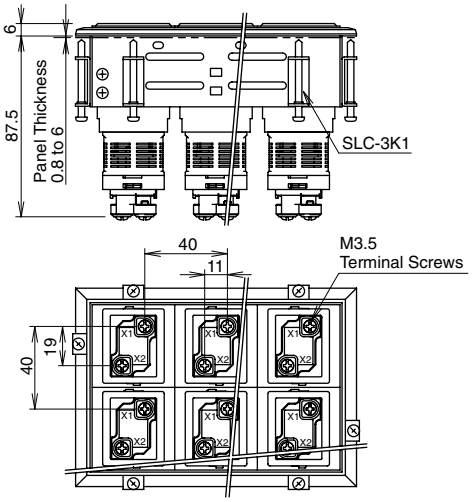

- Terminals X1 and X2 are positive and negative poles, respectively.

- Transformer
- One-color full
- 100/110, 200/220V AC
- 110VDC (DC-DC Converter)



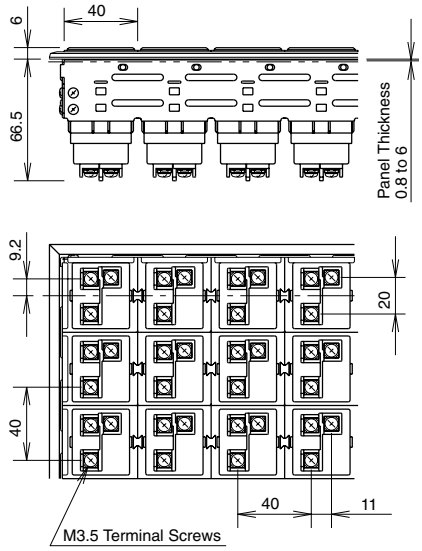

- On LED illuminated DC-DC Converter type units, Terminals X1 and X2 are positive and negative poles, respectively.

- Resistor
- One-color full
- 100/110V AC/DC




**Type C (split-window)**

- Full Voltage
- 6, 12, 24V AC/DC
- One-color full, 2 × LED lamps, Split-window



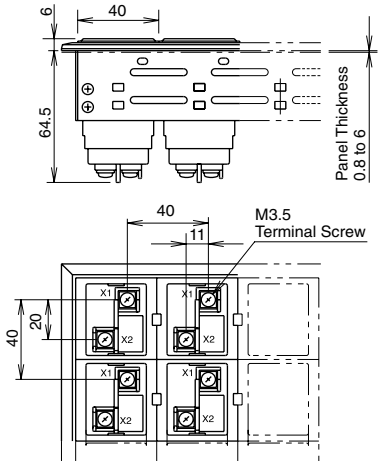

- Terminal X1 is COM terminal.
- For applicable terminal cover, see page 26.

All dimensions in mm.

## Incandescent Illuminated [Side & Rear Views]

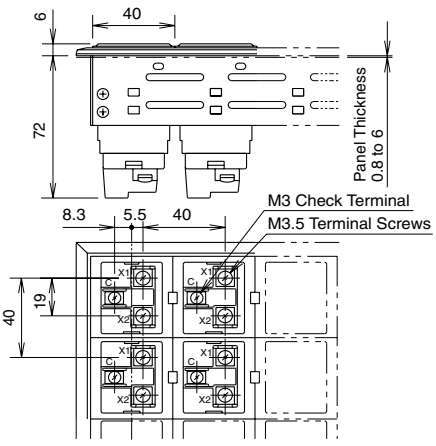
**Type F**

- Full Voltage
- 6, 12, 18, 24V AC/DC
- One-color full
- For applicable terminal cover, see page 26.



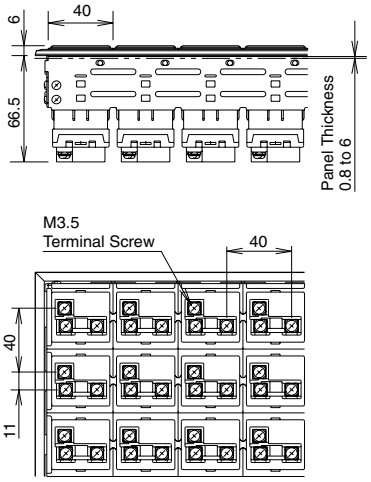

- The dimension of incandescent illuminated 100/110, 200/220V AC is the same as LED illuminated flasher.

- Full Voltage
- One-color full
- w/Check Terminal
- 6, 12, 24V DC
- For applicable terminal cover, see page 26.

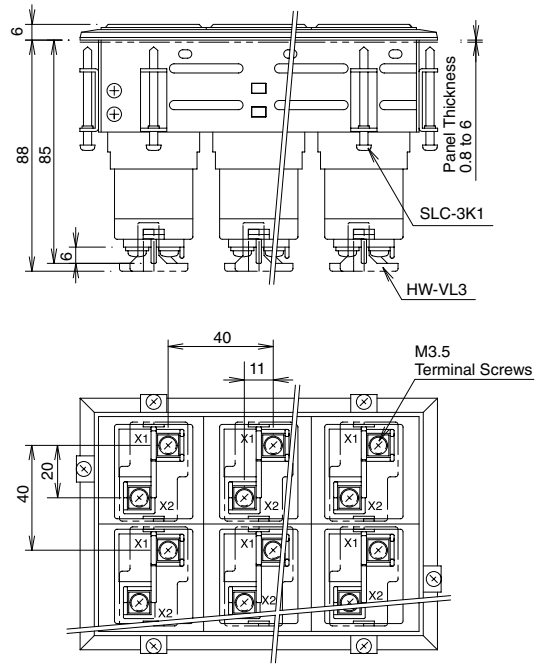



- Incandescent illuminated w/check terminal Terminal X1 and C are positive poles; Terminal X2 is a negative pole.

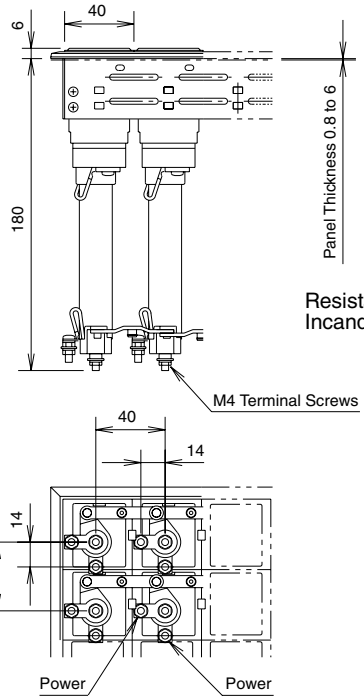
- Full Voltage
- 6, 12, 18, 24V AC/DC
- One-color full
- For applicable terminal cover, see page 26.




- Transformer
- 100/110, 200/220V AC
- One-color full




- Resistor
- 100/110V AC/DC
- One-color full




Resistance
Incandescent: 1kΩ, 40W

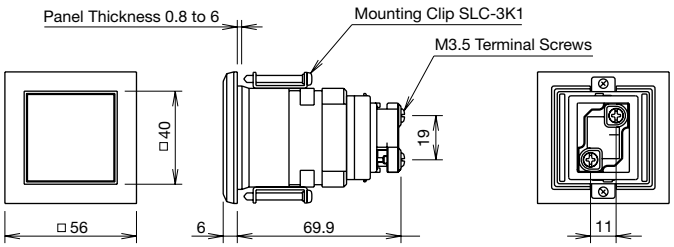



All dimensions in mm.

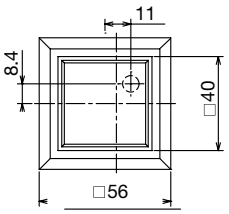
## Dimensions

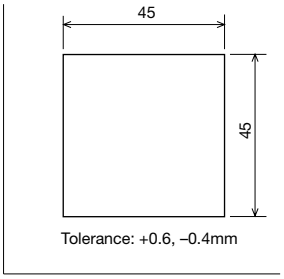
### LED Illuminated [One-window, Type F only]

**Full Voltage 24V AC/DC, One-color Full**

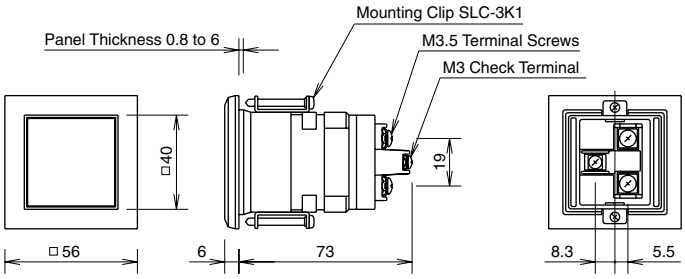



**Spot Illumination**



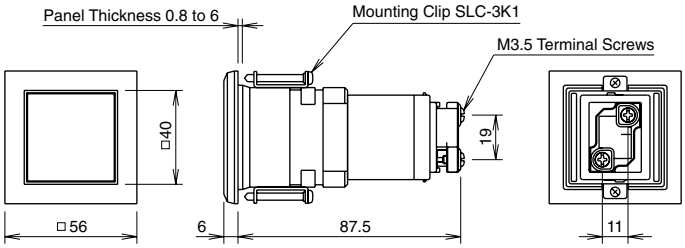




**Full Voltage 24V DC, w/Check Terminal**
**Two-color Alternate LED Illuminated 24V AC/DC**



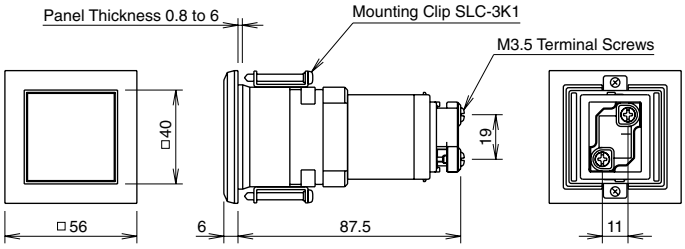

- w/Check Terminal
  Terminal X1 is a positive pole; Terminals X2 and C (check terminal) are negative poles.
- Two-color Alternate
  Red (R) illumination: X1, C
  Green (G) illumination: X1, X2
- See page 26 for applicable terminal covers.

**Flasher 24V DC**



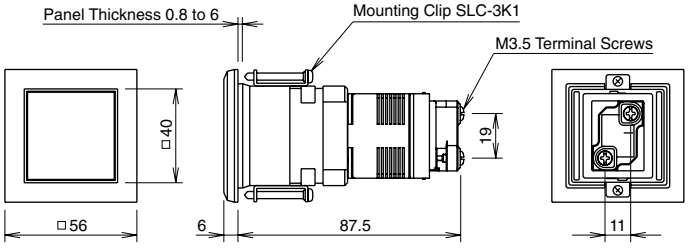

- On LED illuminated flasher, Terminals X1 and X2 are positive and negative poles, respectively.
- See page 26 for applicable terminal covers.

**Transformer 100/110, 200/220V AC**
**DC-DC Converter 110V DC**




- On LED illuminated DC-DC converter type, Terminals X1 and X2 are positive and negative poles, respectively.

**Resistor 100/110V AC/DC**

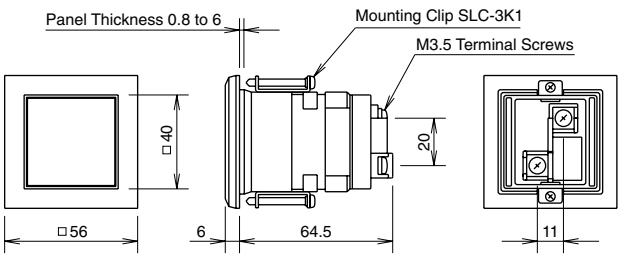


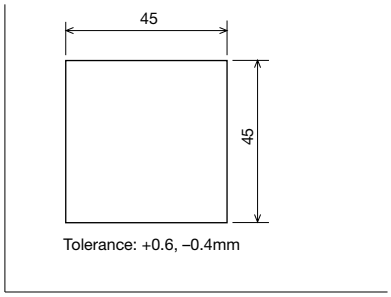

(Resistance)
LED illuminated: 4.4 kΩ, 6W

All dimensions in mm.

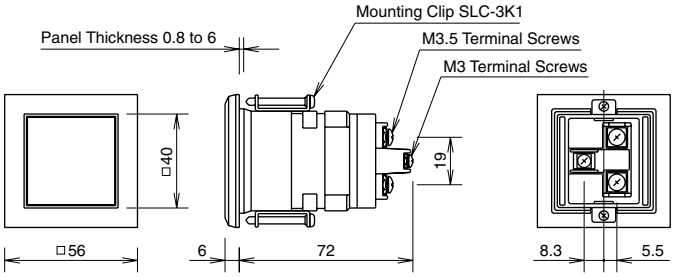
## Incandescent Illuminated [One-window, Type F only]

### Full Voltage 6, 12, 18, 24V AC/DC, One-color Full



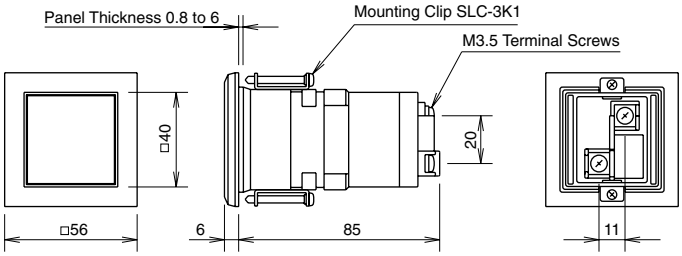




### Full Voltage 24V DC, w/Check Terminal, One-color Full



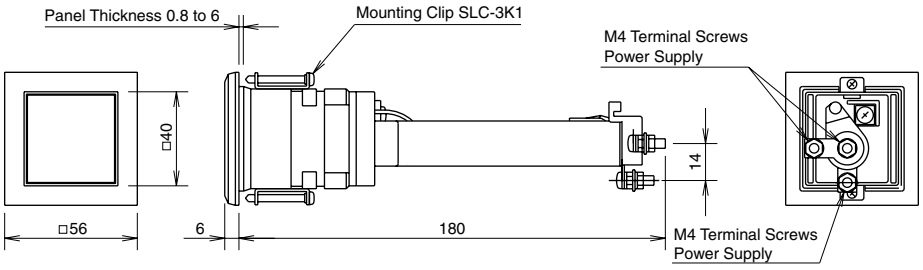

- w/Check Terminal
  Terminal X1is a positive pole; Terminal X2 and C (check terminal) are negative poles.
- For applicable terminal cover, see page 26.

### Transformer 100/110, 200/220V AC, One-color Full



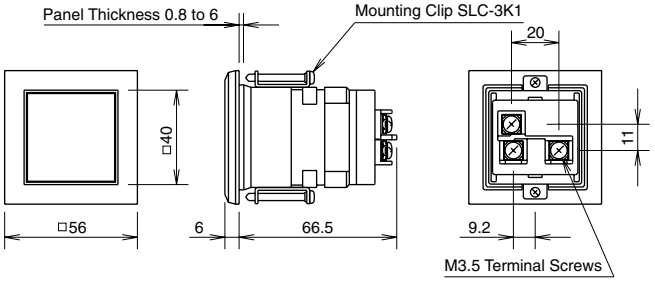

- For applicable terminal cover, see page 26.

### Resistor 100/110V AC/DC, One-color Full




(Resistance)
Incandescent: 1 kΩ, 40W

### Full Voltage 6, 12, 18, 24V AC/DC, One-color Full (Dual-lamp)

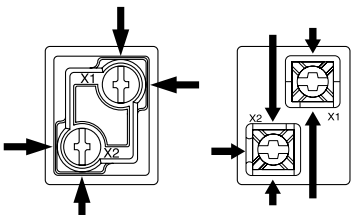



- On dual-lamp, Terminal X1 is a common terminal. Terminals X1 and X2 are interconnected.
- For applicable terminal cover, see page 26.

All dimensions in mm.

## Terminal Connection (LED Illuminated)

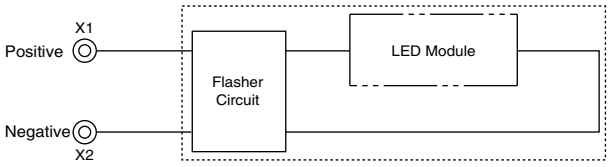
• For check terminal, DC-DC converter, and resistor, Terminals X1 and X2 are positive and negative poles, respectively.



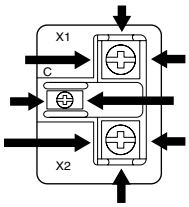

Fingersafe, Spring-up Terminal | Other terminals

Arrows indicate access direction for wiring terminals.

(Flasher Connection Diagram)

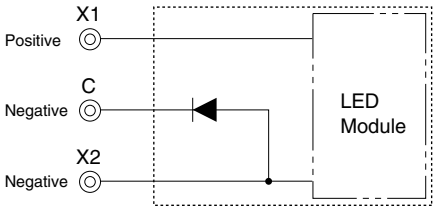



• For w/check terminal and two-color alternate units, Terminal X1 is a positive pole; Terminals X2 and C (check terminal) are negative poles. For two-color alternate, Terminal X1 is common.



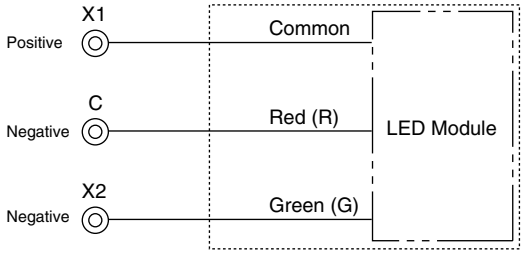

Arrows indicate access directions for wiring terminals.

(w/Check Terminal Connection Diagram)



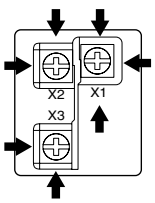

• Connection for Two-color alternate is as follows.
Terminal X1 (+) is common (AC/DC).
Red (R):Terminal C, Green (G):Terminal X2

(Two-color alternate Connection Diagram)

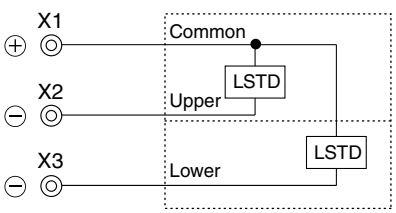



• For the LED illuminated split-window (Type C), Terminal X1 (+) is a common terminal. Terminal X2 is for upper illumination and Terminal X3 is for lower illumination (AC/DC).

Arrows indicate access direction for wiring terminals.




(Type C Split-window Connection Diagram)




Recommended tightening torque:
M3.5: 1 to 1.3 N·m
M3: 0.6 to 1.0 N·m

## Terminal Connection Using Jumpers

• For terminal connection of types F, H, L, V, and G (except Type C) using jumpers, jumpers can be used as shown below.

**SLC40 Series**

| | | Terminal X1 | Terminal X2 | Terminal C |
|---|---|---|---|---|
| LED Illuminated (Note 2) | Fingersafe, Spring-up Terminal (Note 1) | SLCN-JP44<br>SLCN-JP45 | SLCN-JP44<br>SLCN-JP45 | — |
| | Others | SLC-JP40 | SLC-JP41 | SLC-JP42 |
| Incandescent Illuminated | | SLC-JP40 | SLC-JP41 | SLC-JP42 |

Note 1: Fingersafe, spring-up terminals are used in one-color full illuminated (12, 24V AC/DC, 100/110, 200/220V AC, 110V DC).
Note 2: No jumper is used on resistor type.

• For Type C, jumpers can be used on Terminal X1 only as shown below.

| Direction | • When using Type C only<br>• When using Type C and Two-color alternate |
|---|---|
| Vertical | SLC-JP40 |
| Horizontal | SLC-JP41 |

Note: Jumpers cannot be used when using Type C and fingersafe spring-up terminals.

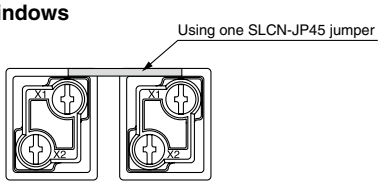
## Terminal Connection (Incandescent Illuminated)

• For incandescent illuminated dual-lamp, terminal X1 is a common terminal. Terminals X2 and X3 are connected with jumpers.
• The incandescent illuminated check terminal is for DC voltage only. Terminal X1 is a positive pole, and terminal X2 is a negative pole. Check terminal is a positive pole.
• Wiring direction for incandescent illuminated check terminals is the same as that of LED illuminated type.

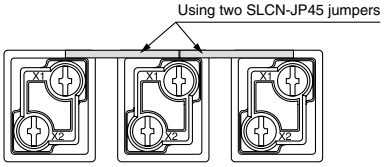
## [Examples of Using Jumpers]

LED Illuminated (fingersafe Spring-up Terminal)

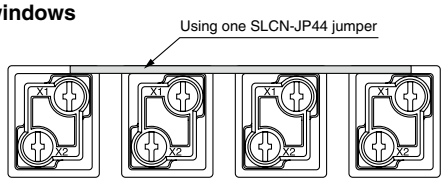
**When using two windows**

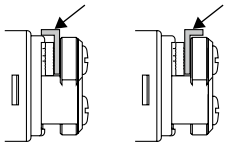



**When using three windows**




**When using four windows**




Jumpers (SLCN-JP44/45) have an orientation. Ensure that jumpers are installed correctly.

## Part No. Development

SLC40N – 0 4 0 5 – TD 2 F B –

Example: G (5), R (5), W (10)
Specify the color code and the number of windows.

40 Series

When ordering Type H, L, V, G, or C units, enter the equivalents of Type F.

**Frame Color**
Black: B

| Equivalent of Basic Size Windows | |
|---|---|
| Rows | Columns |
| 01 | 01 |
| 02 | 02 |
| 03 | 03 |
| 04 | 04 |
| 05 | 05 |
| 06 | 06 |
| 07 | 07 |
| | 08 |
| | 09 |
| | 10 |
| | 11 |
| | 12 |
| | 13 |
| | 14 |
| | 15 |
| | 16 |
| | 17 |
| | 18 |
| | 19 |
| | 20 |
| | 21 |
| | 22 |
| | 23 |
| | 24 |

| Unit | | | | (Code) | Operating Voltage (Built-in Lamp) | (Code) |
|---|---|---|---|---|---|---|
| LED Illuminated | LED Unit | Full Voltage (A, G, R, W, Y) | | DD | 12V AC/DC ±10% | 1 |
| | | | | | 24V AC/DC ±10% | 2 |
| | | Full Voltage (PW, S) | | DDA | 24V AC/DC ±10% | 2 |
| | | Full Voltage w/Check Terminal (A, G, R, W, Y) | | DHM | 24V DC ±10% | 2 |
| | | Full Voltage Two-color Alternate (R/G) | | DW | 24V AC/DC ±10% | 2 |
| | | Full Voltage Flasher (A, G, R, W, Y) | | DF | 24V DC ±10% | 2 |
| | | Transformer (A, G, R, W, Y) | | TD | 100/110V AC ±10% | 1 |
| | | | | | 200/220V AC ±10% | 2 |
| | | Transformer (PW, S) | | TDA | 100/110V AC ±10% | 1 |
| | | | | | 200/220V AC ±10% | 2 |
| | | DC-DC Converter (A, G, R, W, Y) | | CD | 110V DC (90 to 140V DC) | 1 |
| | | Resistor (A, G, R, W, Y) | | RN | 100/110V AC/DC ±10% | 1 |
| | LED Lamp | One-color Full × 2 split window (Type C) (A, G, R, W, Y) | BA9S/13 Base | DP | 6V AC/DC ±10% (LSTD-6∗) | 6 |
| | | | | | 12V AC/DC ±10% (LSTD-1∗) | 1 |
| | | | | | 24V AC/DC ±10% (LSTD-2∗) | 2 |
| Incandescent Illuminated | | Full Voltage | E12/15 Base | DE | 5 to 6V AC/DC (LE-6) | 6 |
| | | | | | 12 to 18V AC/DC (LE-8) | 8 |
| | | | | | 18 to 24V AC/DC (LE-2) (Note) | 2 |
| | | | | | 24 to 30V AC/DC (LE-3) | 3 |
| | | Transformer | | TE | 100/110V AC ±10% (LE-8) | 1 |
| | | | | | 200/220V AC ±10% (LE-8) | 2 |
| | | Resistor | | RE | 100/110V AC/DC ±10% (LE-8) | 1 |
| | | Full Voltage Dual Lamp | BA9S/13 Base | DB | 5 to 6V AC/DC (LS-6) | 6 |
| | | | | | 12 to 18V AC/DC (LS-8) | 8 |
| | | | | | 18 to 24V AC/DC (LS-2) (Note) | 2 |
| | | | | | 24 to 30V AC/DC (LS-3) | 3 |
| | | Full Voltage w/Check Terminal | E12/15 Base | DEM | 5 to 6V DC (LE-6) | 6 |
| | | | | | 12 to 18V DC (LE-8) | 8 |
| | | | | | 24 to 30V DC (LE-3) | 3 |

| Illumination Face Size | (Code) |
|---|---|
| • Type F 40 × 40 mm | F |
| • Type H 40 × 80 mm | H |
| • Type L 40 × 120 mm | L |
| • Type V 80 × 40 mm | V |
| • Type V 80 × 80 mm | G |
| • Type C (20 × 40 mm) × 2 | C |
| • Type F Spot Illumination 40 × 40mm | FST |

| Illumination Color | |
|---|---|
| • Clear Lens Combination | (Code) |
| Amber | A |
| Green | G |
| Pure White | PW |
| Red | R |
| Blue | S |
| White | W |
| Yellow | Y |
| Red/Green | RG |
| • Color Screen Combination (LED only) | (Code) |
| When color display is required at power off, order color screens. For details, see page 34. | |
| Amber | TA |
| Green | TG |
| Pure White | TPW |
| Red | TR |
| Blue | TS |
| White | TW |
| Yellow | TY |
| • Gray Lens Combination | (Code) |
| Amber | SA |
| Green | SG |
| Pure White | SPW |
| Red | SR |
| Blue | SS |
| White | SW |
| Yellow | SY |
| • Type H, L, V, and G cannot be split-illuminated.<br>• Enter the required number of color screens in ( ). | |

The following color/voltage selections are also available.

| Unit | | | | (Code) | Operating Voltage (Built-in Lamp) | (Code) |
|---|---|---|---|---|---|---|
| LED Illuminated | LED Unit | Full Voltage w/Check Terminal (PW, S) | | DHMA | 24V DC ±10% | 2 |
| | | Full Voltage Flasher (PW, S) | | DFA | 24V AC/DC ±10% | 2 |
| | | Transformer (A, G, R, W, Y) | | TD | 115V AC ±10% | 11 |
| | | | | | 120V AC ±10% | 12 |
| | | | | | 230V AC ±10% | 23 |
| | | | | | 240V AC ±10% | 24 |
| | | | | | 380V AC ±10% | 38 |
| | | | | | 400/440V AC ±10% | 4 |
| | | | | | 480V AC ±10% | 48 |
| | | Transformer (PW, S) | | TDA | 115V AC ±10% | 11 |
| | | | | | 120V AC ±10% | 12 |
| | | | | | 230V AC ±10% | 23 |
| | | | | | 240V AC ±10% | 24 |
| | | | | | 380V AC ±10% | 38 |
| | | | | | 400/440V AC ±10% | 4 |
| | | | | | 480V AC ±10% | 48 |
| | | DC-DC Converter (PW, S) | | CDA | 110V DC (90 to 140V DC) | 1 |
| | | Resistor (PW, S) | | RNA | 100/110V AC/DC ±10% | 1 |
| | LED Lamp | One-color Full window (Type C) (combination of PW, S only) | BA9S/13 Base | DPA | 6V AC/DC ±5% (LSTD-6S) × 2 | 6 |
| | | | | | 12V AC/DC ±10% (LSTD-1S) × 2 | 1 |
| | | | | | 24V AC/DC ±10% (LSTD-2S) × 2 | 2 |
| | | One-color Full window (Type C) (combination of PW, S and A, G, R, W, Y) | | DPC | 6V AC/DC ±5% (LSTD-6∗) | 6 |
| | | | | | 12V AC/DC ±10% (LSTD-1∗) | 1 |
| | | | | | 24V AC/DC ±10% (LSTD-2∗) | 2 |
| Incandescent Illuminated | | Transformer | E12/15 Base | TE | 115V AC ±10% (LE-8) | 11 |
| | | | | | 120V AC ±10% (LE-8) | 12 |
| | | | | | 230V AC ±10% (LE-8) | 23 |
| | | | | | 240V AC ±10% (LE-8) | 24 |
| | | | | | 380V AC ±10% (LE-8) | 38 |
| | | | | | 400/440V AC ±10% (LE-8) | 4 |
| | | | | | 480V AC ±10% (LE-8) | 48 |

Note: For longer lamp life, LE-3 (30V rating, 2W lamp) or LS-3 (30V rating, 1W) lamps are recommended when using on 24V AC/DC.

## Ordering Information

When ordering SLC Series Combination Display Lights, use the specification sheet provided on page 39.

### Designation Procedure

1. Part No.: Refer to Part No. Development on page 24.
2. Quantity: Enter the required number of identical assemblies.

### Counting of Windows

Count the number of windows in the equivalent of Type F (basic size).

### Leaf Springs

Leaf spring for temporary fastening is not attached, and can be supplied free of charge upon request when ordering (Part No. SLD40KVP).

## [Conversion Rate]

- Type H (horizontal)

Type F equivalent: 2 windows
Row (1), Column (2)

- Type L (horizontal)

Type F equivalent: 3 windows
Row (1), Column (3)

- Type V (vertical)

Type F equivalent: 2 windows
Row (2), Column (1)

- Type G (large)

Type F equivalent: 4 windows
Row (2), Column (2)

- Type C (split-window)

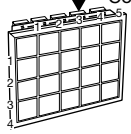
Type F equivalent: 1 window
Row (1), Column (1)

## [Designation Examples]

Ex. 1 SLC40 Series
Type F, 20 windows

SLC40N-[04][05][ ][ ][F][ ]— G(5), R(5), S(5), Y(5)

Columns / Rows



(Color screen: Type F, 20 windows
G(5) + R(5) + S(5) + Y(5) = 20)

Incandescent illuminated when arrangement of color screen is not designated.

LED illuminated units in one color.

— R (20)

(Color screen: Type F, 20 windows
R (20) = 20)

• When color screen is required, specify the color screen code.
Ex. T *
Color Code
Color Screen Code

• When more than one color is required for LED.
• When a particular arrangement of color screen is required.

— No entry is required in designations.

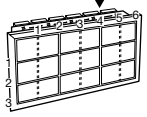
Specify each color code on the specification sheet.

| Rows \ Columns | 1 | 2 | 3 | 4 | 5 | 6 | |
|---|---|---|---|---|---|---|---|
| 1 | R | R | G | G | G | | + |
| 2 | Y | Y | Y | Y | Y | | + |
| 3 | A | A | W | W | W | | + |
| 4 | A | A | W | W | W | | + |
| 5 | + | + | + | + | + | + | |

Ex. 2 SLC40 Series
Type H, 9 windows (Type F equivalent: 3 rows by 6 columns)

SLC40N-[03][06][ ][ ][H][ ]— G(3), R(3), Y(3)

Columns / Rows



(Color screen: Type H, 9 windows
G (3) + R (3) + Y (3) = 9)

— G (9)

(Color screen: Type H, 9 windows
G (9) = 9)

• When color screen is required, specify the color screen code.
Ex. T *
Color Code
Color Screen Code

— No entry is required in designations.

Specify each color code on the specification sheet.

| Rows \ Columns | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---|---|---|---|---|---|---|---|---|
| 1 | W | | R | | R | | | + |
| 2 | W | | R | | R | | | + |
| 3 | W | | G | | G | | | + |
| 4 | + | + | + | + | + | + | + | |

Ex. 3 SLC40 Series (Type F, 12 windows)

When ordering a combination of units with different operating voltages, specify Part No. as follows.

Type F, 12 windows, Full voltage — 24V AC/DC — 8 — Transformer — 100/110V AC — 4

SLC40N-0304-[DD][2]FB(8) + [TD][1]FB(4) -[W(12)]

Specify the position of the units and each voltage on the specification sheet.

| Rows \ Columns | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| 1 | | | | | | + DD2 |
| 2 | | | | | | + |
| 3 | | | | | | + TD1 |
| 4 | + | + | + | + | + | |

Ex. 4 When ordering a combination of units with different illumination colors, specify Part No. as follows.

Example: Full voltage LED illuminated 24V AC/DC, Red (6), Pure White (2)

SLC40N-0204-DD2FB(6) + DDA2FB(2) - R(6)PW(2)
Red — Pure White — Designation
Red: 6, Pure White: 2

Specify the position of the units and each color code on the specification sheet.

| Rows \ Columns | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| 1 | PW | R | R | R | | + |
| 2 | PW | R | R | R | | + |
| | + | + | + | + | + | |

Ex. 5 When ordering a combination of units with different illumination colors for four windows of type C, specify Part No. as follows.

Example: Full voltage LED illuminated 24V AC/DC

SLC40N-0202-DPA2CB(1) DPC2CB(3) - R(1)G(1)A(1)S(1)PW(4)
Blue, Pure white — Red, green, amber, pure white — Designation
Red: 1, green: 1, blue 1, amber 1, pure white 4

Specify the position of the units and each color code on the specification sheet.

| Rows \ Columns | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| 1 | R PW | G PW | | | | + |
| 2 | S PW | A PW | | | | + |
| | + | + | + | + | + | |

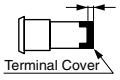
# SLC30/40 Series Combination Display Lights Accessories

## Terminal Cover

### Ordering Terminal Covers

- The fingersafe, spring-up terminal types have integral covers, and do not require terminal covers.
- Terminals other than fingersafe, spring-up terminals do not have terminal covers and need covers ordered separately.
- Incandescent illuminated resistor type cannot use terminal covers.

### Applicable Terminal Covers (Material: PPE)

| Series | Style | | Applicable Terminal Covers | | | | | | When using a terminal cover, the depth is extended shown as below. |
|---|---|---|---|---|---|---|---|---|---|
| | | | **SLC30-VL3** | **HW-VL3** | **SLC30-VL5** | **SLC40-VL5** | **SLC30-VL6** | **SLC40-VL6** | |
| | | |  |  |  |  |  |  |  Terminal Cover |
| | | | 29H × 28W | 38H × 26W | 29H × 28W | 36H × 33.5W | 29H × 26W | 39H × 28W | |
| SLC30 | LED Illuminated | LED One-color Full w/Check Terminal | | | | | Applicable | | +5.7 mm |
| | | Two-color Alternate | | | | | Applicable | | +5.7 mm |
| | | Type C (half-type) one color Full × 2 | | | Applicable | | | | +2.5 mm |
| | Incandescent Illuminated | One-color Full | Applicable | | | | | | +4.5 mm |
| SLC40 | LED Illuminated | LED One-color Full w/Check Terminal | | | | | | Applicable | +4.7 mm |
| | | Two-color Alternate | | | | | | Applicable | +4.7 mm |
| | | Type C (half-type) one color Full × 2 | | | | Applicable | | | +3 mm |
| | Incandescent Illuminated | One-color Full | | Applicable | | | | | +3 mm |
| | | One-color Full w/Check Terminal | | | | | | Applicable | +4.7 mm |
| | | One-color Full Dual-lamp | | | | Applicable | | | +3 mm |

## Weight

Approximate weight of SLC combination display lights can be calculated in the formula below.

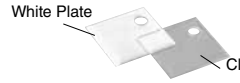
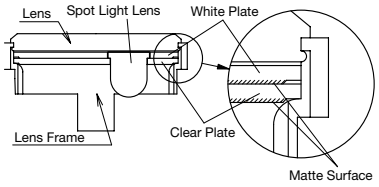
**Weight** = [A × (No. of Rows + No. of Columns) Type F equivalent] + [B × No. of Windows Type F equivalent]

**Frame Weight** **Display Weight**

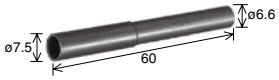
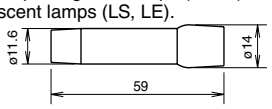
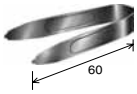
| Series | A | B (including light source) | | | | | |
|---|---|---|---|---|---|---|---|
| | | (Full Voltage) 6V AC/DC 12V AC/DC 24V AC/DC | (Full Voltage) Flasher | (Transformer) 100/110V AC 200/220V AC | (Resistor) 100/110V DC 100/110V AC/DC (Note 2) | (DC-DC Converter) 110V DC | Type C Split-window (Type F equivalent) |
| SLC30 (Approx.) | 22g | 38g | 48g | Incandescent: 105g LED: 85g | Incandescent: 72g LED: 47g | 54g | 46g |
| SLC40 (Approx.) | 30g | 60g | 71g | 126g | Incandescent: 125g LED: 69g | 77g | 66g |

## Accessories / Replacement Parts

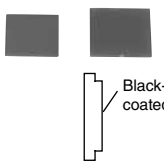
### Accessories

| Name & Shape | Applicable Model | Part No. | Ordering No. | Package Quantity | Remarks |
|---|---|---|---|---|---|
| Spot Illumination Kit for Type F Window<br>  <br>(supplied with the spot illumination type SLC) | SLC30N | **SLCN-3ST-F2** | **SLCN-3ST-F2** | 1 |  |
| | SLC40N | **SLCN-4ST-F2** | **SLCN-4ST-F2** | 1 | |
| White Screen for Spot Illumination | SLC30N | **SLDN-3C-FW-ST1** | **SLDN-3C-FW-ST1** | 1 | |
| | SLC40N | **SLDN-4PF-FW-ST1** | **SLDN-4PF-FW-ST1** | 1 | |

### Tool Accessories

| Name & Shape | Material | Part No. | Ordering No. | Package Quantity | Remarks |
|---|---|---|---|---|---|
| Lamp Holder Tool<br>  | Rubber | **OR-44** | **OR-44** | 1 | Used for replacing LED lamps (LFTD) for SLC30 Type C (Split-window). |
| Lamp Holder Tool<br>  | Rubber | **OR-55** | **OR-55** | 1 | Used for replacing LED lamps (LSTD) or incandescent lamps (LS, LE).<br>  |
| LED Unit Removal Tool<br>  | Metal | **MT-101** | **MT-101** | 1 | Used for removing the LED unit for the SLC30/40 series. |
| Lens Unit Removal Tool<br>  | Rubber (Ring: metal) | **MT-S01** | **MT-S01** | 1 | Used for removing the lens unit. |

### Marking Plate, Color Screens

| Name & Shape | Series | Applicable Window | Dimensions (mm) | | Part No. | Ordering No. | Color Code | Package Quantity |
|---|---|---|---|---|---|---|---|---|
| Color Screen (LED/Incandescent)<br>  | SLC30 | F | 27H × 27W × 1.0t | Acrylic | **SLDN-3C-*** | **SLDN-3C-*PN05** | A: Amber<br>C: Clear (clear screen)<br>FW: White (white screen)<br>G: Green<br>R: Red (Type F)<br>RL: Red (Except Type F)<br>S: Blue<br>Y: Yellow | 5 |
| | | H and V | 27H × 57W × 1.0t | | **SLC-3PH-*** | **SLC-3PH-*PN05** | | |
| | | H (split-window) | 27H × 28.5W × 1.0t | | **SLC-3PH2-*** | **SLC-3PH2-*PN05** | | |
| | | L | 27H × 87W × 1.0t | | **SLC-3PL-*** | **SLC-3PL-*PN05** | | |
| | | G | 57H × 57W × 1.0t | | **SLC-3PG-*** | **SLC-3PG-*PN05** | | |
| | | C (LED only) | 12H × 27W × 1.0t | | **SLC-3PC-*** | **SLC-3PC-*PN05** | | |
| | SLC40 | F | 35.8H × 35.8W × 1.0t | | **SLCN-4PF-*** | **SLCN-4PF-*PN05** | | |
| | | H and V | 75.8H × 35.8W × 1.0t | | **SLC-4PH-*** | **SLC-4PH-*PN05** | | |
| | | L | 35.8H × 115.8W × 1.0t | | **SLC-4PL-*** | **SLC-4PL-*PN05** | | |
| | | G | 75.8H × 75.8W × 1.0t | | **SLC-4PG-*** | **SLC-4PG-*PN05** | | |
| | | C (LED only) | 15.8H × 35.8W × 1.0t | | **SLC-4PC-*** | **SLC-4PC-*PN05** | | |
| Black Marking Plate<br>  | SLC30 | F | 27H × 27W × 1.0t | | **SLDN-3C-WM** | **SLDN-3C-WM** | — | 1 |
| | | H and V | 27H × 57W × 1.0t | | **SLC-3PH-FWM** | **SLC-3PH-FWM** | | |
| | | H (split-window) | 27H × 28.5W × 1.0t | | **SLC-3PH2-FWM** | **SLC-3PH2-FWM** | | |
| | | L | 27H × 87W × 1.0t | | **SLC-3PL-FWM** | **SLC-3PL-FWM** | | |
| | | G | 57H × 57W × 1.0t | | **SLC-3PG-FWM** | **SLC-3PG-FWM** | | |
| | | C (LED only) | 12H × 27W × 1.0t | | **SLC-3PC-FWM** | **SLC-3PC-FWM** | | |
| | SLC40 | F | 35.8H × 35.8W × 1.0t | | **SLCN-4PF-FWM** | **SLCN-4PF-FWM** | | |
| | | H and V | 75.8H × 35.8W × 1.0t | | **SLC-4PH-FWM** | **SLC-4PH-FWM** | | |
| | | L | 35.8H × 115.8W × 1.0t | | **SLC-4PL-FWM** | **SLC-4PL-FWM** | | |
| | | G | 75.8H × 75.8W × 1.0t | | **SLC-4PG-FWM** | **SLC-4PG-FWM** | | |
| | | C (LED only) | 15.8H × 35.8W × 1.0t | | **SLC-4PC-FWM** | **SLC-4PC-FWM** | | |

Note: For insertion order into SLC frames or markings, see operating instructions on page 34 and 35.

## Replacement Parts

### Lens

| Name & Shape | Description | Series | Applicable Window | Dimensions (mm) | Material | Part No. |
|---|---|---|---|---|---|---|
| Lens (LED/Incandescent)  | Clear | SLC30 | F | 28H × 28W × 2.8t | Acrylic | **SLC-3LF** |
| | | | H and V | 28H × 58W × 2.8t | | **SLC-3LH** |
| | | | L | 28H × 88W × 2.8t | | **SLC-3LL** |
| | | | G | 58H × 58W × 2.8t | | **SLC-3LG** |
| | | | C (LED only) | 13H × 28W × 2.8t | | **SLC-3LC** |
| | | SLC40 | F | 36.8H × 36.8W × 2.8t | | **SLC-4LF** |
| | | | H and V | 36.8H × 76.8W × 2.8t | | **SLC-4LH** |
| | | | L | 36.8H × 116.8W × 2.8t | | **SLC-4LL** |
| | | | G | 76.8H × 76.8W × 2.8t | | **SLC-4LG** |
| | | | C (LED only) | 16.8H × 36.8W × 2.8t | | **SLC-4LC** |
| | Gray | SLC30 | F | 28H × 28W × 2.8t | | **SLC-3LF-M** |
| | | | H and V | 28H × 58W × 2.8t | | **SLC-3LH-M** |
| | | | L | 28H × 88W × 2.8t | | **SLC-3LL-M** |
| | | | G | 58H × 58W × 2.8t | | **SLC-3LG-M** |
| | | | C (LED only) | 13H × 28W × 2.8t | | **SLC-3LC-M** |
| | | SLC40 | F | 36.8H × 36.8W × 2.8t | | **SLC-4LF-M** |
| | | | H and V | 36.8H × 76.8W × 2.8t | | **SLC-4LH-M** |
| | | | L | 36.8H × 116.8W × 2.8t | | **SLC-4LL-M** |
| | | | G | 76.8H × 76.8W × 2.8t | | **SLC-4LG-M** |
| | | | C (LED only) | 16.8H × 36.8W × 2.8t | | **SLC-4LC-M** |

### Lens Frame

| Shape | Series | Applicable Window | Material | Part No. | |
|---|---|---|---|---|---|
| | | | | LED Illuminated | Incandescent Illuminated |
| For LED  For Incandescent  | SLC30 | F | ABS | **SLC-3WF-BL** | **SLC-3WF-B** |
| | | H | | **SLC-3WH-BL** | **SLC-3WH-B** |
| | | H (split-window) (Note) | | **SLC-3WH2-BL** | **SLC-3WH2-B** |
| | | L | PC | **SLC-3WL-BL** | **SLC-3WL-B** |
| | | V | ABS | **SLC-3WV-BL** | **SLC-3WV-B** |
| | | G | | **SLC-3WG-BL** | **SLC-3WG-B** |
| | | C | | **SLC-3WC-BL** | — |
| | SLC40 | F | | **SLC-4WF-BL** | **SLC-4WF-B** |
| | | H | | **SLC-4WH-BL** | **SLC-4WH-B** |
| | | L | PC | **SLC-4WL-BL** | **SLC-4WL-B** |
| | | V | ABS | **SLC-4WV-BL** | **SLC-4WV-B** |
| | | G | | **SLC-4WG-BL** | **SLC-4WG-B** |
| | | C | | **SLC-4WC-BL** | — |

Note: A light barrier is supplied.

### LED Units

| Series & Shape | Illumination | Operating Voltage | Rated Current | Part No. | Ordering No. | Color Code |
|---|---|---|---|---|---|---|
| SLC30  Weight: approx. 4.3g | One color full | 6V AC/DC | Amber, green, red, yellow:12mA White: 21mA | **SLDN-36M-∗** | **SLDN-36M-∗T** | Specify a color code in place of ∗ in the Part No. A (amber) G (green) PW (pure white) R (red) S (blue) W (white) Y (yellow) |
| | | 12V AC/DC | Amber, green, red,white, yellow: 12mA | **SLDN-31M-∗** | **SLDN-31M-∗T** | |
| | | 24V AC/DC | Amber, red, white: 12mA Blue, green, pure white, yellow: 11mA | **SLDN-32M-∗** | **SLDN-32M-∗T** | |
| | Two-color alternate | 24V DC | Red: 12mA/green: 11mA | **SLDN-32MW-RG** | **SLDN-32MW-RGT** | |
| SLC40  Weight: approx. 9.2g | One color full | 24V AC/DC | Amber, blue, green, pure white, red, yellow, white: 15mA | **SLCN-42M-∗** | **SLCN-42M-∗T** | |
| | Two-color alternate | 24V AC/DC | Red: 15mA/green: 15mA | **SLCN-42MW-RG** | **SLCN-42MW-RGT** | |

Note: Blue (S) and PW (pure white) are 24V AC/DC only

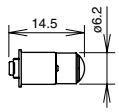
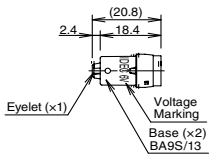
## Replacement Parts

### LED Units for Spot Illumination

| Series & Shape | Rated Voltage (AC: 50/60 Hz) | Rated Current | Part No. | Ordering No. | Color Code |
|---|---|---|---|---|---|
| SLC30<br>  <br>Weight: approx. 4.5g | 24V AC/DC | Amber, red, white: 12mA<br>Blue, green, pure white, yellow: 11mA | **SLDN-32ST-∗** | **SLDN-32ST-∗T** | Specify a color code in place of ∗ in the Part No.<br>A (amber)<br>G (green)<br>PW (pure white)<br>R (red)<br>S (blue)<br>W (white)<br>Y (yellow) |
| SLC40<br>  <br>Weight: approx. 9.4g | 24V AC/DC | Amber, blue, green, pure white, red, white, yellow: 15mA | **SLCN-42ST-∗** | **SLCN-42ST-∗T** | |

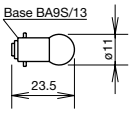
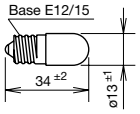
• Used with SLCN-ST-∗ spot illumination kit. The spot color is same as illumination surface.

### LED Lamps

| Shape | Operating Voltage | Current Draw | | Part No. | Ordering No. | Illumination Color | Package Quantity | Base |
|---|---|---|---|---|---|---|---|---|
| | | DC Rating | AC Rating | | | | | |
| LFTD Lamp (SLC30)<br>  <br>  <br> | 5V DC | 8 mA | — | **LFTD-5∗** | **LFTD-5∗** | Specify a color code in place of ∗ in the Part No.<br>A (amber)<br>G (green)<br>PW (pure white)<br>R (red)<br>S (blue)<br>W (white)<br>Y (yellow) | 1 | SX6S/8 × 5.4 |
| | | | | | **LFTD-5∗PN10** | | 10 | |
| | 6V AC/DC | 7 mA | 9 mA (A, R, W, Y)<br>10 mA (G, S, PW) | **LFTD-6∗** | **LFTD-6∗** | | 1 | |
| | | | | | **LFTD-6∗PN10** | | 10 | |
| | 12V AC/DC | 8 mA | 9 mA | **LFTD-1∗** | **LFTD-1∗** | | 1 | |
| | | | | | **LFTD-1∗PN10** | | 10 | |
| | 24V AC/DC | 8 mA | 9 mA | **LFTD-2∗** | **LFTD-2∗** | | 1 | |
| | | | | | **LFTD-2∗PN10** | | 10 | |
| LSTD Lamp (SLC40)<br>  <br>  <br> | 6V AC/DC | 7 mA (A, R, W)<br>5.5 mA (G, S, PW) | 8 mA<br>(A, G, PW, R, S, W) | **LSTD-6∗** | **LSTD-6∗** | A (amber)<br>G (green)<br>PW (pure white) (Note)<br>R (red)<br>S (blue)<br>W (white) | 1 | BA9S/13 |
| | | | | | **LSTD-6∗PN10** | | 10 | |
| | 12V AC/DC | 10 mA | 11 mA | **LSTD-1∗** | **LSTD-1∗** | | 1 | |
| | | | | | **LSTD-1∗PN10** | | 10 | |
| | 24V AC/DC | 10 mA | 11 mA | **LSTD-2∗** | **LSTD-2∗** | | 1 | |
| | | | | | **LSTD-2∗PN10** | | 10 | |

Note: For Type C and Yellow (Y) illumination, use yellow (Y) color screen and pure white (PW) LED lamp.

### Incandescent Lamps

| Shape | Operating Voltage | Ratings | Part No. | Base |
|---|---|---|---|---|
| LS Lamp<br>  <br>  <br> | 6V AC/DC | 1W (6.3V) | **LS-6** | BA9S/13 |
| | 12V AC/DC | 1W (18V) | **LS-8** | |
| | 18V AC/DC | 1W (24V) | **LS-2** | |
| | 24V AC/DC | 1W (30V) | **LS-3** | |
| LE Lamp<br>  <br>  <br> | 6V AC/DC | 2W (6.3V) | **LE-6** | E12/15 |
| | 12V AC/DC | 2W (18V) | **LE-8** | |
| | 18V AC/DC | 2W (24V) | **LE-2** | |
| | 24V AC/DC | 2W (30V) | **LE-3** | |

All dimensions in mm.

# SLC30/40 Series Combination Display Lights Accessories

## Accessories / Replacement Parts

### Full Voltage Adapter

| Shape | Series | Description | | Part No. |
|---|---|---|---|---|
|  | SLC30 | LED | One-color Full | **SLDN-3DH** |
|  | | Incandescent | | **SLC-3DS** |
|  | SLC40 | LED | | **SLDN-4DH** |
|  | | Incandescent | | **SLC-4DE** |

### Transformer Unit

| Shape | Series | Illumination | Primary Voltage (50/60 Hz) | Applicable LED Unit/ Incandescent Lamp | Part No. |
|---|---|---|---|---|---|
|  | SLC30 | LED | 100/110V AC | SLDN-32M-∗ | **SLDN-3TH1** |
| | | | 200/220V AC | | **SLDN-3TH2** |
|  | | Incandescent | 100/110V AC | LS-6 | **SLC-3TS1** |
| | | | 200/220V AC | | **SLC-3TS2** |
|  | SLC40 | LED | 100/110V AC | SLCN-42M-∗ | **SLDN-4TH1** |
| | | | 200/220V AC | | **SLDN-4TH2** |
|  | | Incandescent | 100/110V AC | LE-6 | **SLC-4TE1** |
| | | | 200/220V AC | | **SLC-4TE2** |

### Separate Transformer (24V output, LED Unit)

| Shape | Primary Voltage | Secondary Voltage | Part No. | Applicable LED Unit/ Lamp |
|---|---|---|---|---|
|  | 100/110V AC | 0.5W, 24V | **TWR512** | See the table below. |
| | 200/220V AC | 0.5W, 24V | **TWR522** | |
| | 400/440V AC | 0.5W, 24V | **TWR542** | |

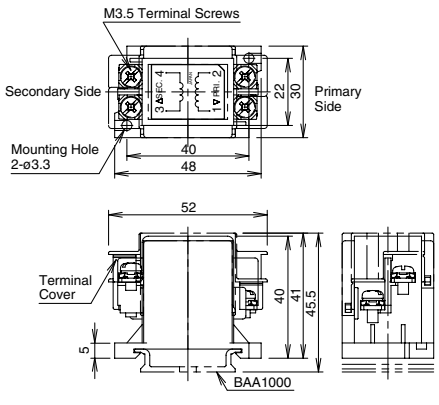
• Terminal cover (Part No. TWR-VL3) is supplied as standard.

#### Applicable LED Unit/Lamp

| Series | LED Part No. | | Applicable Model |
|---|---|---|---|
| SLC30 | LED Unit | **SLDN-32M-∗** | One-color full (one unit per transformer) |
| | | **SLDN-32MW-RG** | Two-color alternate (one unit per transformer) |
| | LED Lamp | **LFTD-2∗** | Type C (up to two lamps per transformer) |
| SLC40 | LED Unit | **SLCN-42M-∗** | LED one-color full (one unit per transformer) |
| | | **SLCN-42MW-RG** | Two-color alternate (one unit per transformer) |
| | LED Lamp | **LSTD-2∗** | Type C (one unit per transformer) |

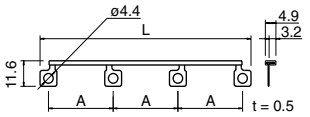
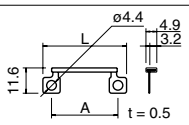
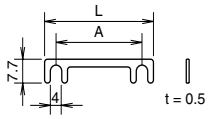
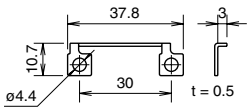
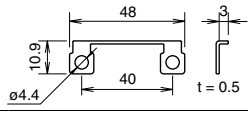
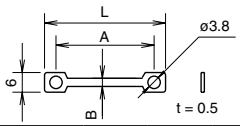
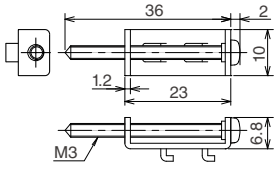
• Specify a color code in place of ∗. See page 29.

#### Dimensions




All dimensions in mm.

## Accessories / Replacement Parts

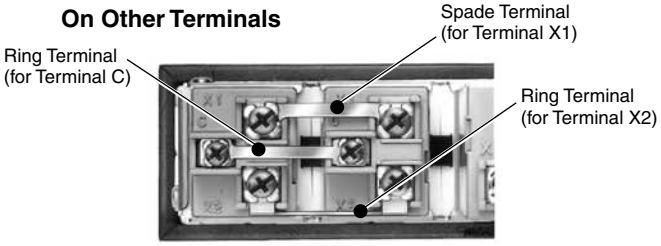
| Name & Shape | | Part No. | Ordering No. | Description & Dimensions | | Package Quantity |
|---|---|---|---|---|---|---|
| Jumper for fingersafe, Spring-up Terminal | Ring Terminal (for four windows)<br>Rated Current: 3A<br>  <br>(Supplied) | **SLCN-JP34** | **SLCN-JP34PN10** | For SLC30<br>Terminal X1, X2 |  | 10 |
| | | **SLCN-JP44** | **SLCN-JP44PN10** | For SLC40<br>Terminal X1, X2 | | |
| | | | | | Part No. \| L \| A<br>**SLCN-JP34** \| 97.8 \| 30<br>**SLCN-JP44** \| 128 \| 40 | |
| | Ring Terminal (for 2 windows)<br>Rated Current: 3A<br>  <br>(Supplied) | **SLCN-JP35** | **SLCN-JP35PN10** | For SLC30<br>Terminal X1, X2 |  | |
| | | **SLCN-JP45** | **SLCN-JP45PN10** | For SLC40<br>Terminal X1, X2 | | |
| | | | | | Part No. \| L \| A<br>**SLCN-JP35** \| 37.8 \| 30<br>**SLCN-JP45** \| 48 \| 40 | |
| Jumper for Other Terminals | Spade Terminal<br>Rated Current: 3A<br>  <br>(Supplied) | **SLC-JP30** | **SLC-JP30PN10** | For SLC30<br>Terminal X1 |  | |
| | | **SLC-JP40** | **SLC-JP40PN10** | For SLC40<br>Terminal X1 | | |
| | | | | | Part No. \| L \| A±0.1<br>**SLCN-JP30** \| 38 \| 30<br>**SLCN-JP40** \| 48 \| 40 | |
| | Ring Terminal<br>Rated Current: 3A<br>  | **SLC-JP33** | **SLC-JP33PN10** | For SLC30<br>Terminal X2 or<br>Terminal X1 of<br>Type C |  | |
| | | **SLC-JP41** | **SLC-JP41PN10** | For SLC40<br>Terminal X2 |  | |
| | Ring Terminal<br>Rated Current: 3A<br>  | **SLC-JP32** | **SLC-JP32PN10** | For SLC30<br>Terminal C (check terminal & 2-color alternate) |  | |
| | | **SLC-JP42** | **SLC-JP42PN10** | For SLC40<br>Terminal C (check terminal & 2-color alternate) | | |
| | | | | | Part No. \| L \| A±0.1 \| B<br>**SLCN-JP32** \| 37 \| 30 \| 2.5<br>**SLCN-JP42** \| 47 \| 40 \| 2.5 | |
| Mounting Clips<br>  <br>(Supplied) | | **SLC-3K1** | **SLC-3K1PN10** | Used for fastening SLC units to panel cut-out from the rear of the panel.<br>Weight: approx. 4.6g |  | |

All dimensions in mm.

## Jumper Application Examples

### On Fingersafe, Spring-up Terminals


### On Other Terminals



# SLC30/40 Series Combination Display Lights Instructions

## ⚠ Safety Precautions

- Turn off the power to the SLC units before installation, removal, wiring, maintenance, or inspection. Before removing the LED units or incandescent lamps, make sure that power is turned off. Failure to turn off the power may cause an electrical shock, create fire hazards, or damage of LED units or incandescent lamps. Do not use the SLC units without the lens, otherwise ingress of foreign objects may cause short circuit, and LED units may be damaged resulting in the deterioration of LED brightness or no lighting.
- When lighting the SLC units continuously, observe the conditions described below. If the limits are exceeded, the SLC units may heat up and create fie hazards or damage the SLC units.
- To avoid burning your hand, use the lamp holder tool when replacing incandescent lamps.
- For wiring, use wires of a proper size to meet the voltage and current requirements and tighten the terminal screws to the tightening torque shown below. Loose terminal screws may cause excessive heating, resulting in fire hazards.
- Do not install or operate the SLC units where the SLC units are subjected to direct sunlight. Excessive heating may create fire hazards or damage the SLC units.
- When replacing LED units, LED lamps, or incandescent lamps, use IDEC products.

## Operating Instructions

### Notes for Continuous Lighting

Up to 10 SLC units (Type F equivalent) can be lit continuously. When more units are mounted, consider the following restrictions.

**LED illuminated full voltage**
**Incandescent illuminated full voltage**

- Do not light more than 40% of the SLC units continuously, and light the units in a checker pattern.
- When more than 40% of the units are lit continuously, limit the lighting duration to 40 minutes. Before lighting the units again, ensure that all units have cooled down.
- When using 2-color alternate units, do not light the two colors simultaneously.

**LED/Incandescent illuminated**
**Transformer and DC-DC converter**

- Light the units in a flashing or checker pattern.

When using the SLC units in other conditions, contact IDEC.

### Notes for Panel Mounting

- When mounting the SLC units on a panel, determine the panel thickness taking the weights of the SLC units and wires into consideration.

### Tightening Torque for Terminal Screws

- For wiring, use wires of a proper size to meet the voltage and current requirements and tighten the terminal screws to the tightening torque shown below.

| Terminal Screw | Tightening Torque |
|---|---|
| M3 | 0.6 to 1.0 |
| M3.5 | 1.0 to 1.3 N·m |
| M4 | 1.4 to 2.0 N·m |

#### <Storage and Handling>

- Do not use the SLC where it is subjected to condensation caused by extreme temperature change.
- Do not use chemicals such as alcohol that degrade the property of acrylic.

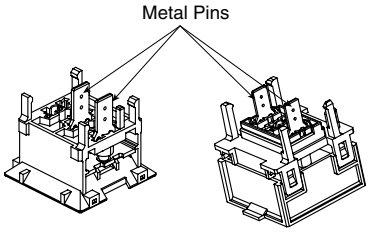
#### <Operating Instructions>

- The illumination color may change depending on the decreasing brightness of LED, along with the period of use.
- The SLC can be used indoors only. Do not use outdoors.

## Operating Instructions

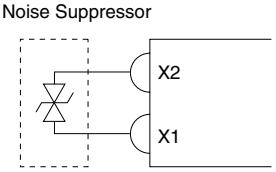
### When Using Blue and Green LED Units

When replacing LED units, avoid ESD to the LED pins, otherwise the internal LED elements may become damaged.




### Precautions for Noise

When using the SLC units in an environment where the SLC is subjected to noise, connect a noise suppressor across terminals X1 and X2 as shown below.

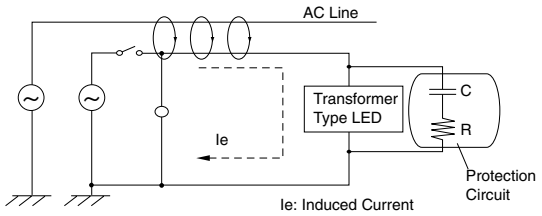



### Notes for Using LED Units

**Countermeasures against dim lighting**

The SLC units contain a provision against dim lighting due to leakage current. If the LED unit appears to be dimly lit due to induced current from nearby AC lines, take appropriate countermeasures as described below.

**[Sample Circuit]**




**[Countermeasure]**

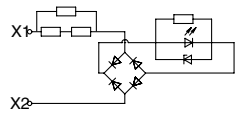
As shown in the diagram above, connect an RC circuit in parallel with the transformer LED unit. For the values of the resistor and capacitor, see the following table.

| Operating Voltage | | Capacitor C (μF) | Resistor R | |
|---|---|---|---|---|
| | | | (Ω) | (W) |
| SLC30 | 100/110V AC (50/60 Hz) | 0.33 | 120 | 0.25 |
| | 200/220V AC (50/60 Hz) | 0.10 | 120 | 0.25 |
| SLC40 | 100/110V AC (50/60 Hz) | 0.22 | 120 | 0.25 |
| | 200/220V AC (50/60 Hz) | 0.10 | 120 | 0.25 |

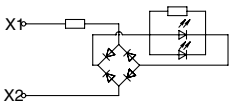
### LED Unit Internal Circuit

#### SLC30 Series

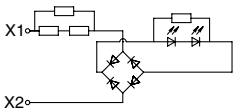
- SLDN-36M-∗ (6V AC/DC)
- SLDN-31M-∗ (12V AC/DC)
  One-color full
  (amber, green, red, yellow)

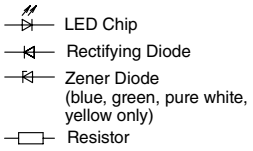



- SLDN-36M-W (6V AC/DC)
  One-color full (white)

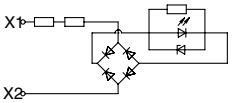



- SLDN-31M-W (12V AC/DC)
  One-color full (white)

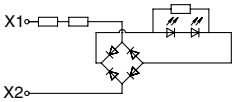


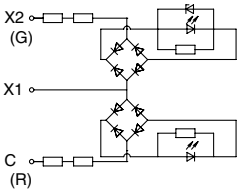

- SLDN-32M-∗ (24V AC/DC)
  One-color full
  (amber, blue, green, red, yellow)



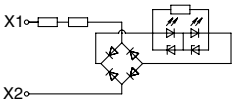

- SLDN-32-W (24V AC/DC)
  One-color full (white)




- SLDN-32MW-RG
  (24V AC/DC)
  Two-color alternate

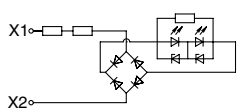



- SLDN-32ST-∗ (24V AC/DC)
  Spot illumination

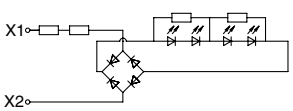



#### SLC40 Series

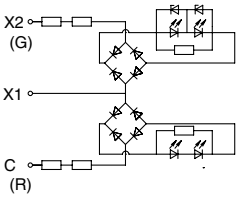
- SLDN-42M-∗ (24V AC/DC)
  One-color full (amber, blue, green, red, yellow)



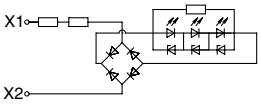

- SLDN-42-W (24V AC/DC)
  One-color full (white)




- SLDN-42MW-RG
  (24V AC/DC)
  Two-color alternate

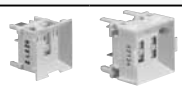



- SLDN-42ST-∗ (24V AC/DC)
  Spot illumination



## Operating Instructions

### Type F, H, H2, L, V, G

| Display Color Type | Light Source | Marking Plate/ Color Screen (Note 1) (Note 2) | Lens | ON Color (Color Code) | | OFF Color |
|---|---|---|---|---|---|---|
| Standard (using clear lens) |  SLC30 SLC40 LED unit |  Matte Surface clear / white |  clear lens | amber (A), blue (S), green (G), pure white (PW) (Type F only), red (R), white (W), yellow (Y) red/green (two-color alternate) (RG) (no spot illumination for red/green two-color alternate) | | White |
| |  SLC30 SLC40 Incandescent lamp |  Matte Surface color / white |  clear lens | amber (A), blue (S), green (G), red (R), yellow (Y) (Note 3) | | |
| |  SLC30 SLC40 Incandescent lamp |  Matte Surface clear / white |  clear lens | white (W) | | |
| Color Screen |  SLC30 SLC40 LED unit |  Matte Surface white / color |  clear lens | amber (TA), blue (TS), green (TG), red (TR), yellow (TY), | | Same as ON color |
| |  SLC30 SLC40 LED unit |  Matte Surface clear / white |  clear lens | pure white (TPW, Type F only), white (TW) | | |
| Gray Lens (Note 4) |  SLC30 SLC40 LED unit |  Matte Surface clear / black (Note 5) |  gray lens | Legend Color | amber (SA), blue (SS), green (SG), pure white (SPW, Type F only), red (SR), white (SW), yellow (SY) | Gray |
| |  SLC30 SLC40 Incandescent lamp |  Matte Surface color∗ / black (Note 5) (∗ clear for white (SW)) |  gray lens | | amber (SA), blue (SS), green (SG), red (SR), white (SW), yellow (SY) | |

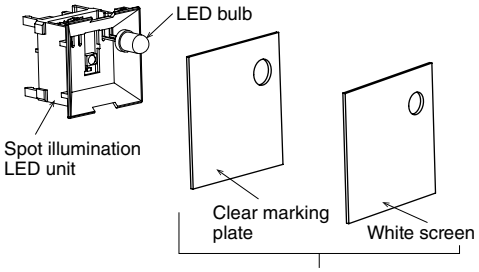
### Type C (split-window)

| Display Color Type | Light Source | Marking Plate/ Color Screen (Note 1) (Note 2) | Lens | ON Color (Color Code) | | OFF Color |
|---|---|---|---|---|---|---|
| Standard (using clear lens) |  SLC30 SLC40 LED lamp |  Matte Surface color / white |  clear lens | amber (A), blue (S), green (G), red (R), yellow (Y) (Note 3) | | White |
| |  SLC30 SLC40 LED lamp |  Matte Surface white / clear |  clear lens | pure white (PW), white (W) | | |
| Gray Lens (Note 4) |  SLC30 SLC40 LED lamp |  Matte Surface color / black (Note 5) |  gray lens | Legend Color | amber (SA), blue (SS), green (SG), red (SR), yellow (SY) | Gray |
| |  SLC30 SLC40 LED lamp |  Matte Surface clear / black (Note 5) |  gray lens | | pure white (SPW), white (SW) | |

Note 1: Place the marking plate and color screen with the matte surfaces facing each other. The insertion order can be interchanged if necessary. Engrave on the flat surface of the screen/plate next to the lens.
Note 2: See page 27 for ordering the screen/plate as replacement parts.
Note 3: When color screen display (color shown when OFF) is necessary, change the insertion order of screen/plate as follows. amber (A), blue (S), green (G), red (R), yellow (Y): light source → white plate → color screen → clear lens
Note 4: When ON: legends shown in the specified color on gray lens. When OFF: no legends shown on gray lens. Gray lens, black marking plate, and clear or color screen are used.
Note 5: Black marking plate has black coating. Engrave a reverse legend on the black-coated surface.

## Type F Spot Illumination

Spot illumination LED unit and spot illumination kit are used.




### Marking on Films

In addition to white color screens or clear marking plates, legends can be engraved on thin marking films on Type F windows. Two sheets of 0.1-mm-thick films or one sheet of 0.2-mm-thick films is applicable. Marking films are not supplied with the SLC units and must be prepared by the user.

### Dimensions

SLC30N: 27 × 27 mm
SLC40N: 35.8 × 35.8 mm

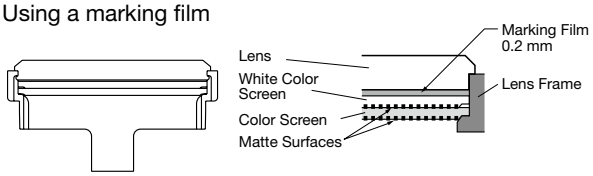
### Film Material

Polyester is recommended.

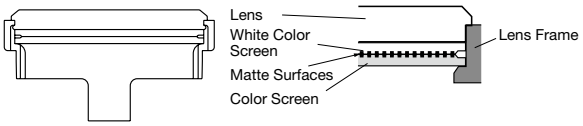
### Placement of Marking Film

When using a marking film, place the matte surfaces of the marking plate and color screen in the same direction to make a room of 0.2 mm for the marking film (matte surfaces are not facing each other). When not using a marking film, face the matte surfaces of marking plate and color screen each other.

Using a marking film



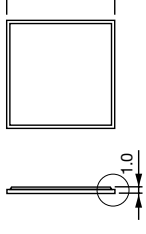

Not using a marking film



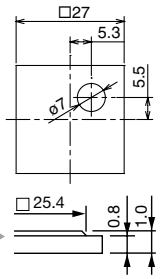

### Color Screen/White Color Screen/Clear Screen Dimensions

SLC30

Type F



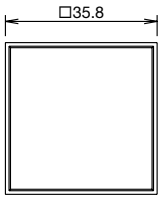

Type F
Spot Illumination



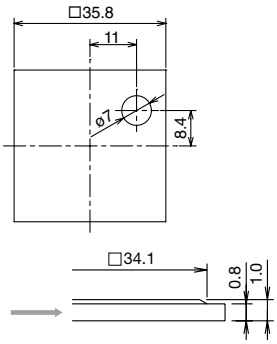

For engraving area, see page 7.

SLC40

Type F




Type F
Spot Illumination




For engraving area, see page 17.

All dimensions in mm.

## Operating Instructions

### Removing the Windows

#### SLC30 Series

To remove the display window, insert the tip of a flat screwdriver into the slot on the bottom of the lens frame, and press down lightly on the screwdriver as shown.

For types G and V, do not put excessive force to remove one latch while pressing the other latch on the opposite side.

#### SLC40 Series (Extensible Windows)

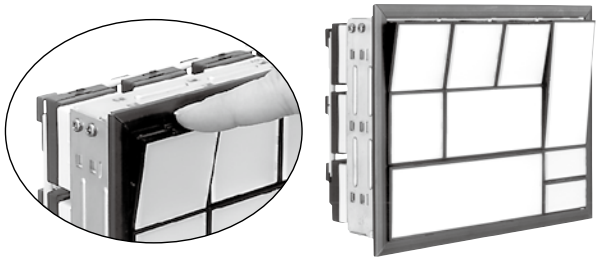
The extensible window, featured on all SLC40 series units except Types C, G, and L, can be removed simply by pulling the upper portion out of the housing. For Types C, G, and L, insert the tip of a flat screwdriver into the slot on the bottom of he lens frame, and press up lightly.

When installing Type C windows, face the retaining latch with TOP marking upward.

All windows are shipped with the window retracted. After the windows are installed in a panel, they can be extended as required starting from the lowest row to the top row. Beware of the orientation when installing the units. When transporting the units, hold all windows in the retracted position.

SLC30 Series

SLC40 Series

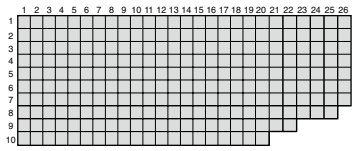


### Maximum Number of Windows

#### SLC30 Series

**LED Unit**

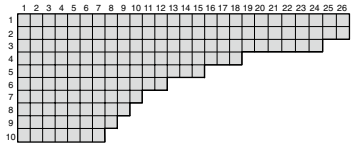
- Full Voltage, w/Check Terminal, 2-color Alternate
  Up to 10 rows/26 columns (windows must be 200 at maximum)



200 windows maximum

**LED Unit**

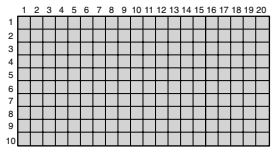
- Transformer, Flasher, DC-DC Converter, Resistor
  Up to 10 rows/26 columns (windows must be 75 at maximum)



75 windows maximum

**Incandescent Lamp**

- Full Voltage
  Up to 10 rows/20 columns



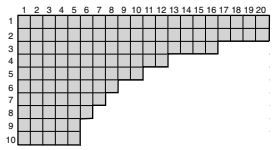
200 windows maximum

**LED Lamp (Type C)**

- Full Voltage

**Incandescent Lamp**

- Transformer, Resistor
  Up to 10 rows/20 columns (windows must be 50 at maximum)

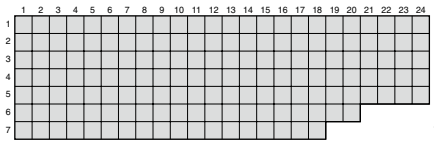


50 windows maximum

#### SLC40 Series

**LED Unit**

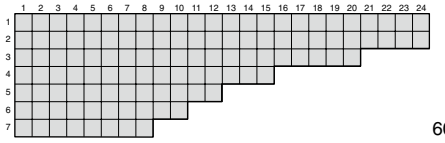
- Full Voltage, w/Check Terminal, 2-color Alternate
  Up to 7 rows/24 columns (windows must be 126 at maximum)



126 windows maximum

**LED Unit**

- Transformer, Flasher, DC-DC Converter, Resistor
  Up to 7 rows/24 columns (windows must be 60 at maximum)



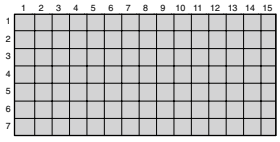
60 windows maximum

**LED Lamp (Type C)**

- Full Voltage

**Incandescent Lamp**

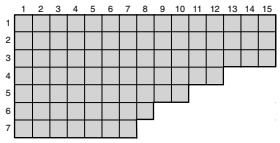
- Full Voltage, w/Check Terminal, 2-color Alternate
  Up to 7 rows/15 columns



105 windows maximum

**Incandescent Lamp**

- Transformer, Resistor
  Up to 7 rows/15 columns (windows must be 50 at maximum



50 windows maximum

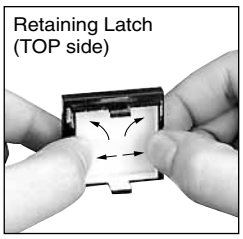
## Replacing Lens, Marking Plate, and Color Screen

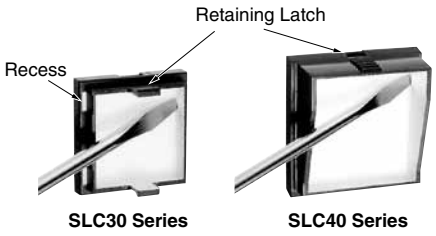
**[Removal]**

The lens has retaining projections (one or two each on right and left sides). To remove the lens, marking plate, and color screen from the lens frame, push open the lens frame with both hands as shown.

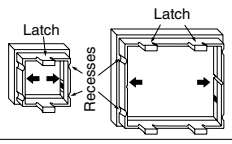
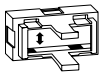
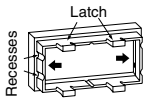
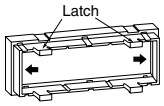
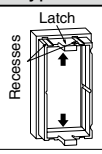
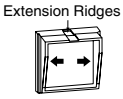
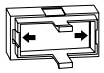
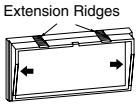
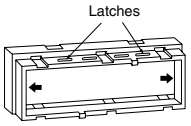
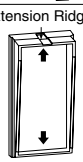
The lens can also be removed by inserting a screwdriver into one of the sides with recesses. Sine the lens has an orientation due to projections, be sure to insert the screwdriver in the direction as shown.

Note: Take care not to damage or scratch the lens surface.



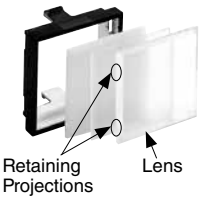

**Retaining Projections Location**

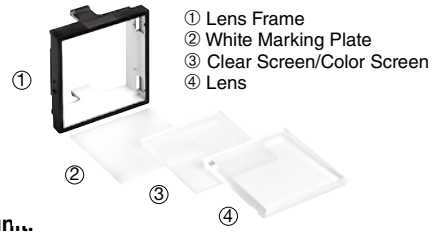
| Series | Type F, G | Type C | Type H | Type L | Type V |
|---|---|---|---|---|---|
| SLC30 Series |   |  |   |   |   |
| SLC40 Series (Extensible Windows) |   |  Not Extensible |   |   Not Extensible |   |

**[Installation]**

Install the color screen and marking plate into the lens frame.

To install the lens, insert its retaining projections into the recesses inside the lens frame, and press the lens on the other side into the lens frame.



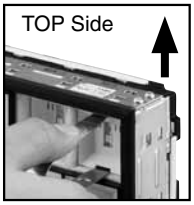

## Replacing the LED Unit

**Ensure that power to the display lights has been turned off before removing the LED un...**

**[Removal]**

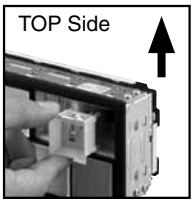
Use the LED unit removal tool (MT-101) to pull out the LED unit. For SLC30 units, pinch the top and bottom sides of the unit. For SLC40 units, pinch the right and left sides of the unit.

Note: When removing the LED unit from the housing, pull it out straight without pressing on the LED unit terminals.



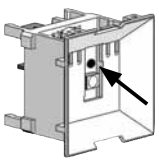
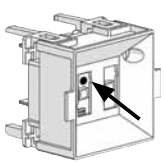

**[Installation]**

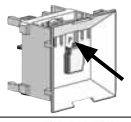
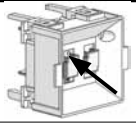
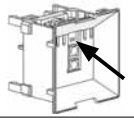
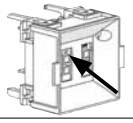
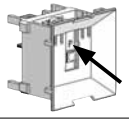
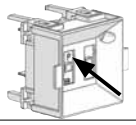
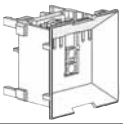
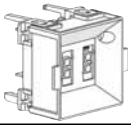
The LED unit has an orientation. To install the LED unit, place the metal pins on the LED unit to fit into the receptacles in the housing, and insert the LED unit.




## LED Unit Color Identification

Each LED unit has part no. and identification mark stamped.

| Color | Code | Mark | Appearance | |
|---|---|---|---|---|
| | | | SLC30 | SLC40 |
| Red | R | ● Red dot |  |  |
| Green | G | ● Green dot | | |
| Amber | A | ● Amber dot | | |
| Blue | S | ● Blue dot | | |

| Color | Code | Mark | Appearance | |
|---|---|---|---|---|
| | | | SLC30 | SLC40 |
| Yellow | Y | P (Note) |  |  |
| White | W | W |  |  |
| Pure White | PW | P |  |  |
| Red/ Green | RG | — |  |  |

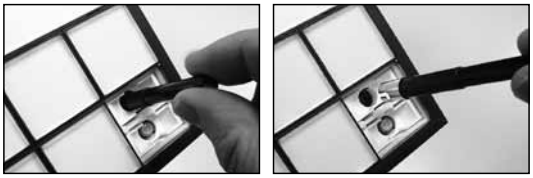
Note: Yellow (Y) LED unit uses a pure white LED unit with a yellow filter on the LED.

## Replacing LED Lamps

### SLC30, Type C

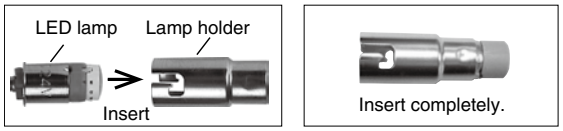
**[Removal]**

Push lamp holder tool OR-44 into the LED lamp kit, and push and turn clockwise to remove the lamp from the lamp holder.



**[Installation]**

Insert the lamp into the lamp holder completely (lamps can be installed easily by using the handle part of lamp holder tool).




Insert the lamp holder tool into the lamp holder.

Align the insertion guides of the lamp holder with the grooves in the SLC unit. Push the lamp lightly and turn clockwise to install.

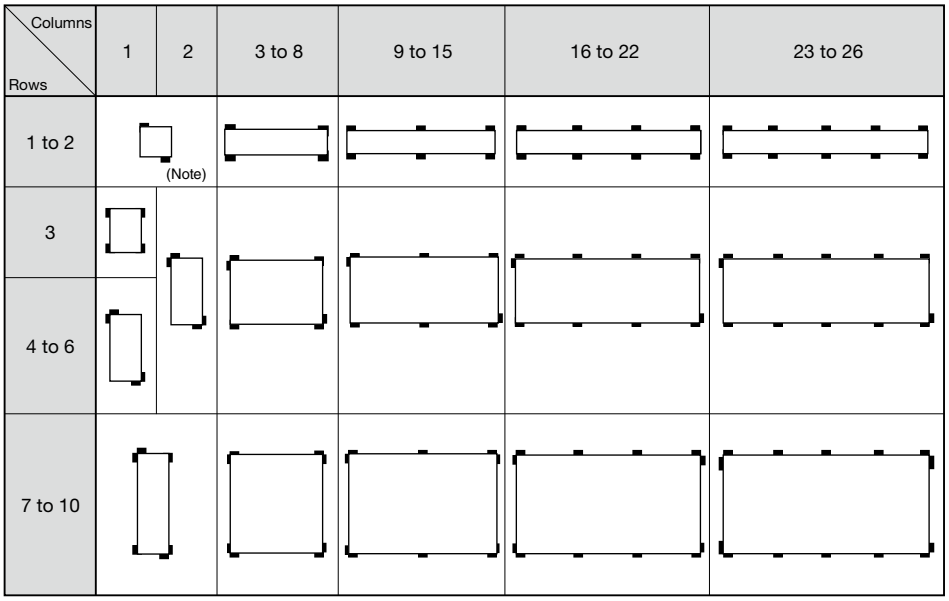
### SLC40, Type C

Lamps can be replaced easily by using the lamp holder tool OR-55. When removing the lamp, reflector does not have to be removed.

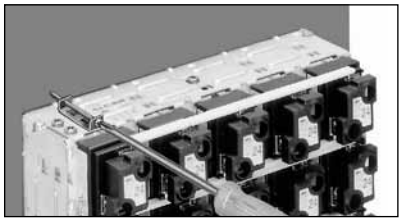
## Installation on Panel

Insert the units into a panel cut-out from the front, and install the mounting clips supplied with the units from the back as shown below. Apply loctite on the screws to prevent loosening. The number of mounting screws varies with the number of windows.
Tighten the screws to a torque of 0.39 N·m to 0.49 N·m.

## Example of Mounting Clip Positions (▬)




Note: See below for Type V.



### No. of Mounting Clips

| Columns / Rows | 1 to 2 | 3 to 8 | 9 to 15 | 16 to 22 | 23 to 26 |
|---|---|---|---|---|---|
| 1 to 2 | 2 | 4 (6) | 6 (8) | 8 | 10 |
| 3 to 6 | 4 (6) | 6 (8) | 8 (10) | 10 (12) | 12 (14) |
| 7 to 10 | 6 (8) | 8 (10) | 10 (12) | 12 | 14 |

Note: Numbers in ( ) show the number of mounting clips required for transformer, resistor, flicker, and DC-DC converter.

## SLC30/40 Series Combination Display Lights Specification Sheet

| | |
|---|---|
| Date of Order | |
| Customer | |
| Address | |
| Phone No. | |
| Contact | |

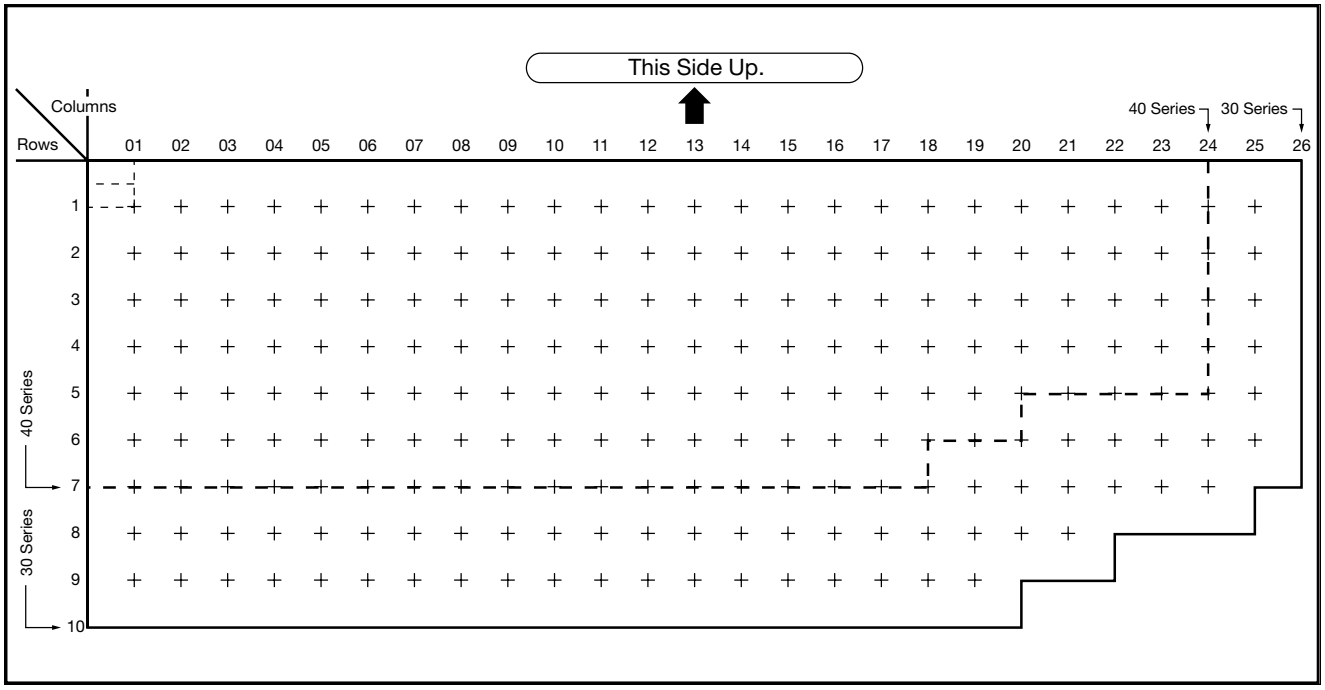
**Part No.**

SLC □0N-□□□□-□□□B-

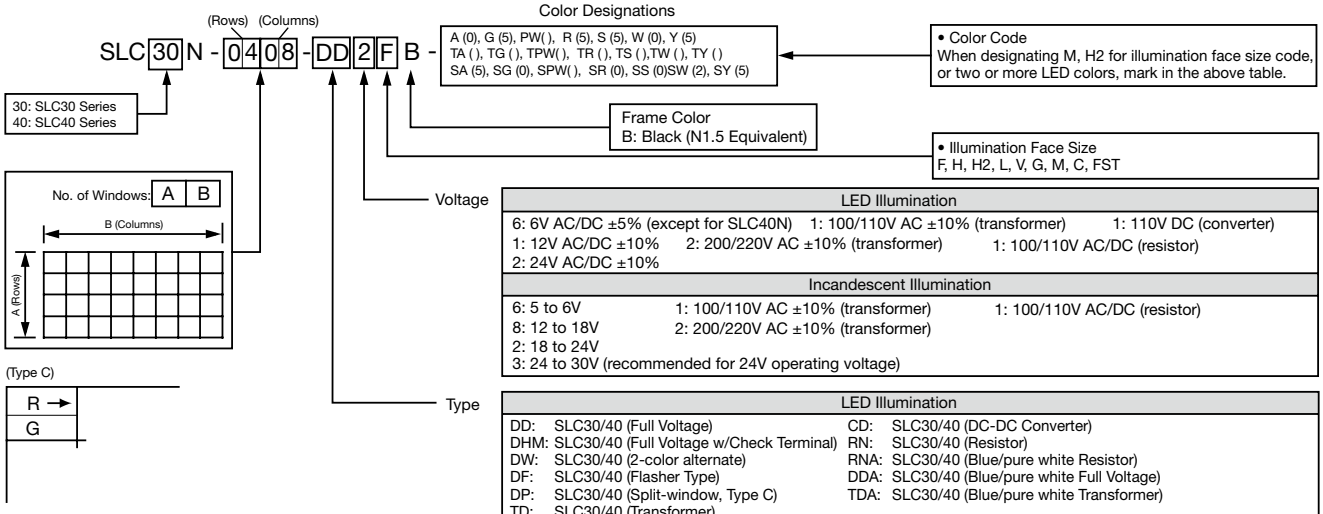
Color Code Designations

A ( ), G ( ), PW ( ), R ( ), S ( ), W ( ), Y ( )
TA ( ), TG ( ), TPW ( ), TR ( ), TS ( ), TW ( ), TY ( )
SA ( ), SG ( ), SPW ( ), SR ( ), SS ( ), SW ( ), SY ( )

### Illumination Face Size & Color Screen Code Designations




## Part No. Development




| LED Illumination | | |
|---|---|---|
| 6: 6V AC/DC ±5% (except for SLC40N) | 1: 100/110V AC ±10% (transformer) | 1: 110V DC (converter) |
| 1: 12V AC/DC ±10% | 2: 200/220V AC ±10% (transformer) | 1: 100/110V AC/DC (resistor) |
| 2: 24V AC/DC ±10% | | |

| Incandescent Illumination | | |
|---|---|---|
| 6: 5 to 6V | 1: 100/110V AC ±10% (transformer) | 1: 100/110V AC/DC (resistor) |
| 8: 12 to 18V | 2: 200/220V AC ±10% (transformer) | |
| 2: 18 to 24V | | |
| 3: 24 to 30V (recommended for 24V operating voltage) | | |

| LED Illumination | |
|---|---|
| DD: SLC30/40 (Full Voltage) | CD: SLC30/40 (DC-DC Converter) |
| DHM: SLC30/40 (Full Voltage w/Check Terminal) | RN: SLC30/40 (Resistor) |
| DW: SLC30/40 (2-color alternate) | RNA: SLC30/40 (Blue/pure white Resistor) |
| DF: SLC30/40 (Flasher Type) | DDA: SLC30/40 (Blue/pure white Full Voltage) |
| DP: SLC30/40 (Split-window, Type C) | TDA: SLC30/40 (Blue/pure white Transformer) |
| TD: SLC30/40 (Transformer) | |

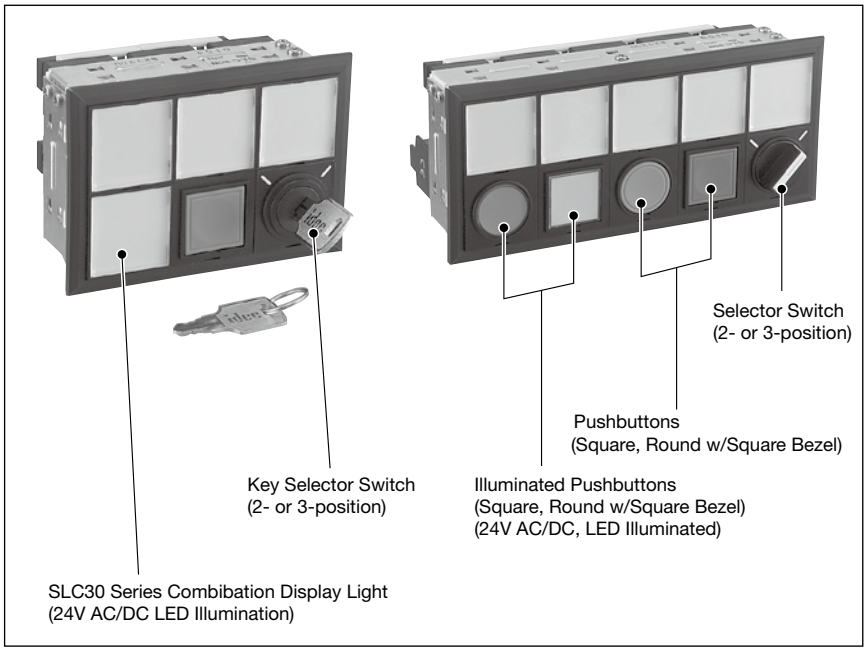
| Incandescent Illumination | |
|---|---|
| DS: SLC30 (BA9S Base Full Voltage) | RS: SLC30 (BA9S Resistor) |
| DE: SLC40 (E12 Base Full Voltage) | RE: SLC40 (E12 Resistor) |
| TS: SLC30 (BA9S Transformer) | DB: SLC40 (BA9S Full Voltage, Dual Lamp) |
| TE: SLC40 (E12 Transformer) | DEM: SLC40 (E12 Full Voltage w/Check Terminal) |

# SLC30 Series Combination Display with Control Units

**Combination of display lights and control units reduce labor of switch installation and minimizes installation space.**

**Switch for lamp test, external switch for system display can be integrated into the frame of combination display lights.**

- Various control units can be installed in the window frame, with or without SLC units.
- Panel space can be reduced.
- Labor and time to install switches can be reduced.
- Flexibility of panel design is maximized.
- Up to 30 windows (3 rows × 10 columns) can be used.




## Combination Display Lights

- LED Illumination
- One-color Full, Type F (30 × 30mm)
- Operating voltage: 24V AC/DC
- Illumination color:
  Amber (A), Blue (S), Green (G), Pure White (PW), Red (R), White (W), Yellow (Y)
- Frame color: Black (B)

## Control Unit (SLC30-LW)

**Pushbutton (Square, Round w/Square Bezel)**

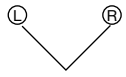
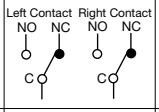
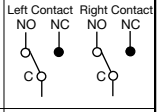
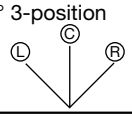
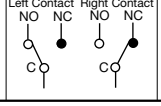
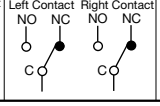
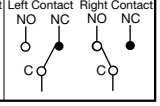
- Contact: DPDT (gold or silver)
- Operation: Momentary
- Button color:
  Black (B), Green (G), Red (R), Blue (S), White (W), Yellow (Y)

**Illuminated Pushbutton (Square, Round w/Square Bezel)**

- Contact: DPDT (gold or silver)
- Operation: Momentary
- Illumination color:
  Amber (A), Green (G), Pure White (PW), Red (R), Blue (S), White (W), Yellow (Y)

**Selector Switch (Round w/Square Bezel)**
**Key Selector Switch (Round w/Square Bezel)**

- Contact: DPDT (gold or silver)
- Operation: 2 or 3-position, maintained

| Operation Angle | Operator Position and Contact Operation | | |
|---|---|---|---|
| | ↖ Left | ↑ Center | ↗ Right |
| 90° 2-position  |  | |  |
| 45° 3-position  |  |  |  |



## Specifications

| | |
|---|---|
| Connection Wire | SLC30: Solid wire ø1.6 × 2<br>Stranded wire 2 mm² × 2<br>SLC-LW: Stranded wire 1.25 mm² maximum |
| Terminal Screw | SLC30: M3.5<br>SLC30-LW: M3.0 |
| Insulation Resistance | 100 MΩ minimum (500V DC megger) |
| Dielectric Strength | SLC30: 2000V AC, 1 minute |
| | SLC30-LW: 2500V AC, 1 minute (between terminals of the same pole: 1000V AC, 1 minute) |
| Operating Temperature | –20 to 40°C (no freezing) |
| Storage Temperature | –25 to +60°C (no freezing) |
| Operating Humidity | 45 to 85% RH (no condensation) |

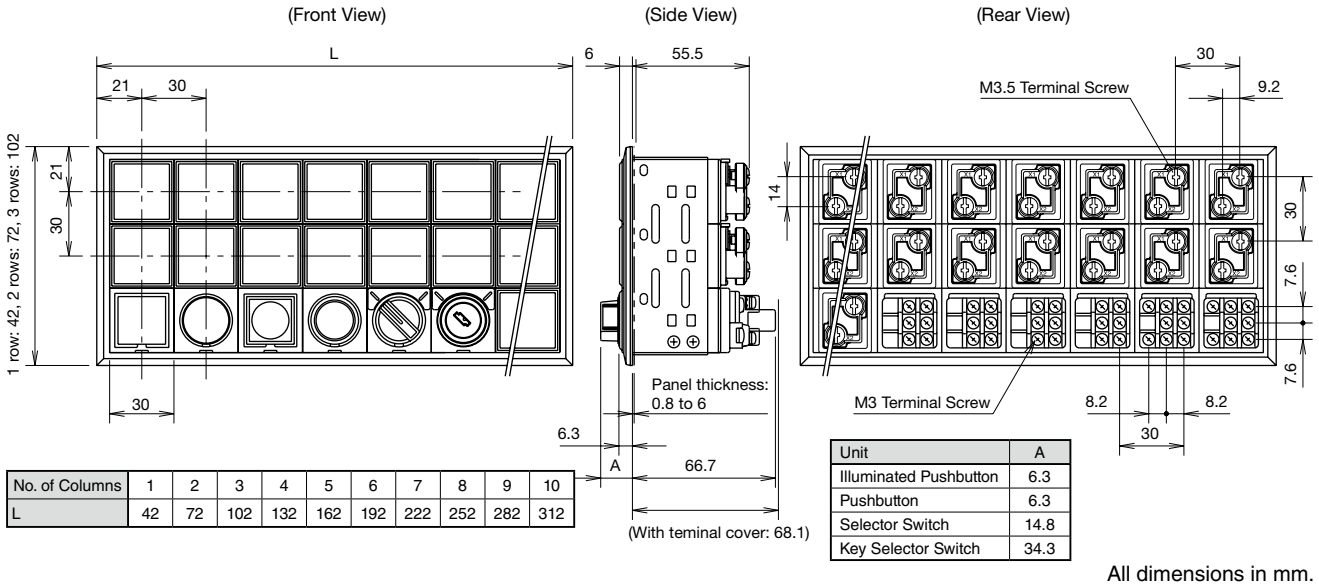
**Contact Ratings**

| | |
|---|---|
| Rated Insulation Voltage | 250V AC/DC |
| Rated Current | Gold contact: 3A<br>Silver contact: 5A |
| Operating Voltage/Current | Gold contact: 125V AC/0.1A, 30V DC/0.1A (resistive load)<br>Silver contact: 125V AC/3A, 250V AC/2A 30V DC/2A, 125V DC/0.4A (resistive load) |

**Combination Display Light Ratings**

| | |
|---|---|
| Operating Voltage | 24V AC/DC |
| Rated Current | Amber, red, white : 12 mA<br>Blue, green, pure white, yellow: 11 mA |

## Dimensions

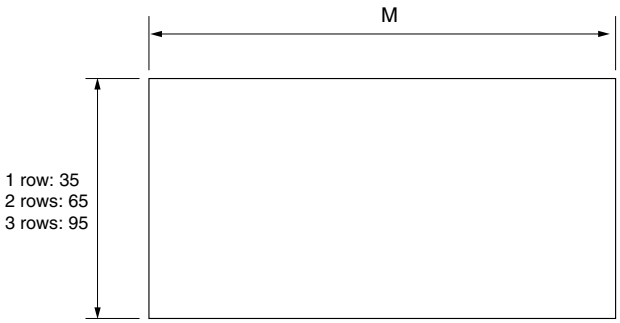



| No. of Columns | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| L | 42 | 72 | 102 | 132 | 162 | 192 | 222 | 252 | 282 | 312 |

| Unit | A |
|---|---|
| Illuminated Pushbutton | 6.3 |
| Pushbutton | 6.3 |
| Selector Switch | 14.8 |
| Key Selector Switch | 34.3 |

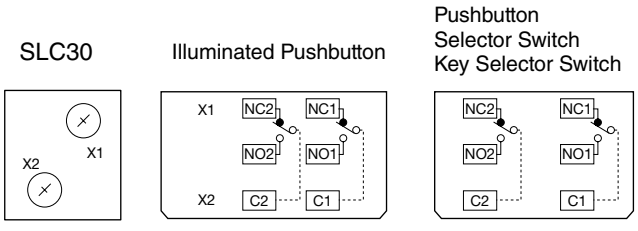
All dimensions in mm.

## Panel Cut-out




| No. of Columns | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| M (mm) | 35 | 65 | 95 | 125 | 155 | 185 | 215 | 245 | 275 | 305 |

## Panel Cut-out (Bottom View)




X1: Positive lamp terminal
X2: Negative lamp terminal

## Ordering Information

1. When ordering, complete the Specification Sheet on page 39.
2. Control units (SLC30-LW) can be mounted on the bottom row only.
3. Jumpers (SLCN-JP34/-JP35) are used between combination display lights only. Jumpers can not be used between control units, or between control units and combination display lights.
4. See page 27 to 29 for accessories.
5. Minimum unit size is 2 × 1 windows.

## ⚠ Safety Precautions

See page 32.

## Operating Instructions

1. When using the insulation terminal cover (LW-VL2M) for the control units
   - Install the terminal cover on the SLC units before wiring. Terminal covers cannot be installed after wiring.
   - Ring crimping terminals cannot be installed when terminal covers are used. Use spade terminals or wire directly.
2. Do not remove the operator part of control units from the housing. Otherwise contacts may malfunction.
3. On key selector switches, do not attempt to remove the key at any key retained position with excessive force (more than approx. 70N). Otherwise the operator part detaches from the housing, causing the contacts to malfunction.
4. Use a lamp holder tool (OR-55) when replacing lamps for control units.
5. For wiring, use wires of a proper size to meet the voltage and current requirements. Tighten the M3.5 terminal screws to a tightening torque shown below.

| Terminal Screw | Recommended Tightening Torque |
|---|---|
| M3 | 0.6 to 1.0 N·m |
| M3.5 | 1.0 to 1.3 N·m |

6. Up to 10 SLC units (Type F equivalent) can be lit continuously. When more units are mounted, consider the following restrictions.
   - Do not light more than 40% of the SLC units continuously, and light the units in a checker pattern.
   - When more than 40% of the units are lit continuously, limit the lighting duration to 40 minutes. Before lighting the units again, ensure that all units have cooled down.
7. For other operating instructions of display lights, see the relevant pages of SLC30/40 catalog.
8. For other operating instructions of control units, see the relevant pages of ø22 LW control unit catalog.

## SLC30/40 Series Combination Display Lights with Control Units Specification Sheet

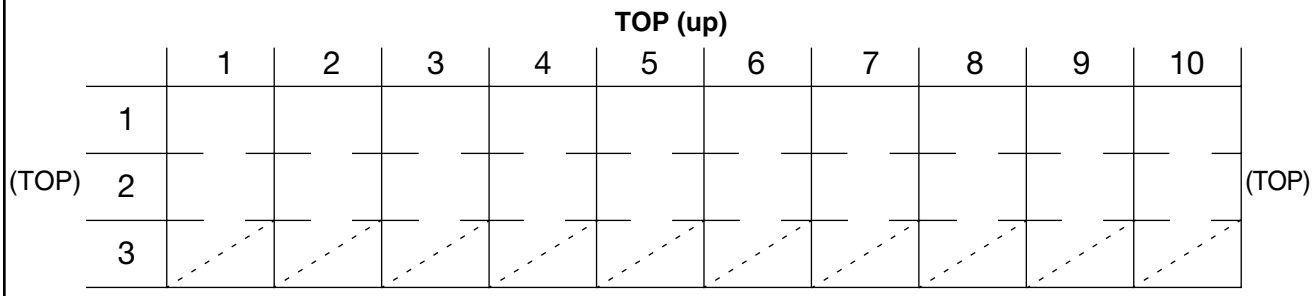
| | |
|---|---|
| Date of Order | |
| Customer | |
| Address | |
| Phone No. | |
| Contact | |

**Part No.**

SLC30N-□□□□-DD2ML□-

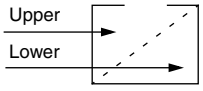
For illumination color and control unit, enter your requirements in the diagram below.

## Illumination Color & Control Unit Specification




### Specification Notes

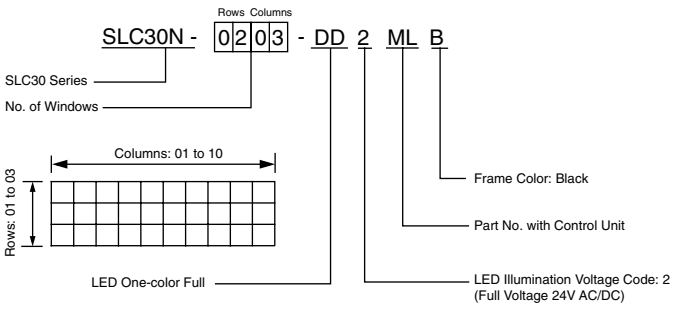
1. Use the specification diagram above for LED one-color Full (24V AC/DC) only.
2. Control units can be mounted on the bottom row (the third row in the diagram above) only. Enter button or lens color code in the upper part and control unit code in the lower part (see the table below for control unit code). Display lights can be specified on the bottom row.
3. Specify the TOP position (mounted onto the panel).

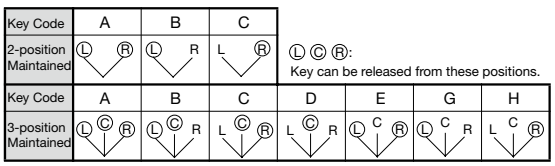


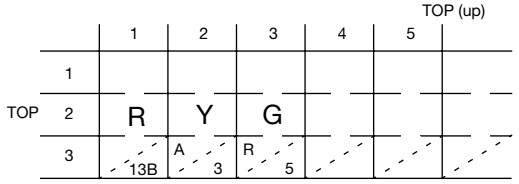

### Control Unit Code

| Code | Style (gold contact) | Code | Style (silver contact) |
|---|---|---|---|
| 1 | Square Illuminated Pushbutton (DPDT) | 2 | Square Illuminated Pushbutton (DPDT) |
| 3 | Round w/Square Bezel Illuminated Pushbutton (DPDT) | 4 | Round w/Square Bezel Illuminated Pushbutton (DPDT) |
| 5 | Square Pushbutton (DPDT) | 6 | Square Pushbutton (DPDT) |
| 7 | Round w/Square Bezel Pushbutton (DPDT) | 8 | Round w/Square Bezel Pushbutton (DPDT) |
| 9 | Selector Switch (2-position) | 10 | Selector Switch (2-position) |
| 11 | Selector Switch (3-position) | 12 | Selector Switch (3-position) |
| 13* | Key Selector Switch (2-position) | 14* | Key Selector Switch (2-position) |
| 15* | Key Selector Switch (3-position) | 16* | Key Selector Switch (3-position) |

* Refer to the below table for key retaining positions.



Specifications and other descriptions in this brochure are subject to change without notice.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