

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, 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 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 fire hazards or damage the SLC units.
- 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 or LED lamps, use IDEC products.

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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.

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.

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

- 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.

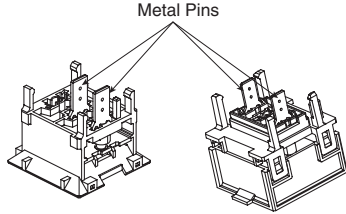
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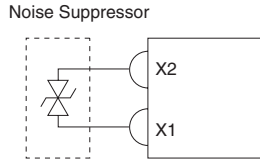
When Using Blue and Green LED Units

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.

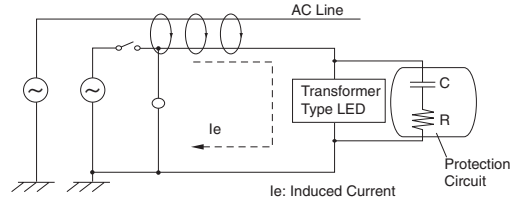


Notes for Using LED Units

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]

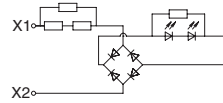
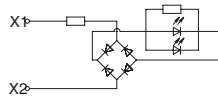
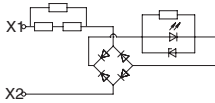
As shown in the diagram above, connect an RC circuit in parallel with the transformer LED unit. For the values of the resistor and capacitor, see the following table.

	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

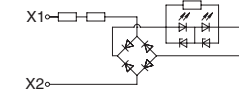
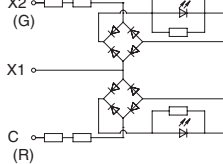
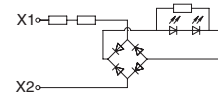
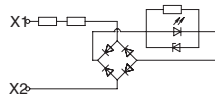
LED Unit Internal Circuit

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)

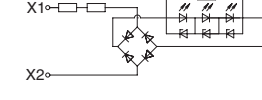
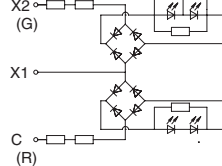
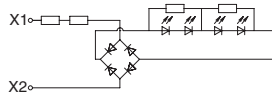
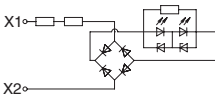


- SLDN-32M-* (24V AC/DC)
One-color full (amber, blue, green, red, yellow)
- SLDN-32-W (24V AC/DC)
One-color full (white)
- SLDN-32MW-RG (24V AC/DC)
Two-color alternate
- SLDN-32ST-* (24V AC/DC)
Spot illumination



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












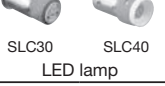


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Operating Instructions

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
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 3)	 SLC30 SLC40 LED unit	 Matte Surface clear / black (Note 4)	 gray lens	Legend Color amber (SA), blue (SS), green (SG), pure white (SPW, Type F only), red (SR), white (SW), yellow (SY)	Gray

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)	White
	 SLC30 SLC40 LED lamp	 Matte Surface white / clear	 clear lens	pure white (PW), white (W)	
Gray Lens (Note 3)	 SLC30 SLC40 LED lamp	 Matte Surface color / black (Note 4)	 gray lens	Legend Color amber (SA), blue (SS), green (SG), red (SR), yellow (SY)	Gray
	 SLC30 SLC40 LED lamp	 Matte Surface clear / black (Note 4)	 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 24 for ordering the screen/plate as replacement parts.

Note 3: 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 4: Black marking plate has black coating. Engrave a reverse legend on the black-coated surface.