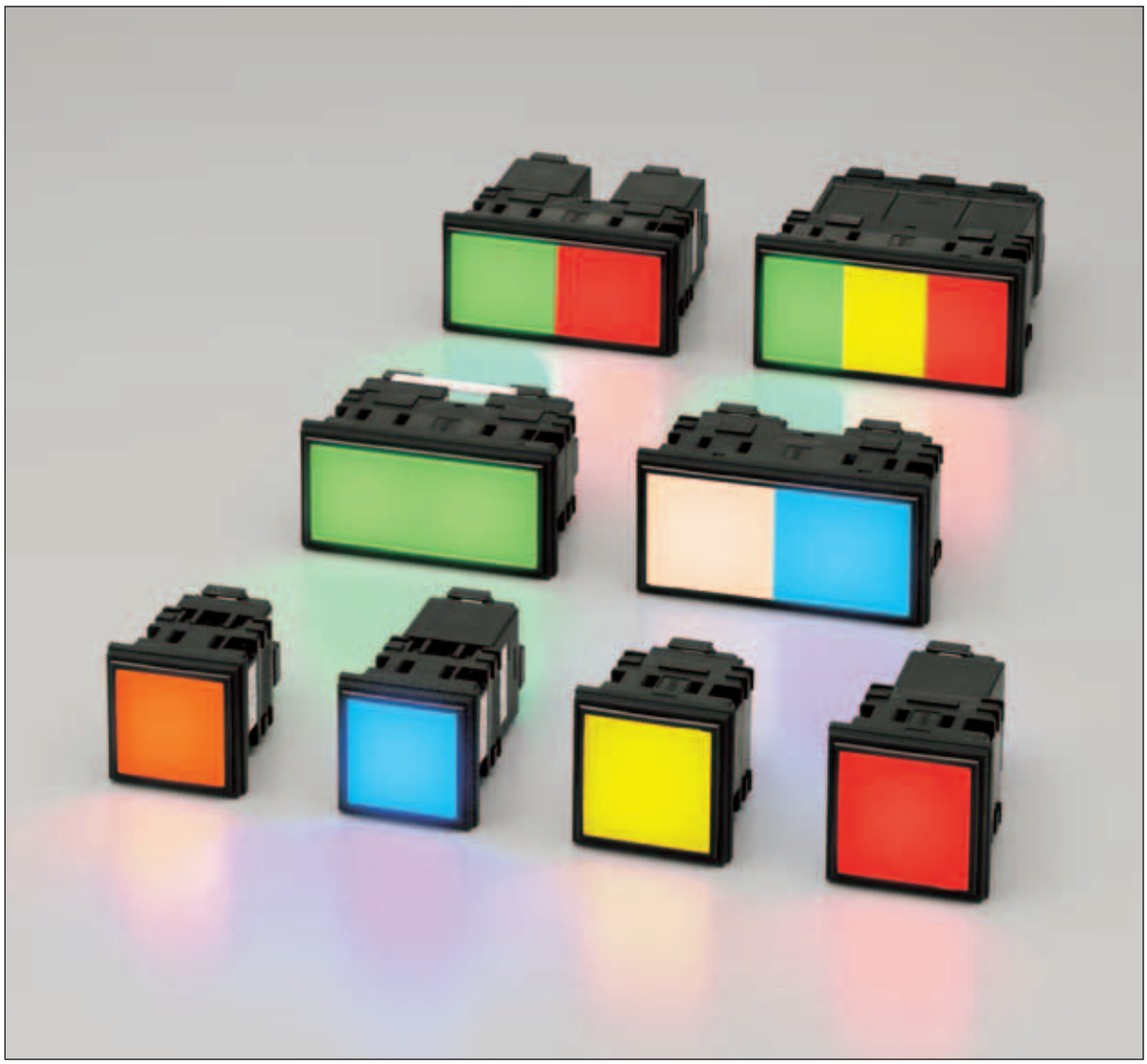
Think Automation and beyond...

IDEC

SLDN Series

LED Illuminated Display Lights



IDEC CORPORATION

Super Bright LED Illumination
Increased Visibility for Higher Safety

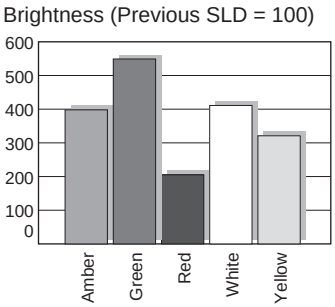
- The LED units can be removed, so the color arrangements can be easily changed.
- The finger-safe spring-up terminals save wiring time.
- Six illumination colors; amber, green, red, blue, white, and yellow.
- Full, 2-way or 3-way split illumination, and two-color (red/green) alternate illumination are available.
- Legends can be engraved on the supplied marking plate. One or two thin marking sheets (not supplied) can also be installed.
- UL and c-UL listed File No. E68961
- EN compliant EN60947-5-1
- DEMKO Certificate No. 99-03194

c UL us LISTED

(Except for DC-DC converter type)

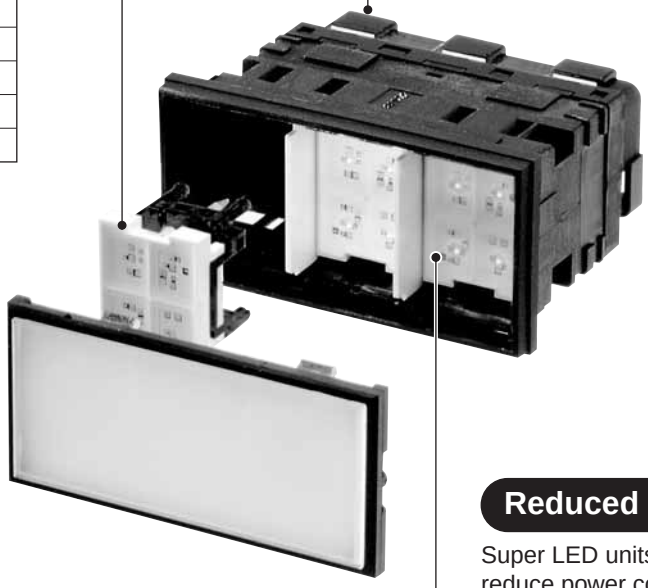
Enhanced Safety

The brightness of the super LED units results in vibrant colors and prevents recognition errors.
(IEC 60073 and IEC 60204-1)



Reduced Wiring Time

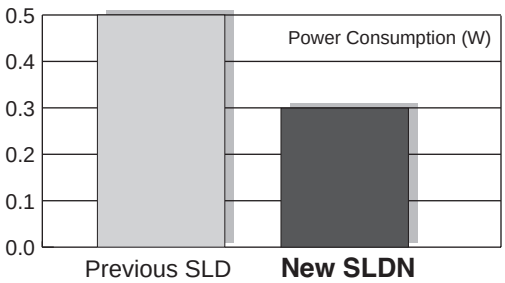
The captive spring-up terminals cut wiring time in half compared with conventional units. The integrated terminal cover prevents electrical shocks. For 2-color alternate and check terminal type units, separate terminal covers are available.



Special circuitry is used to prevent unintended lighting due to leakage current or induced voltage.
(See page 26 for details.)

Reduced Power Consumption

Super LED units ensure high brightness and reduce power consumption by 40%.



Easy Replacement of LED Units

Two or three LED units are installed in the split-illumination types. Since the LED units are removable, the color arrangement can be changed easily.

SLDN List

Type	Appearance	Frame Size (Lens Size)	Input Voltage	Illumination Face	Operating Voltage	Illumination Color
SLD30N		DIN Size 36 × 36 mm (28 × 28 mm)	Full Voltage	1-color Full	6V DC ±5% 12V AC/DC ±10% 24V AC/DC ±10%	Amber, Green, Red, Blue, White, Yellow
				1-color Full w/check terminal	24V DC ±10%	
				2-color Alternate	24V DC ±10%	Red/Green
			Transformer	1-color Full	100/110V AC±10% 115/120V AC±10% 200/220V AC±10% 230/240V AC±10%	Amber, Green, Red, Blue, White, Yellow
			DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	
SLD44N		40 × 40 mm (32 × 32 mm)	Full Voltage	1-color Full	6V DC ±5% 12V AC/DC ±10% 24V AC/DC ±10%	Amber, Green, Red, Blue, White, Yellow
				1-color Full w/check terminal	24V DC ±10%	
				2-color Alternate	24V DC ±10%	Red/Green
			Transformer	1-color Full	100/110V AC±10% 115/120V AC±10% 200/220V AC±10% 230/240V AC±10%	Amber, Green, Red, Blue, White, Yellow
			DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	
SLD72N		DIN Size 36 × 72 mm (28 × 64 mm)	Full Voltage	1-color Full	6V DC ±5% 12V AC/DC ±10% 24V AC/DC ±10%	Amber, Green, Red, Blue, White, Yellow
				2-way Split		
				3-way Split		
				1-color Full w/check terminal	24V DC ±10%	
				2-color Alternate	24V DC ±10%	Red/Green
			Transformer	1-color Full	100/110V AC±10% 115/120V AC±10% 200/220V AC±10% 230/240V AC±10%	Amber, Green, Red, Blue, White, Yellow
				2-way Split		
				3-way Split		
			DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	
SLD48N		40 × 80 mm (32 × 72 mm)	Full Voltage	1-color Full	6V DC ±5% 12V AC/DC ±10% 24V AC/DC ±10%	Amber, Green, Red, Blue, White, Yellow
				2-way Split		
				3-way Split		
				1-color Full w/check terminal	24V DC ±10%	
				2-color Alternate	24V DC ±10%	Red/Green
			Transformer	1-color Full	100/110V AC±10% 115/120V AC±10% 200/220V AC±10% 230/240V AC±10%	Amber, Green, Red, Blue, White, Yellow
				2-way Split		
				3-way Split		
			DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	

SLDN Type No. Development

SLD 72 N - 1 DH2 B R

Frame Size
30: 36 × 36 mm
44: 40 × 40 mm
72: 36 × 72 mm
48: 40 × 80 mm

Face Division
1: Full
2: 2-way split
3: 3-way split

Power Voltage
[Full Voltage Type]
DH0: 6V or 12V AC/DC (LED unit not supplied)
DH2: 24V AC/DC
DHM2: 24V DC (with check terminal)
DW2: 24V DC (2-color alternate)

[Transformer Type]
TH1: 100/110V AC
TH12: 115/120V AC
TH2: 200/220V AC
TH24: 230/240V AC

[DC-DC Converter Type]
CH1: 110V DC

Housing Color
B: Black

Illumination Color
A: Amber
G: Green
R: Red
S: Blue (except 6 and 12V AC/DC)
W: White
Y: Yellow

SLD30N | DIN36mm Square (Illumination face size 28mm square)

Specifications

Input Type	Full Voltage	Transformer	DC-DC Converter
Rated Voltage (Primary Voltage)	24V AC/DC, 24V DC *1 6V AC/DC, 12V AC/DC	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit *2	1-color LED unit	
Face Division	Full		
Illumination Color	Amber, Green, Red, Blue, White, Yellow Red/Green *2	Amber, Green, Red, Blue, White, Yellow	
Marking Plate	Clear (27 × 27 × 1 mm)		
Color Screen	White (27 × 27 × 1 mm)		
Engraving Area	25 × 25 mm		
Insulation Resistance	Between live and dead parts: 100 MΩ minimum (500V DC megger)		
Dielectric Strength	Between live and dead parts: 2000V, 1 minute		2500V, 1 minute
Vibration Resistance	5 to 55 Hz, amplitude 0.5 mm		
Shock Resistance	1000 m/s^2 (100G)		
Operating Temperature	–20 to +40°C (no freezing)		–10 to +40°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black		
Weight (approx.)	38g (1-color full) 43g (w/check terminal) 43g (2-color alternate)	85g (1-color full)	53g (1-color full)

*1: 24V DC is for 1-color full w/check terminal and 2-color alternate types only.
*2: For 2-color alternate type

Types

Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Built-in LED Unit (see ratings on page 17)
Full Voltage	1-color Full	24V AC/DC ±10%	SLD30N-1DH2B∗	A, G, R, S, W, Y	SLDN-32F-∗T
	1-color Full w/check terminal	24V DC ±10%	SLD30N-1DHM2B∗	A, G, R, S, W, Y	SLDN-32F-∗T
	2-color Alternate	24V DC ±10%	SLD30N-1DW2BRG	RG (red/green)	SLDN-32FW-RGT
Transformer	1-color Full	100/110V AC ±10%	SLD30N-1TH1B∗	A, G, R, S, W, Y	SLDN-32F-∗T
		115/120V AC ±10%	SLD30N-1TH12B∗	A, G, R, S, W, Y	SLDN-32F-∗T
		200/220V AC ±10%	SLD30N-1TH2B∗	A, G, R, S, W, Y	SLDN-32F-∗T
		230/240V AC ±10%	SLD30N-1TH24B∗	A, G, R, S, W, Y	SLDN-32F-∗T
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	SLD30N-1CH1B∗	A, G, R, S, W, Y	SLDN-32F-∗T

Note 1: Specify a color code in place of ∗ in the Type No.: A (amber), G (green), R (red), S (blue), W (white), Y (yellow).
Note 2: The above SLD30N units contain an LED unit of the specified color. The LED unit is installed in the SLD30N housing at the factory.
Note 3: Every SLD30N unit contains a clear marking plate and a white color screen. When color display is required during power off, order a color screen separately and replace the clear marking plate with the color screen. For Type No. of color screens, see page 18.

• Full Voltage Types for 6V and 12V AC/DC (Order LED Units Separately)

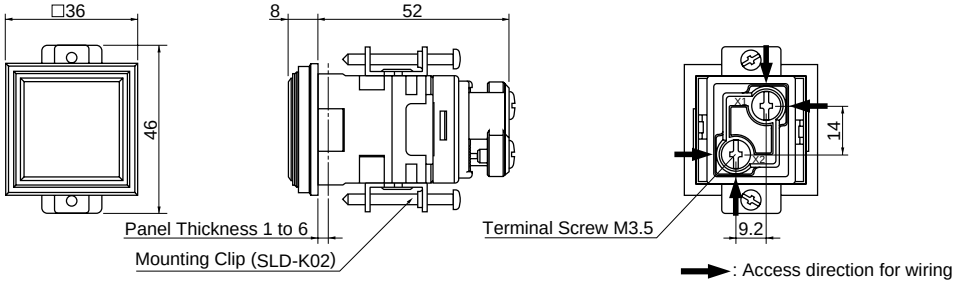
Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Applicable LED Unit (see ratings on page 17)
Full Voltage	1-color Full	6V AC/DC ±5%	SLD30N-1DH0B-6	A, G, R, W, Y	SLDN-36F-∗T
		12V AC/DC ±10%	SLD30N-1DH0B-12	A, G, R, W, Y	SLDN-31F-∗T

Note 1: The above SLD30N units are not supplied with LED units. Order applicable LED units by specifying a color code in place of ∗ in the Type No.: A (amber), G (green), R (red), W (white), Y (yellow).
Note 2: Every SLD30N unit contains a clear marking plate and a white color screen. When color display is required during power off, order a color screen separately and replace the clear marking plate with the color screen. For Type No. of color screens, see page 18.

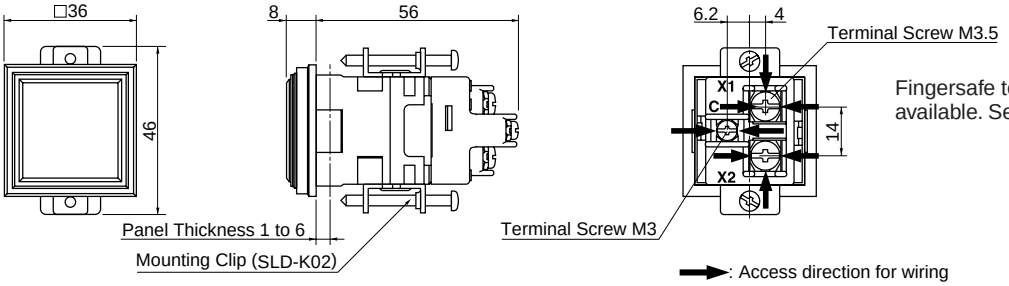
SLD30N	DIN36mm Square (Illumination face size 28mm square)

Dimensions

• Full Voltage Type (1-color full)

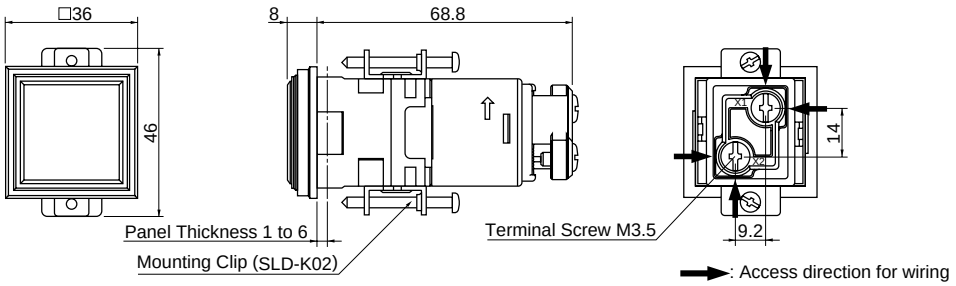


• Full Voltage Type (1-color full w/check terminal and 2-color alternate)

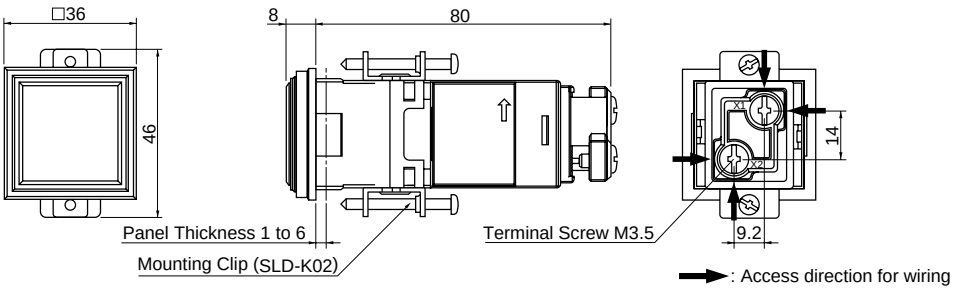


Fingersafe terminal cover is available. See page 18.

• Transformer Type

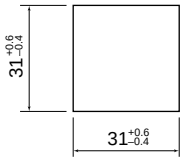


• DC-DC Converter Type

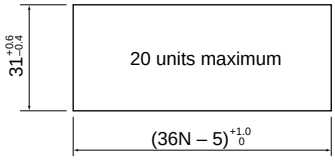


Panel Cut-out

• Single Mounting

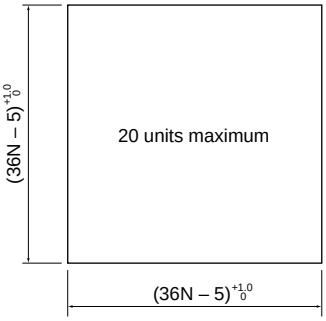


• Horizontal Mounting



• Vertical Mounting

• Integrated Mounting



N: No. of units (rows/columns)

When using leaf springs for temporary fastening, order SLD-30KVP separately. See page 23.

All dimensions in mm.

SLD44N | 40mm Square (Illumination face size 32mm square)

Specifications

Input Type	Full Voltage	Transformer	DC-DC Converter
Rated Voltage (Primary Voltage)	24V AC/DC, 24V DC *1 6V AC/DC, 12V AC/DC	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit *2	1-color LED unit	
Face Division	Full		
Illumination Color	Amber, Green, Red, Blue, White, Yellow Red/Green *2	Amber, Green, Red, Blue, White, Yellow	
Marking Plate	Clear (31 × 31 × 1 mm)		
Color Screen	White (31 × 31 × 1 mm)		
Engraving Area	29 × 29 mm		
Insulation Resistance	Between live and dead parts: 100 MΩ minimum (500V DC megger)		
Dielectric Strength	Between live and dead parts: 2000V, 1 minute		2500V, 1 minute
Vibration Resistance	5 to 55 Hz, amplitude 0.5 mm		
Shock Resistance	1000 m/s^2 (100G)		
Operating Temperature	–20 to +40°C (no freezing)		–10 to +40°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black		
Weight (approx.)	46g (1-color full) 49g (w/check terminal) 49g (2-color alternate)	93g (1-color full)	60g (1-color full)

*1: 24V DC is for 1-color full w/check terminal and 2-color alternate types only.
*2: For 2-color alternate type

Types

Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Built-in LED Unit (see ratings on page 17)
Full Voltage	1-color Full	24V AC/DC ±10%	SLD44N-1DH2B∗	A, G, R, S, W, Y	SLDN-92F-∗T
	1-color Full w/check terminal	24V DC ±10%	SLD44N-1DHM2B∗	A, G, R, S, W, Y	SLDN-92F-∗T
	2-color Alternate	24V DC ±10%	SLD44N-1DW2BRG	RG (red/green)	SLDN-92FW-RGT
Transformer	1-color Full	100/110V AC ±10%	SLD44N-1TH1B∗	A, G, R, S, W, Y	SLDN-92F-∗T
		115/120V AC ±10%	SLD44N-1TH12B∗	A, G, R, S, W, Y	SLDN-92F-∗T
		200/220V AC ±10%	SLD44N-1TH2B∗	A, G, R, S, W, Y	SLDN-92F-∗T
		230/240V AC ±10%	SLD44N-1TH24B∗	A, G, R, S, W, Y	SLDN-92F-∗T
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	SLD44N-1CH1B∗	A, G, R, S, W, Y	SLDN-92F-∗T

Note 1: Specify a color code in place of ∗ in the Type No.: A (amber), G (green), R (red), S (blue), W (white), Y (yellow).
Note 2: The above SLD44N units contain an LED unit of the specified color. The LED unit is installed in the SLD44N housing at the factory.
Note 3: Every SLD44N unit contains a clear marking plate and a white color screen. When color display is required during power off, order a color screen separately and replace the clear marking plate with the color screen. For Type No. of color screens, see page 18.

• Full Voltage Types for 6V and 12V AC/DC (Order LED Units Separately)

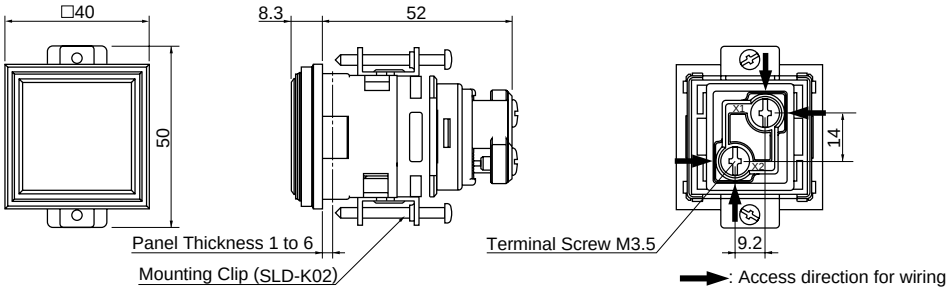
Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Applicable LED Unit (see ratings on page 17)
Full Voltage	1-color Full	6V AC/DC ±5%	SLD44N-1DH0B-6	A, G, R, W, Y	SLDN-96F-∗T
		12V AC/DC ±10%	SLD44N-1DH0B-12	A, G, R, W, Y	SLDN-91F-∗T

Note 1: The above SLD44N units are not supplied with LED units. Order applicable LED units by specifying a color code in place of ∗ in the Type No.: A (amber), G (green), R (red), W (white), Y (yellow).
Note 2: Every SLD44N unit contains a clear marking plate and a white color screen. When color display is required during power off, order a color screen separately and replace the clear marking plate with the color screen. For Type No. of color screens, see page 18.

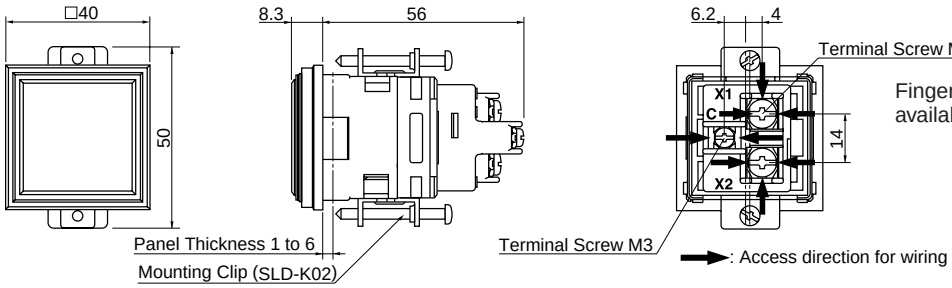
SLD44N	40mm Square (Illumination face size 32mm square)

Dimensions

• Full Voltage Type (1-color full)

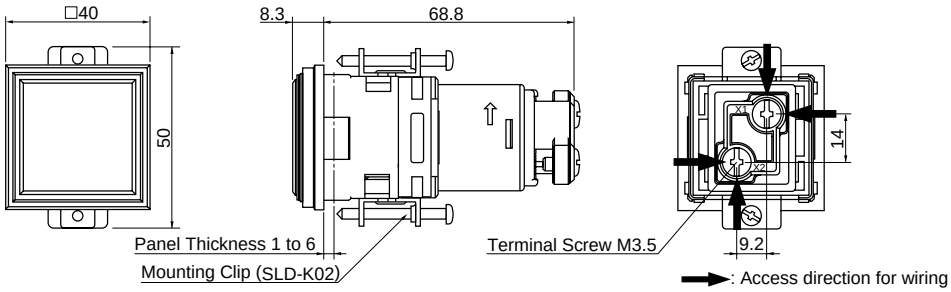


• Full Voltage Type (1-color full w/check terminal and 2-color alternate)

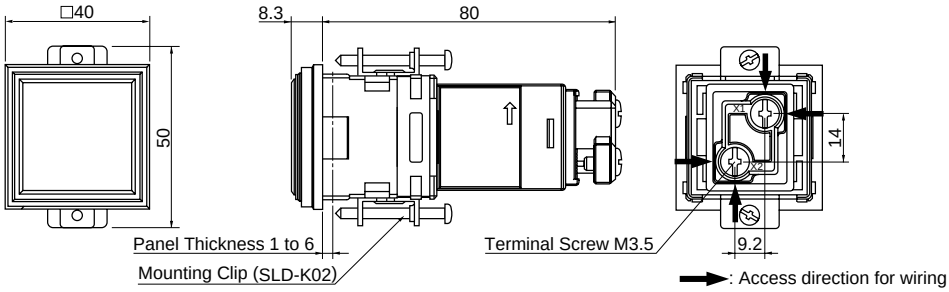


Fingersafe terminal cover is available. See page 18.

• Transformer Type

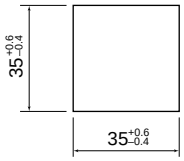


• DC-DC Converter Type

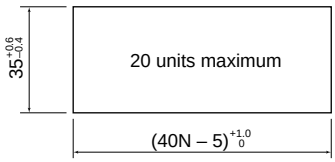


Panel Cut-out

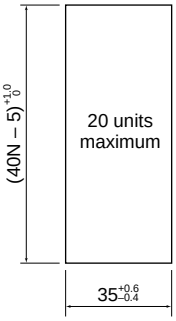
• Single Mounting



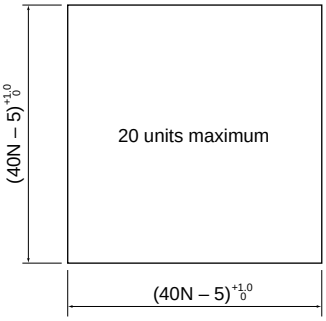
• Horizontal Mounting



• Vertical Mounting



• Integrated Mounting



N: No. of units (rows/columns)

When using leaf springs for temporary fastening, order SLDN-44KVP separately. See page 23.

All dimensions in mm.

SLD72N	DIN36 × 72mm (Illumination face size 28 × 64mm)

Specifications

Input Type	Full Voltage	Transformer	DC-DC Converter
Rated Voltage (Primary Voltage)	24V AC/DC, 24V DC *1 6V AC/DC, 12V AC/DC	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit *2	1-color LED unit	
Face Division	Full *3, 2-way split, 3-way split	Full, 2-way split, 3-way split	Full
Illumination Color	Amber, Green, Red, Blue, White, Yellow Red/Green *2	Amber, Green, Red, Blue, White, Yellow	
Marking Plate	Clear (27 × 63 × 1 mm)		
Color Screen	White (Full: 27 × 63 × 1 mm, 2-way split: 27 × 31.5 × 1 mm, 3-way split: 27 × 21 × 1 mm)		
Engraving Area	Full: 25 × 61 mm, 2-way split: 25 × 29.5 mm, 3-way split: 25 × 19 mm		
Insulation Resistance	Between live and dead parts: 100 MΩ minimum (500V DC megger)		
Dielectric Strength	Between live and dead parts: 2000V, 1 minute		2500V, 1 minute
Vibration Resistance	5 to 55 Hz, amplitude 0.5 mm		
Shock Resistance	1000 m/s^2 (100G)		
Operating Temperature	–20 to +40°C (no freezing)		–10 to +40°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black		
Weight (approx.)	78g (1-color full, 2-way split) 86g (w/check terminal, 2-color alternate) 89g (3-way split)	172g (1-color full, 2-way split) 245g (3-way split)	107g (1-color full)

*1: 24V DC is for 1-color full w/check terminal and 2-color alternate types only.
*2: For 2-color alternate type
*3: The 2-color alternate type is full face illumination only.

Types

Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Built-in LED Units (see ratings on page 17)
Full Voltage	1-color Full	24V AC/DC ±10%	SLD72N-1DH2B∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	2-way Split	24V AC/DC ±10%	SLD72N-2DH2BGR	GR	SLDN-92F-∗T (2 units)
			SLD72N-2DH2BRG	RG	
	3-way Split	24V AC/DC ±10%	SLD72N-3DH2BGAR	GAR	SLDN-72F-∗T (3 units)
	1-color Full w/check terminal	24V DC ±10%	SLD72N-1DHM2B∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	2-color Alternate	24V DC ±10%	SLD72N-1DW2BRG	RG (red/green)	SLDN-92FW-RGT (2 units)
Transformer	1-color Full	100/110, 115/120, 200/220, 230/240V AC ±10%	SLD72N-1TH☐B∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	2-way Split		SLD72N-2TH☐BGR	GR	SLDN-92F-∗T (2 units)
			SLD72N-2TH☐BRG	RG	
	3-way Split		SLD72N-3TH☐BGAR	GAR	SLDN-72F-∗T (3 units)
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	SLD72N-1CH1B∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)

Note 1: Specify a color code in place of ∗ in the Type No.: A (amber), G (green), R (red), S (blue), W (white), Y (yellow).
Note 2: Specify an operating voltage (primary voltage) code of the transformer in place of ☐ in the Type No.:
1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
Note 3: The above SLD72N units contain LED units of the specified color. The LED units are installed in the SLD72N housing at the factory.
Note 4: Every SLD72N unit contains a clear marking plate and white color screen(s) of the specified split face size. When color display is required during power off, see page 18.

SLD72N | DIN36 × 72mm (Illumination face size 28 × 64mm)

Types

• Full Voltage and Transformer Split Illumination Types (LED Units Supplied)

Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Supplied LED Units (see ratings on page 17)
Full Voltage	2-way Split	24V AC/DC ±10%	SLD72N-2DH2B∗∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	3-way Split		SLD72N-3DH2B∗∗∗	A, G, R, S, W, Y	SLDN-72F-∗T (3 units)
Transformer	2-way Split	100/110, 115/120, 200/220, 230/240V AC ±10%	SLD72N-2TH☐B∗∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	3-way Split		SLD72N-3TH☐B∗∗∗	A, G, R, S, W, Y	SLDN-72F-∗T (3 units)

Note 1: Color codes come in place of ∗∗ or ∗∗∗ in the Type No.: A (amber), G (green), R (red), S (blue), W (white), Y (yellow). When ordering the above split illumination types, specify standard color codes found under "Color Code" in the tables below. The LED units can be arranged in any placement found under "Combination" in the table.

Note 2: Specify an operating voltage (primary voltage) code of the transformer in place of ☐ in the Type No.: 1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).

Note 3: The above SLD72N units are supplied with LED units of the specified colors. The LED units are packaged in the same box with the SLD72N housing at factory; not installed in the SLD72N housing. Install the LED units in required positions.

Note 4: Every SLD72N unit contains a clear marking plate and white color screen(s) of the specified split face size. When color display is required during power off, see page 18.

[2-way Split]

Color Code	Combination	Color Code	Combination
AA	AA	RR	RR
AG	AG GA	RS	RS SR
AR	AR RA	RW	RW WR
AS	AS SA	RY	RY YR
AW	AW WA	SS	SS
AY	AY YA	SW	SW WS
GG	GG	SY	SY YS
GS	GS SG	WW	WW
GW	GW WG	WY	WY YW
GY	GY YG	YY	YY

[3-way Split]

Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination
AAA	AAA	AGW	AGW AWG GAW GWA WAG WGA	ASS	ASS SAS SSA	GGS	GGS GSG SGG	GSW	GSW GWS SGW SWG WGS WSG	RRY	RRY RYR YRR	SSW	SSW SWS WSS
AAG	AAG AGA GAA			ASW	ASW AWS SAW SWA WAS WSA	GGW	GGW GWG WGG			RSS	RSS SRS SSR	SSY	SSY SYS YSS
AAR	AAR ARA RAA	AGY	AGY AYG GAY GYA YAG YGA			GGY	GGY GYG YGG	GSY	GSY GYS SGY SYG YGS YSG	RSW	RSW RWS SRW SWR WRS WSR	SWW	SWW WSW WWS
AAS	AAS ASA SAA			ASY	ASY AYS SAY SYA YAS YSA	GRR	GRR RGR RRG					SWY	SWY SYW WSY WYS YSW YWS
AAW	AAW AWA WAA	ARR	ARR RAR RRA			GRS	GRS GSR RGS RSG SGR SRG	GWW	GWW WGW WWG	RSY	RSY RYS SRY SYR YRS YSR		
AAY	AAY AYA YAA	ARS	ARS ASR RAS RSA SAR SRA	AWW	AWW WAW WWA			GWY	GWY GYW WGY WYG YGW YWG			SYY	SYY YSY YYS
AGG	AGG GAG GGA			AWY	AWY AYW WAY WYA YAW YWA	GRW	GRW GWR RGW RWG WGR WRG			RWW	RWW WRW WWR	WWW	WWW
AGR	AGR ARG GRA RAG RGA	ARW	ARW AWR RAW RWA WAR WRA					GYY	GYY YGY YYG	RWY	RWY RYW WRY WYR YRW YWR	WWY	WWY WYW YWW
				AYY	AYY YAY YYA	GRY	GRY GYR RGY RYG YGR YRG	RRR	RRR			WYY	WYY YWY YYW
AGS	AGS ASG GAS GSA SAG SGA	ARY	ARY AYR RAY RYA YAR YRA	GGG	GGG			RRS	RRS RSR SRR	RYY	RYY YRY YYR	YYY	YYY
				GGR	GGR GRG RGG	GSS	GSS SGS SSG	RRW	RRW RWR WRR	SSS	SSS		

Note: For the full voltage and transformer type units, color codes GR and RG for 2-way split and color code GAR for 3-way split are found in the Type No. table on page 9.

• Full Voltage Types for 6V and 12V AC/DC (Order LED Units Separately)

Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Applicable LED Units (see ratings on page 17)
Full Voltage	1-color Full	6V AC/DC ±5%	SLD72N-1DH0B-6	A, G, R, W, Y	SLDN-96F-∗T (2 units)
		12V AC/DC ±10%	SLD72N-1DH0B-12	A, G, R, W, Y	SLDN-91F-∗T (2 units)
	2-way Split	6V AC/DC ±5%	SLD72N-2DH0B-6	A, G, R, W, Y	SLDN-96F-∗T (2 units)
		12V AC/DC ±10%	SLD72N-2DH0B-12	A, G, R, W, Y	SLDN-91F-∗T (2 units)
	3-way Split	6V AC/DC ±5%	SLD72N-3DH0B-6	A, G, R, W, Y	SLDN-76F-∗T (3 units)
		12V AC/DC ±10%	SLD72N-3DH0B-12	A, G, R, W, Y	SLDN-71F-∗T (3 units)

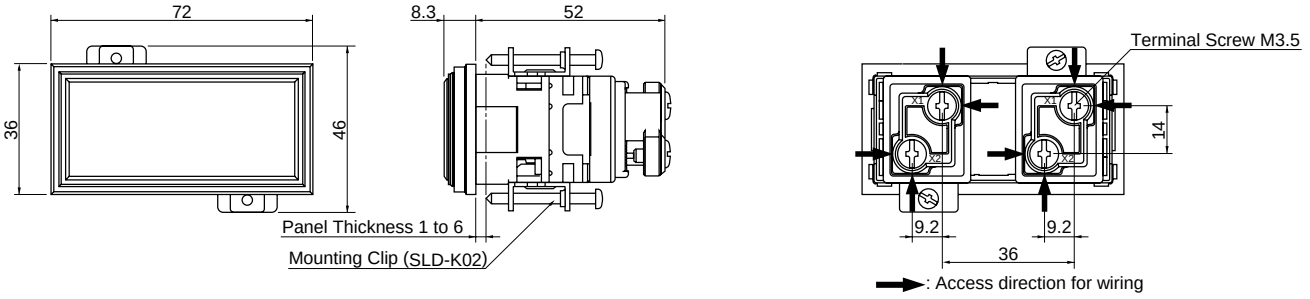
Note 1: The above SLD72N units are not supplied with LED units. Order applicable LED units by specifying a color code in place of ∗ in the Type No.: A (amber), G (green), R (red), W (white), Y (yellow).

Note 2: Every SLD72N unit contains a clear marking plate and white color screen(s) of the specified split face size. When color display is required during power off, see page 18.

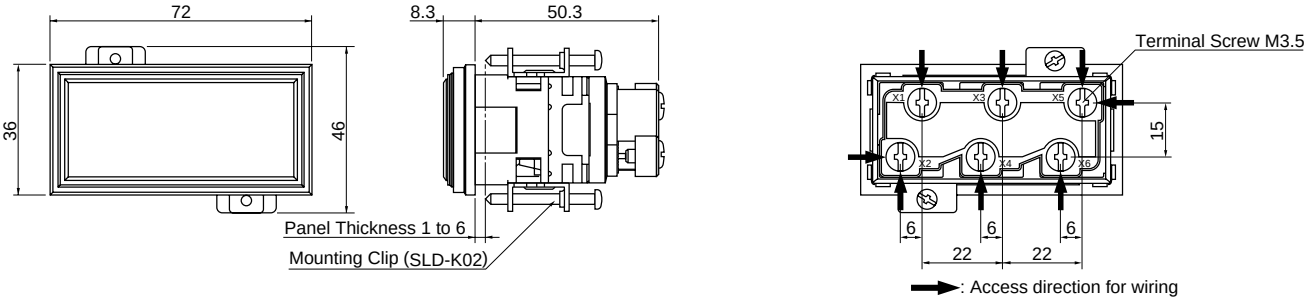
SLD72N	DIN36 × 72mm (Illumination face size 28 × 64mm)

Dimensions

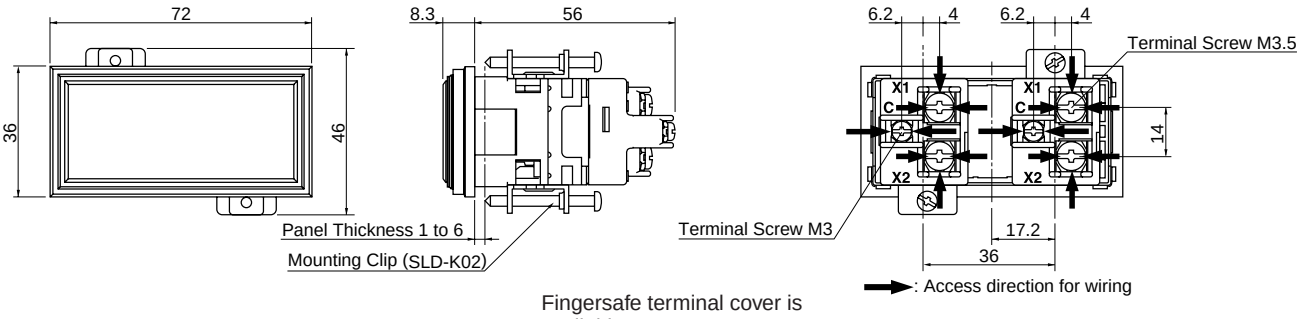
• Full Voltage Type (1-color full and 2-way split)



• Full Voltage Type (3-way split)

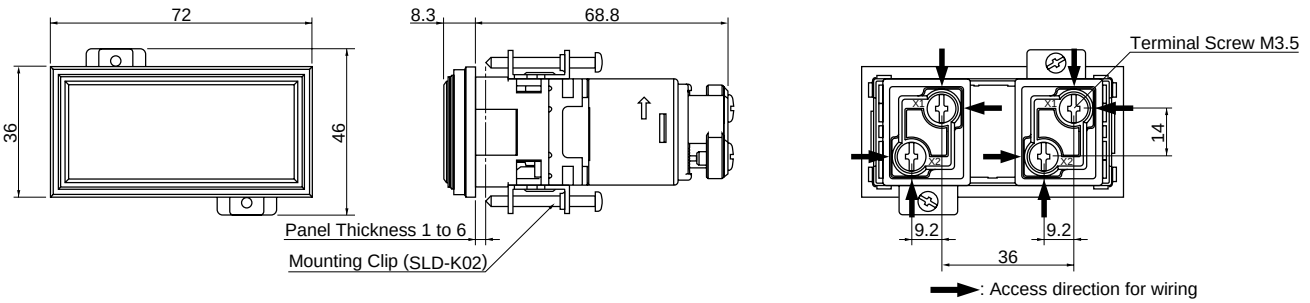


• Full Voltage Type (1-color full w/check terminal and 2-color alternate)



Fingersafe terminal cover is available. See page 18.

• Transformer Type (1-color full and 2-way split)



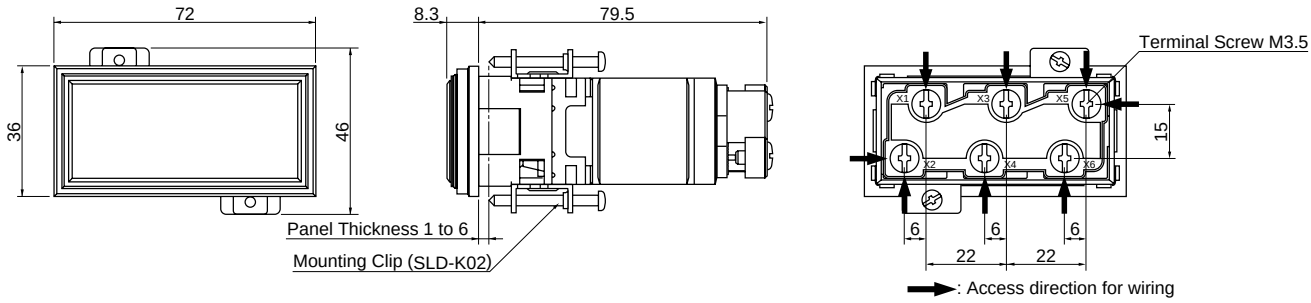
When using leaf springs for temporary fastening, order SLD-30KVP or SLD-7KVP separately. See page 24.

All dimensions in mm.

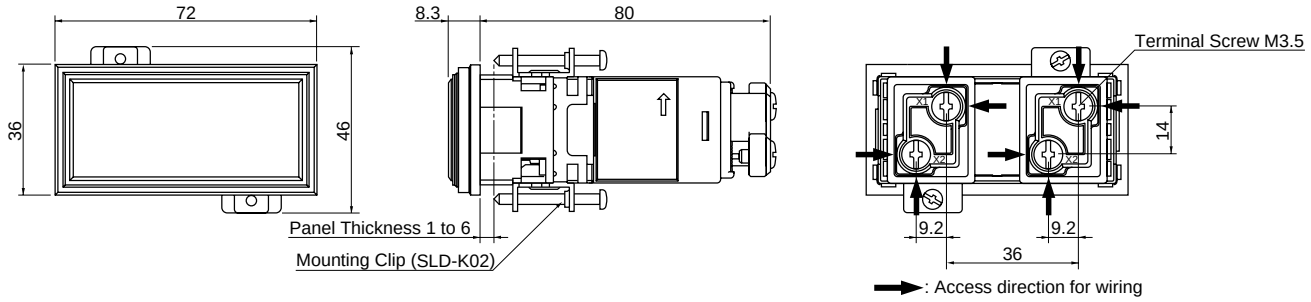
SLD72N	DIN36 × 72mm (Illumination face size 28 × 64mm)

Dimensions

• Transformer Type (3-way split)

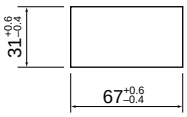


• DC-DC Converter Type



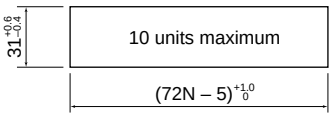
Panel Cut-out

• Single Mounting

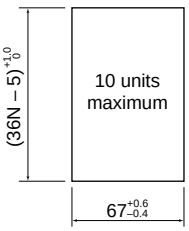


N: No. of units (rows/columns)

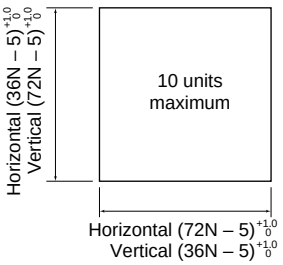
• Horizontal Mounting



• Vertical Mounting



• Integrated Mounting



When using leaf springs for temporary fastening, order SLD-30KVP or SLD-7KVP separately. See page 24.

All dimensions in mm.

SLD48N	40 × 80mm (Illumination face size 32 × 72mm)

Specifications

Input Type	Full Voltage	Transformer	DC-DC Converter
Rated Voltage (Primary Voltage)	24V AC/DC, 24V DC *1 6V AC/DC, 12V AC/DC	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit *2	1-color LED unit	
Face Division	Full *3, 2-way split, 3-way split	Full, 2-way split, 3-way split	Full
Illumination Color	Amber, Green, Red, Blue, White, Yellow Red/Green *2	Amber, Green, Red, Blue, White, Yellow	
Marking Plate	Clear (31 × 71 × 1 mm)		
Color Screen	White (Full: 31 × 71 × 1 mm, 2-way split: 31 × 35.5 × 1 mm, 3-way split: 31 × 23.5 × 1 mm)		
Engraving Area	Full: 29 × 69 mm, 2-way split: 29 × 33.5 mm, 3-way split: 29 × 21.5 mm		
Insulation Resistance	Between live and dead parts: 100 MΩ minimum (500V DC megger)		
Dielectric Strength	Between live and dead parts: 2000V, 1 minute		2500V, 1 minute
Vibration Resistance	5 to 55 Hz, amplitude 0.5 mm		
Shock Resistance	1000 m/s^2 (100G)		
Operating Temperature	–20 to +40°C (no freezing)		–10 to +40°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black		
Weight (approx.)	92g (1-color full, 2-way split) 100g (w/check terminal, 2-color alternate) 102g (3-way split)	186g (1-color full, 2-way split) 259g (3-way split)	121g (1-color full)

*1: 24V DC is for 1-color full w/check terminal and 2-color alternate types only.
*2: For 2-color alternate type
*3: The 2-color alternate type is full face illumination only.

Types

Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Built-in LED Units (see ratings on page 17)
Full Voltage	1-color Full	24V AC/DC ±10%	SLD48N-1DH2B∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	2-way Split	24V AC/DC ±10%	SLD48N-2DH2BGR	GR	SLDN-92F-∗T (2 units)
			SLD48N-2DH2BRG	RG	
	3-way Split	24V AC/DC ±10%	SLD48N-3DH2BGAR	GAR	SLDN-72F-∗T (3 units)
	1-color Full w/check terminal	24V DC ±10%	SLD48N-1DHM2B∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	2-color Alternate	24V DC ±10%	SLD48N-1DW2BRG	RG (red/green)	SLDN-92FW-RGT (2 units)
Transformer	1-color Full	100/110, 115/120, 200/220, 230/240V AC ±10%	SLD48N-1TH☐B∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	2-way Split		SLD48N-2TH☐BGR	GR	SLDN-92F-∗T (2 units)
			SLD48N-2TH☐BRG	RG	
	3-way Split		SLD48N-3TH☐BGAR	GAR	SLDN-72F-∗T (3 units)
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	SLD48N-1CH1B∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)

Note 1: Specify a color code in place of ∗ in the Type No.: A (amber), G (green), R (red), S (blue), W (white), Y (yellow).
Note 2: Specify an operating voltage (primary voltage) code of the transformer in place of ☐ in the Type No.:
1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
Note 3: The above SLD48N units contain LED units of the specified color. The LED units are installed in the SLD48N housing at the factory.
Note 4: Every SLD48N unit contains a clear marking plate and white color screen(s) of the specified split face size. When color display is required during power off, see page 18.

SLD48N | 40 × 80mm (Illumination face size 32 × 72mm)

Types

• Full Voltage and Transformer Split Illumination Types (LED Units Supplied)

Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Supplied LED Units (see ratings on page 17)
Full Voltage	2-way Split	24V AC/DC ±10%	SLD48N-2DH2B∗∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	3-way Split		SLD48N-3DH2B∗∗∗	A, G, R, S, W, Y	SLDN-72F-∗T (3 units)
Transformer	2-way Split	100/110, 115/120, 200/220, 230/240V AC ±10%	SLD48N-2TH☐B∗∗	A, G, R, S, W, Y	SLDN-92F-∗T (2 units)
	3-way Split		SLD48N-3TH☐B∗∗∗	A, G, R, S, W, Y	SLDN-72F-∗T (3 units)

Note 1: Color codes come in place of ∗∗ or ∗∗∗ in the Type No.: A (amber), G (green), R (red), S (blue), W (white), Y (yellow). When ordering the above split illumination types, specify standard color codes found under “Color Code” in the tables below. The LED units can be arranged in any placement found under “Combination” in the table.

Note 2: Specify an operating voltage (primary voltage) code of the transformer in place of ☐ in the Type No.: 1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).

Note 3: The above SLD48N units are supplied with LED units of the specified colors. The LED units are packaged in the same box with the SLD48N housing at factory; not installed in the SLD48N housing. Install the LED units in required positions.

Note 4: Every SLD48N unit contains a clear marking plate and white color screen(s) of the specified split face size. When color display is required during power off, see page 18.

[2-way Split]

Color Code	Combination	Color Code	Combination
AA	AA	RR	RR
AG	AG GA	RS	RS SR
AR	AR RA	RW	RW WR
AS	AS SA	RY	RY YR
AW	AW WA	SS	SS
AY	AY YA	SW	SW WS
GG	GG	SY	SY YS
GS	GS SG	WW	WW
GW	GW WG	WY	WY YW
GY	GY YG	YY	YY

[3-way Split]

Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination
AAA	AAA	AGW	AGW AWG GAW GWA WAG WGA	ASS	ASS SAS SSA	GGS	GGS GSG SGG	GSW	GSW GWS SGW SWG WGS WSG	RRY	RRY RYR YRR	SSW	SSW SWS WSS
AAG	AAG AGA GAA			ASW	ASW AWS SAW SWA WAS WSA	GGW	GGW GWG WGG			RSS	RSS SRS SSR	SSY	SSY SYS YSS
AAR	AAR ARA RAA	AGY	AGY AYG GAY GYA YAG YGA			GGY	GGY GYG YGG	GSY	GSY GYS SGY SYG YGS YSG	RSW	RSW RWS SRW SWR WRS WSR	SWW	SWW WSW WWS
AAS	AAS ASA SAA			ASY	ASY AYS SAY SYA YAS YSA	GRR	GRR RGR RRG					SWY	SWY SYW WSY WYS YSW YWS
AAW	AAW AWA WAA	ARR	ARR RAR RRA			GRS	GRS GSR RGS RSG SGR SRG	GWW	GWW WGW WWG	RSY	RSY RYS SRY SYR YRS YSR		
AAY	AAY AYA YAA	ARS	ARS ASR RAS RSA SAR SRA	AWW	AWW WAW WWA			GWY	GWY GYW WGY WYG YGW YWG			SYY	SYY YSY YYS
AGG	AGG GAG GGA			AWY	AWY AYW WAY WYA YAW YWA	GRW	GRW GWR RGW RWG WGR WRG			RWW	RWW WRW WWR	WWW	WWW
AGR	AGR ARG GRA RAG RGA	ARW	ARW AWR RAW RWA WAR WRA					GYY	GYY YGY YYG	RWY	RWY RYW WRY WYR YRW YWR	WWY	WWY WYW YWW
				AYY	AYY YAY YYA	GRY	GRY GYR RGY RYG YGR YRG	RRR	RRR			WYY	WYY YWY YYW
AGS	AGS ASG GAS GSA SAG SGA	ARY	ARY AYR RAY RYA YAR YRA	GGG	GGG			RRS	RRS RSR SRR	RYY	RYY YRY YYR	YYY	YYY
				GGR	GGR GRG RGG	GSS	GSS SGS SSG	RRW	RRW RWR WRR	SSS	SSS		

Note: For the full voltage and transformer type units, color codes GR and RG for 2-way split and color code GAR for 3-way split are found in the Type No. table on page 13.

• Full Voltage Types for 6V and 12V AC/DC (Order LED Units Separately)

Input Type	Illumination Face	Operating Voltage	Type No.	Illumination Color Code	Applicable LED Units (see ratings on page 17)
Full Voltage	1-color Full	6V AC/DC ±5%	SLD48N-1DH0B-6	A, G, R, W, Y	SLDN-96F-∗T (2 units)
		12V AC/DC ±10%	SLD48N-1DH0B-12	A, G, R, W, Y	SLDN-91F-∗T (2 units)
	2-way Split	6V AC/DC ±5%	SLD48N-2DH0B-6	A, G, R, W, Y	SLDN-96F-∗T (2 units)
		12V AC/DC ±10%	SLD48N-2DH0B-12	A, G, R, W, Y	SLDN-91F-∗T (2 units)
	3-way Split	6V AC/DC ±5%	SLD48N-3DH0B-6	A, G, R, W, Y	SLDN-76F-∗T (3 units)
		12V AC/DC ±10%	SLD48N-3DH0B-12	A, G, R, W, Y	SLDN-71F-∗T (3 units)

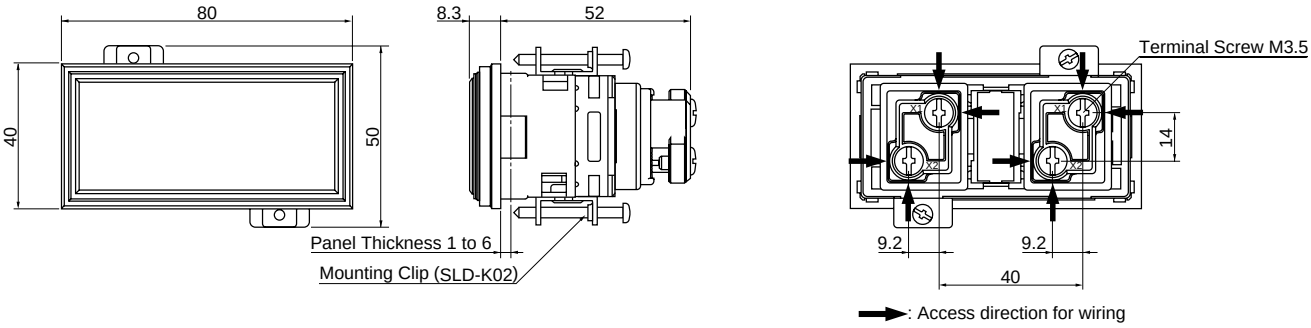
Note 1: The above SLD48N units are not supplied with LED units. Order applicable LED units by specifying a color code in place of ∗ in the Type No.: A (amber), G (green), R (red), W (white), Y (yellow).

Note 2: Every SLD48N unit contains a clear marking plate and white color screen(s) of the specified split face size. When color display is required during power off, see page 18.

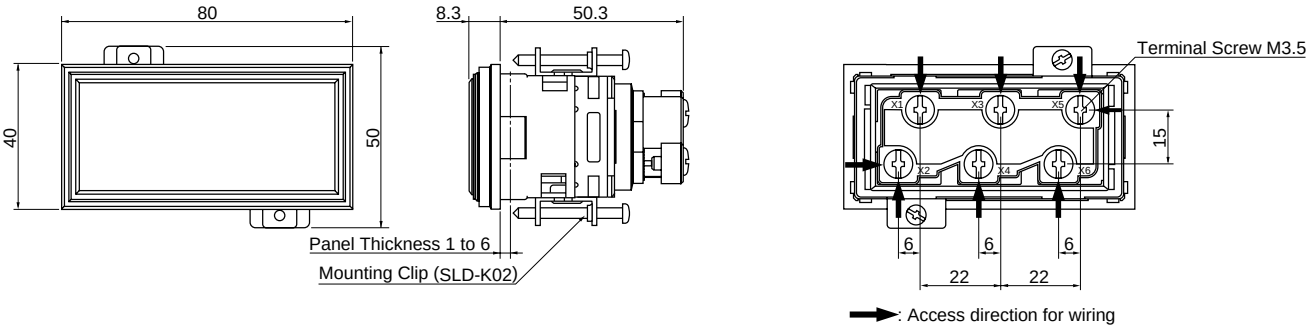
SLD48N	40 × 80mm (Illumination face size 32 × 72mm)

Dimensions

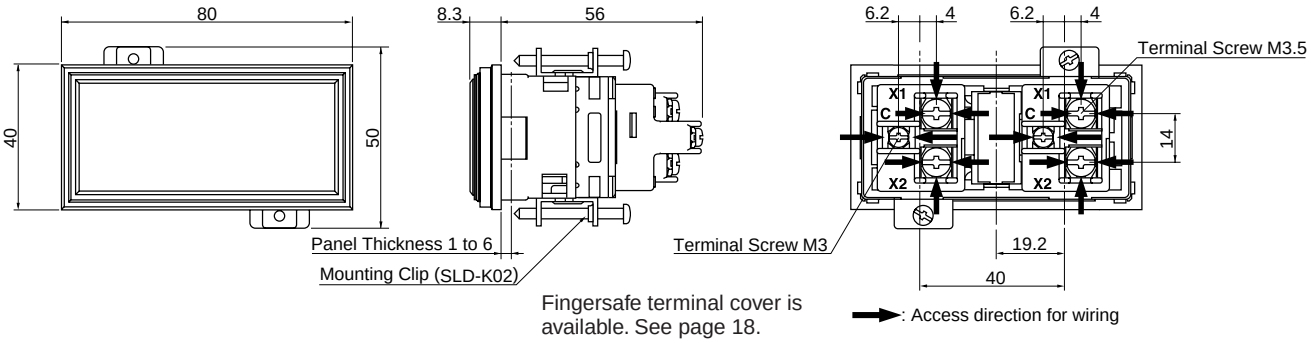
• Full Voltage Type (1-color full and 2-way split)



• Full Voltage Type (3-way split)

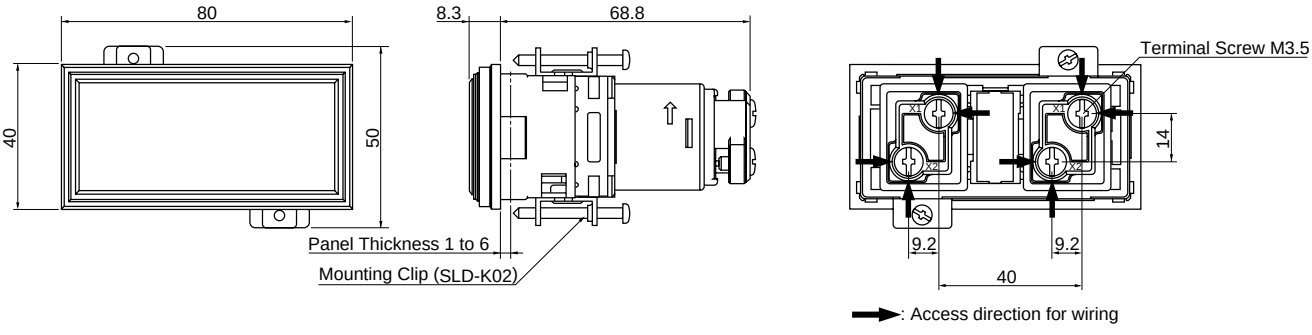


• Full Voltage Type (1-color full w/check terminal and 2-color alternate)



Fingersafe terminal cover is available. See page 18.

• Transformer Type (1-color full and 2-way split)



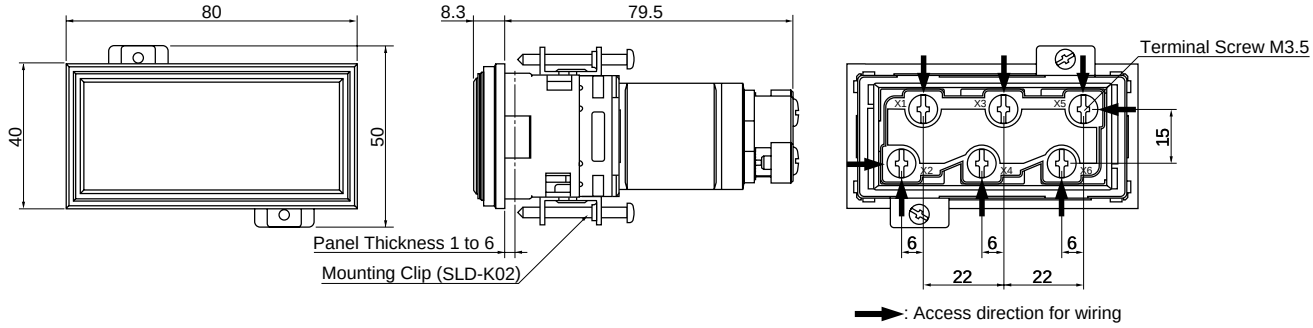
When using leaf springs for temporary fastening, order SLDN-44KVP or SLDN-8KVP separately. See page 24.

All dimensions in mm.

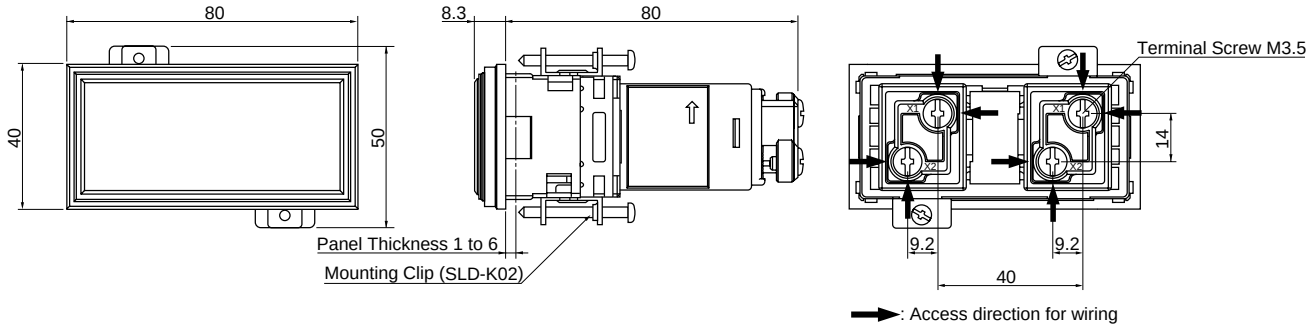
SLD48N	40 × 80mm (Illumination face size 32 × 72mm)

Dimensions

• Transformer Type (3-way split)

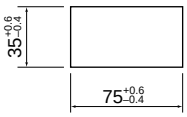


• DC-DC Converter Type



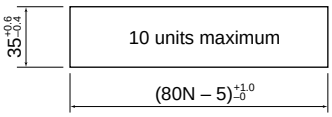
Panel Cut-out

• Single Mounting

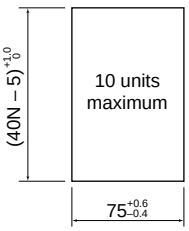


N: No. of units (rows/columns)

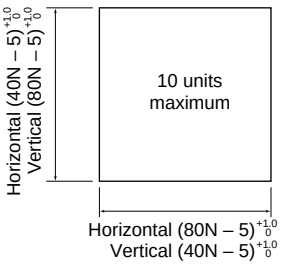
• Horizontal Mounting



• Vertical Mounting



• Integrated Mounting



When using leaf springs for temporary fastening, order SLDN-44KVP or SLDN-8KVP separately. See page 24.

All dimensions in mm.

LED Units

• 24V AC/DC (1-color) and 24V DC (2-color)

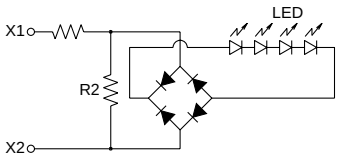
Appearance	For use on	Type No.	Illumination Color	Rating	Package Quantity
(supplied)	SLD30N	SLDN-32F-AT	Amber	24V AC/DC, 12 mA	1
		SLDN-32F-GT	Green	24V AC/DC, 12 mA	
		SLDN-32F-RT	Red	24V AC/DC, 13 mA	
		SLDN-32F-ST	Blue	24V AC/DC, 12 mA	
		SLDN-32F-WT	White	24V AC/DC, 13 mA	
		SLDN-32F-YT	Yellow	24V AC/DC, 13 mA	
		SLDN-32FW-RGT	Red/Green	24V DC, 13 mA (red)/12 mA (green)	
(supplied)	SLD44N SLD72N (Full/2-way split) SLD48N (Full/2-way split)	SLDN-92F-AT	Amber	24V AC/DC, 12 mA	1
		SLDN-92F-GT	Green	24V AC/DC, 12 mA	
		SLDN-92F-RT	Red	24V AC/DC, 13 mA	
		SLDN-92F-ST	Blue	24V AC/DC, 12 mA	
		SLDN-92F-WT	White	24V AC/DC, 13 mA	
		SLDN-92F-YT	Yellow	24V AC/DC, 13 mA	
		SLDN-92FW-RGT	Red/Green	24V DC, 13 mA (red)/12 mA (green)	
(supplied)	SLD72N (3-way split) SLD48N (3-way split)	SLDN-72F-AT	Amber	24V AC/DC, 12 mA	1
		SLDN-72F-GT	Green	24V AC/DC, 12 mA	
		SLDN-72F-RT	Red	24V AC/DC, 13 mA	
		SLDN-72F-ST	Blue	24V AC/DC, 12 mA	
		SLDN-72F-WT	White	24V AC/DC, 13 mA	
		SLDN-72F-YT	Yellow	24V AC/DC, 13 mA	

• 6V and 12V AC/DC (1-color)

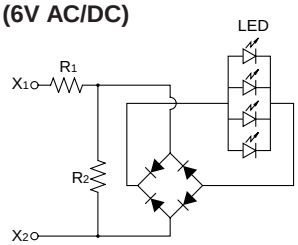
For use on	Illumination Color	6V AC/DC		12V AC/DC		Package Quantity
		Type No.	Rating	Type No.	Rating	
SLD30N	Amber	SLDN-36F-AT	6V AC/DC, 39 mA	SLDN-31F-AT	12V AC/DC, 21 mA	1
	Green	SLDN-36F-GT	6V AC/DC, 39 mA	SLDN-31F-GT	12V AC/DC, 21 mA	
	Red	SLDN-36F-RT	6V AC/DC, 43 mA	SLDN-31F-RT	12V AC/DC, 23 mA	
	White	SLDN-36F-WT	6V AC/DC, 43 mA	SLDN-31F-WT	12V AC/DC, 23 mA	
	Yellow	SLDN-36F-YT	6V AC/DC, 43 mA	SLDN-31F-YT	12V AC/DC, 23 mA	
SLD44N SLD72N (Full/2-way split) SLD48N (Full/2-way split)	Amber	SLDN-96F-AT	6V AC/DC, 39 mA	SLDN-91F-AT	12V AC/DC, 21 mA	1
	Green	SLDN-96F-GT	6V AC/DC, 39 mA	SLDN-91F-GT	12V AC/DC, 21 mA	
	Red	SLDN-96F-RT	6V AC/DC, 43 mA	SLDN-91F-RT	12V AC/DC, 23 mA	
	White	SLDN-96F-WT	6V AC/DC, 43 mA	SLDN-91F-WT	12V AC/DC, 23 mA	
	Yellow	SLDN-96F-YT	6V AC/DC, 43 mA	SLDN-91F-YT	12V AC/DC, 23 mA	
SLD72N (3-way split) SLD48N (3-way split)	Amber	SLDN-76F-AT	6V AC/DC, 39 mA	SLDN-71F-AT	12V AC/DC, 21 mA	1
	Green	SLDN-76F-GT	6V AC/DC, 39 mA	SLDN-71F-GT	12V AC/DC, 21 mA	
	Red	SLDN-76F-RT	6V AC/DC, 43 mA	SLDN-71F-RT	12V AC/DC, 23 mA	
	White	SLDN-76F-WT	6V AC/DC, 43 mA	SLDN-71F-WT	12V AC/DC, 23 mA	
	Yellow	SLDN-76F-YT	6V AC/DC, 43 mA	SLDN-71F-YT	12V AC/DC, 23 mA	

• LED Unit Internal Circuits

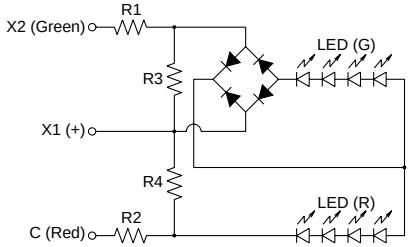
1-color LED Unit (24V AC/DC)



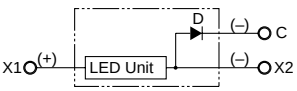
(6V AC/DC)



2-color Alternate LED Unit (24V DC)

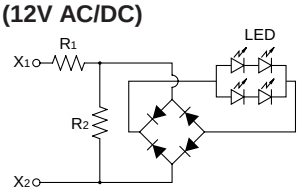


• 1-color Full w/Check Terminal LED Unit Internal Circuit

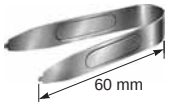


Protection diode D:
Reverse withstand voltage 400V

(12V AC/DC)



Accessories

Name Appearance	For use on	Material	Type No.	Ordering Type No.	Package Quantity	Remarks
LED Unit Removal Tool 	All SLDN	Metal	MT-101	MT-101	1	Used for removing the LED unit from the SLDN housing.
Lens Unit Removal Tool	All SLDN	Rubber	MT-S01	MT-S01	1	Used for removing the lens unit from the SLDN housing.
Cross-shaped Joint	SLD30N SLD72N	Diecast	SLD-F30	SLD-F30PN05	5	Used for connecting SLDN units for integrated mounting. Weight: 25g
	SLD44N SLD48N		SLD-F44	SLD-F44PN05	5	
I-shaped Joint	SLD72N	Diecast	SLD-L72	SLD-L72PN05	5	Used for connecting cross-shaped joint on the longer sides of the SLD72N or SLD48N for integrated mounting. Weight: 10g
	SLD48N		SLD-L48	SLD-L48PN05	5	
Terminal Cover	w/check terminal, 2-color alternate	PPE	SLC30-VL6	SLC30-VL6	1	Fingersafe terminal cover for 1-color w/check terminal and 2-color alternate types.

Maintenance Parts

Marking Plate and Color Screen

Name Appearance	For use on		Material	Type No.	Ordering Type No.	Package Quantity	Remarks
Mounting Clip (supplied)	All SLDN		Metal	SLD-K02	SLD-K02PN10	10	Used for fastening SLDN units to the panel from the rear in single, row, or integrated mounting. Two mounting clips are supplied with every SLDN unit. Weight: 6g
Color Screen (supplied)	SLD30N	Full	Acrylic	SLDN-3C-∗	SLDN-3C-∗PN05	5	Specify a color code in place of ∗. White display when power off: FW (white) Color display when power off: A (amber) C (clear) G (green) R (red) S (blue) Y (yellow)
	SLD44N	Full		SLDN-44C-∗	SLDN-44C-∗PN05		
	SLD72N	Full		SLDN-7C-∗	SLDN-7C-∗PN05		
		2-way split		SLDN-7C2-∗	SLDN-7C2-∗PN05		
		3-way split		SLDN-7C3-∗	SLDN-7C3-∗PN05		
	SLD48N	Full		SLDN-8C-∗	SLDN-8C-∗PN05		
		2-way split		SLDN-8C2-∗	SLDN-8C2-∗PN05		
		3-way split		SLDN-8C3-∗	SLDN-8C3-∗PN05		
Lens (supplied)	SLD30N		Polycar-bonate	SLC-3LF-U	SLC-3LF-U	1	
	SLD44N			SLD-44L	SLD-44L		
	SLD72N			SLD-7L	SLD-7L		
	SLD48N			SLD-8L	SLD-8L		
Lens Frame (supplied)	SLD30N		ABS	SLD-3W-B	SLD-3W-B	1	
	SLD44N			SLDN-44W-B	SLDN-44W-B		
	SLD72N			SLDN-7W-B	SLDN-7W-B		
	SLD48N			SLDN-8W-B	SLDN-8W-B		
Light Barrier (supplied)	SLD72N	2-way split 3-way split	PBT	SLDN-7SH	SLDN-7SHPN05	5	
	SLD48N	2-way split		SLDN-8SH	SLDN-8SHPN05		

Transformer

Types

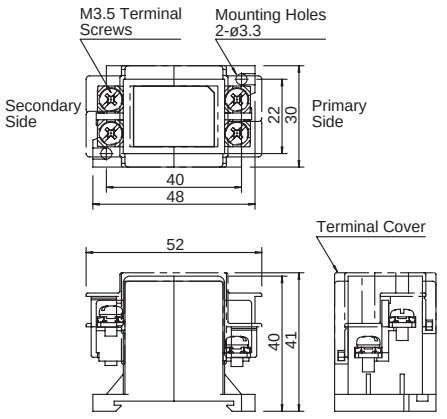
Shape	Primary Voltage	Secondary Voltage	Type No.	Package Quantity
	100/110V AC	24V AC, 0.5W	TWR512	1
	200/220V AC		TWR522	1
	400/440V AC		TWR542	1

- Terminal covers are supplied.
- Only one LED unit can be connected to each transformer.
- Use plastic mounting clip BC9Z-E/NS35N when mounting 400/440V AC primary voltage models.

• Applicable LED Units

SLDN	LED Unit	For use on
SLD30N	SLDN-32F-☐T	Full face illumination, 24V AC
SLD44N	SLDN-92F-☐T	Full face illumination, 24V AC
SLD72N	SLDN-92F-☐T	Full face and 2-way split illumination, 24V AC, 1 LED unit
	SLDN-72F-☐T	3-way split illumination, 24V AC, 1 LED unit
SLD48N	SLDN-92F-☐T	Full face and 2-way split illumination, 24V AC, 1 LED unit
	SLDN-72F-☐T	3-way split illumination, 24V AC, 1 LED unit

Dimensions

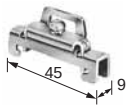
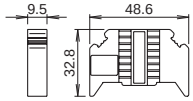


All dimensions in mm.

Specifications

Operating Voltage	100/110V AC, 200/220V AC, 400/440V AC (50/60 Hz)
Power Consumption	2.4VA
Rated Insulation Voltage	600V
Insulation Resistance	100 MΩ minimum (500V DC megger)
Dielectric Strength	2500V AC, 1 minute
Operating Temperature	–30 to +60°C (no freezing)
Relative Humidity	35 to 85% (no condensation)
Vibration Resistance	Operating Extremes: 5 to 55 Hz, amplitude 0.5 mm
Shock Resistance	Damage Limits: 1,000 m/s^2 (100G)
Terminal Screw	M3.5
Applicable Wire	2 mm^2 maximum, 2 wires maximum

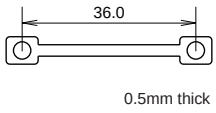
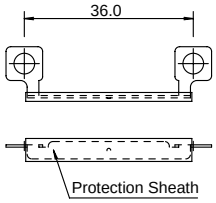
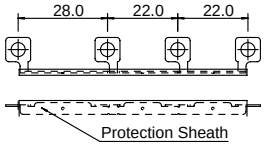
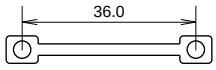
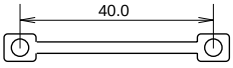
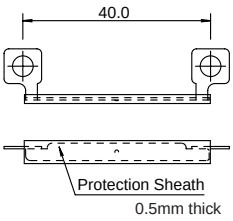
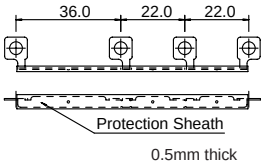
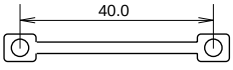
Accessories

Description	Appearance	Description	Type No.	Ordering Type No.	Package Quantity
DIN Rail		Aluminum Weight: Approx. 200g Length: 1m	BAA1000	BAA1000PN10	10
		Steel Weight: Approx. 320g Length: 1m	BAP1000	BAP1000PN10	
Mounting Clip		Steel Weight: Approx.15g	BNL6	BNL6PN10	
		Plastic Weight: Approx.15g	BC9Z-E/NS35N	BC9Z-E/NS35NPN10	

- Use plastic mounting clip BC9Z-E/NS35N when using 400/440V AC primary voltage transformers.

Maintenance Parts

Jumpers

For use on		Type No.	Ordering Type No.	Package Quantity	Dimensions	Application Example
SLD30N	w/Check Terminal 2-color Alternate	LJ-2	LJ-2PN10	10	 0.5mm thick	• SLD30N/SLD44N 1-color
	Full	SLDN-JP301	SLDN-JP301PN10	10	 0.5mm thick	
SLD72N	Full 2-way Split					
	3-way Split	SLDN-JP723	SLDN-JP723PN10	10	 0.5mm thick	• SLD72N/SLD48N 3-way split
	w/Check Terminal 2-color Alternate	LJ-2	LJ-2PN10	10	 0.5mm thick	
SLD44N	w/Check Terminal 2-color Alternate	LJ-6	LJ-6PN10	10	 0.5mm thick	
	Full	SLCN-JP45	SLCN-JP45PN10	10	 0.5mm thick	
SLD48N	Full 2-way Split					
	3-way Split	SLDN-JP483	SLDN-JP483PN10	10	 0.5mm thick	
	w/Check Terminal 2-color Alternate	LJ-6	LJ-6PN10	10	 0.5mm thick	• SLD72N/SLD48N w/check terminal, 2-color

Safety Precautions

- Turn off power to the SLDN units before installation, removal, wiring, maintenance, or inspection. Before removing the LED unit, make sure that power is turned off. Failure to turn off the power may cause an electrical shock, create fire hazards.
- When lighting the SLDN units continuously, observe the conditions described on page 21. If these limits are exceeded, the SLDN units may heat up and create a fire hazard or damage the SLDN units.
- Use wires of a proper size to meet the voltage and current requirements. Tighten terminal screws to a proper torque shown below. Loose screws will cause excessive heating and create fire hazards.

Terminal Screw	Proper Tightening Torque
M3	0.6 to 1.0 N·m
M3.5	1.0 to 1.3 N·m

- Do not install and operate the SLDN units where the SLDN units are subjected to direct sunlight. Excessive heating may create a fire hazard or damage the SLDN units.

Operating Instructions

Notes for Continuous Lighting
(Integrated Mounting)

- Up to 10 SLD30N or SLD44N units can be lit continuously. Up to six SLD72N or SLD48N units can be lit continuously. When more units are mounted, consider the following restrictions.
- When more SLDN units are mounted, do not light more than 50% of the SLDN units continuously and light the units in a checkerboard pattern.
- When more than 50% of the units are lit continuously, limit the lighting duration to 40 minutes. Before lighting the units again, make sure that all units have cooled down.
- When using the SLDN units in other conditions, consult IDEC.
- When using 2-color alternate type units, do not light the two colors simultaneously.

Notes for Panel Mounting

- Tighten the mounting clips to a torque of 0.4 to 0.5 N·m.
- Do not repeat installation and removal of mounting clips many times. The mounting clips will become deformed and fail to ensure proper tightening.
- When mounting the SLDN units on a panel, determine the panel thickness taking the weights of the SLDN units and wires into consideration.

Wiring

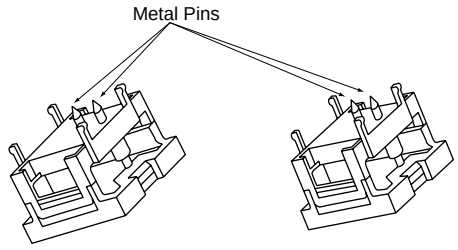
- Proper tightening torque of terminal screws are shown in the table below:

Terminal Screw	Proper Tightening Torque
M3	0.6 to 1.0 N·m
M3.5	1.0 to 1.3 N·m

- Use an insulation sheath or marking tube on the crimping part of crimping terminals to prevent electrical shocks.
- M3.5 terminals can be wired using one or two ø1.6 mm solid wires or 2 mm^2 stranded wires. M3 terminals can be wired using one or two 1.25 mm^2 stranded wires.

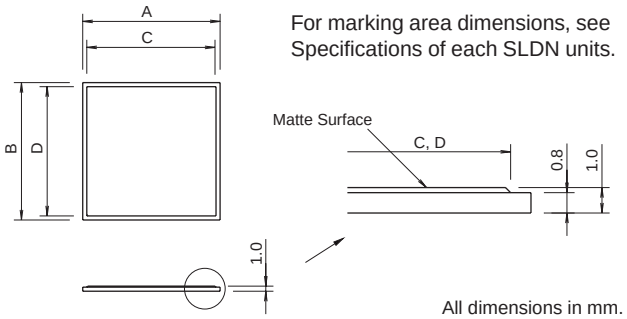
Caution for Electrostatic Discharge (ESD)

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



Marking

- Legends can be engraved on the clear marking plates and color screens, whose dimensions are shown below



For marking area dimensions, see Specifications of each SLDN units.

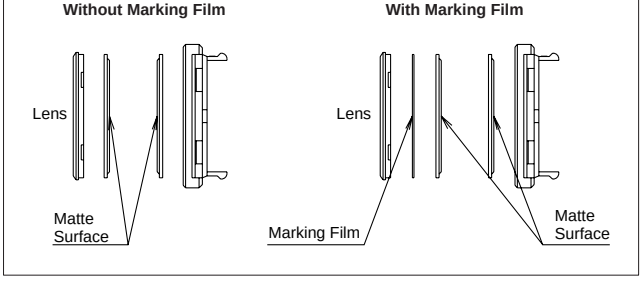
All dimensions in mm.

For use on	Face	Type No.	A	B	C	D
SLD30N	Full	SLDN-3C-☐	27.0	27.0	25.4	25.4
SLD44N	Full	SLDN-44C-☐	31.0	31.0	29.4	29.4
SLD72N	Full	SLDN-7C-☐	63.0	27.0	61.4	25.4
	2-way split	SLDN-7C2-☐	31.5	27.0	29.9	25.4
	3-way split	SLDN-7C3-☐	21.0	27.0	19.4	25.4
SLD48N	Full	SLDN-8C-☐	71.0	31.0	69.4	29.4
	2-way split	SLDN-8C2-☐	35.5	31.0	33.9	29.4
	3-way split	SLDN-8C3-☐	23.5	31.0	21.9	29.4

- In addition, thin marking films can be inserted as illustrated below. Two sheets of 0.1-mm-thick films or one sheet of 0.2-mm-thick film is applicable. Marking films are not supplied with the SLDN units and must be prepared by the user. Polyester films are recommended.

For use on	Marking Film Dimensions
SLD30N	27 × 27 mm
SLD44N	31 × 31 mm
SLD72N	27 × 63 mm
SLD48N	31 × 71 mm

- Placement of Marking Plate and 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 for the marking film. If the matte surfaces face with each other, the marking film cannot be inserted.



Operating Instructions

Illumination Units

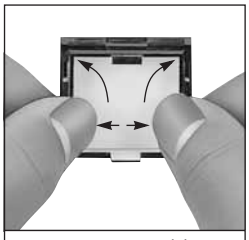
• Removing the Display Window

To remove the display window, insert the tip of a flat screwdriver into the slot on top or bottom of the lens frame. Lens unit removal tool MT-S01 can also be used to remove the display window.

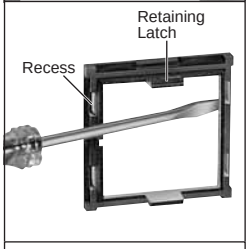
• Replacing the Lens, Marking Plate, and Color Screen

[Removal]

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



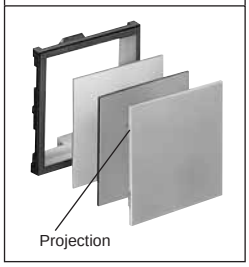
The lens can also be removed by inserting a screwdriver into one of the sides with recesses. Since the lens has an orientation due to projections, be sure to insert the screwdriver in the direction as shown. Take care not to damage or scratch the lens surface.



[Installation]

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

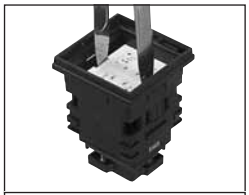
To install the lens, insert its retaining projections into the recesses inside the lens frame, and press the lens on the other side into the lens frame.



• Replacing the LED Unit

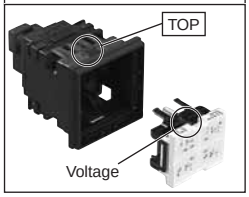
[Removal]

Use the LED unit removal tool (MT-101) to pull out the LED unit.



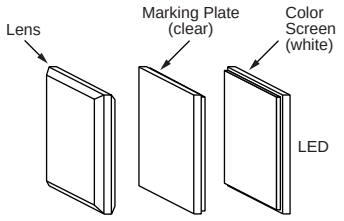
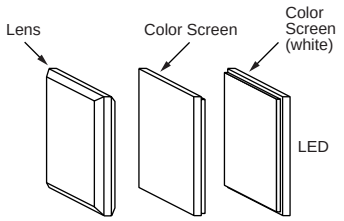
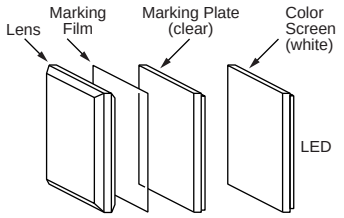
[Installation]

The LED unit has an orientation. To install the LED unit, place the voltage marking on the LED unit in the same direction as the TOP marking on the on the LED unit, and push in the LED unit.



• Placement of Marking Plate and Color Screen

Insert marking plate, color screen, and marking film in the proper order as described below.

For use on	Placement
White Display (lamp off)	
Color Display (lamp off) Install a color screen and a white plate.	
Marking Film (prepared by the user)	

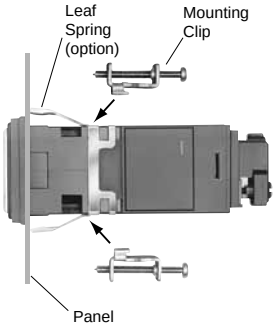
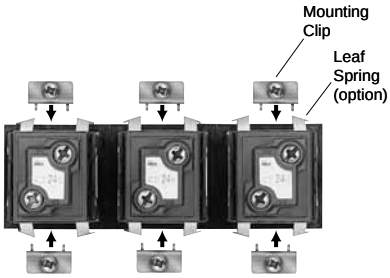
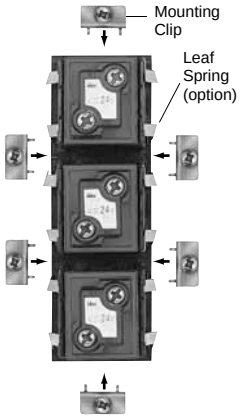
Operating Instructions

Installation on Panel: SLD30N & SLD44N (Square Types)

• Single, Horizontal, or Vertical One-row Mounting

All SLDN units are mounted using the supplied mounting clips. When using leaf springs for temporary fastening, order SLD30KVP (for SLD30N) or SLDN-44KVP (for SLD44N) separately.

A maximum of 20 SLD30N or SLD44N units can be mounted collectively in a row or integrated form.

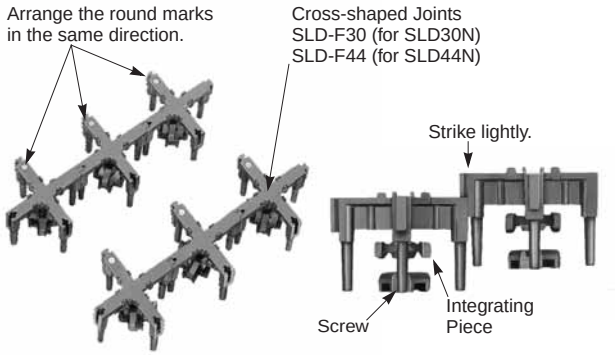
Mounting	Single Mounting	Horizontal Mounting	Vertical Mounting
Outside View			
Mounting Procedure	Push the SLDN unit into the panel cut-out from the front of the panel. When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit. Install two mounting clips and tighten the screws.	Push the SLDN units starting from the end of the row into the panel cut-out from the front of the panel. When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit. Install two mounting clips to each unit and tighten the screws.	Push the SLDN units starting from the bottom of the column into the panel cut-out from the front of the panel. When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit. Install mounting clips to combine adjoining SLDN units and one mounting clip each at the top and bottom of the column, and tighten the screws.

Note: Tighten the mounting clip screws to a torque of approx. 0.4 to 0.5 N·m.

• Integrated Mounting

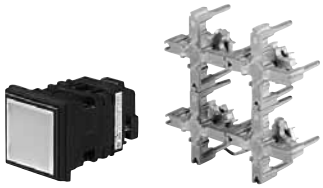
1. Assemble the cross-shaped joints.

First, assemble the cross-shaped joints in a row with round marks in the same direction. Then, combine the rows of assembled cross-shaped joints together.

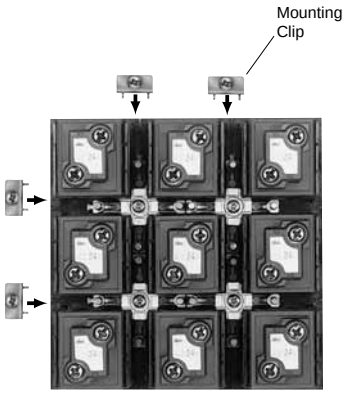


2. Lock the housings with the cross-shaped joints.

Insert the SLDN units into the assembled cross-shaped joints. Tighten the screws to integrate adjoining four SLDN units with the integrating pieces on the cross-shaped joints.



3. Install into panel cut-out.



Insert the cluster of SLDN units into the panel cut-out from the front of the panel. Install the mounting clips as shown and tighten the screws lightly to a torque of approximately 0.4 to 0.5 N·m.

Quantity of mounting clips = (N – 1) × 2 + (N' – 1) × 2

Quantity of cross-shaped joints = (N – 1) × (N' – 1)

where N and N' are the numbers of rows and columns, respectively.

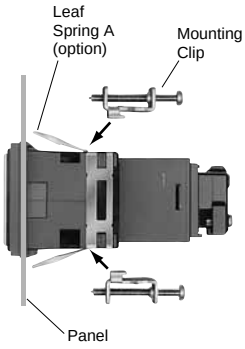
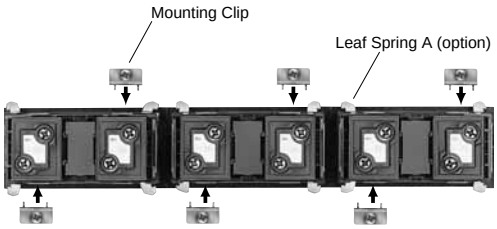
Operating Instructions

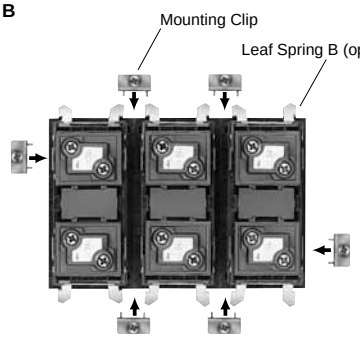
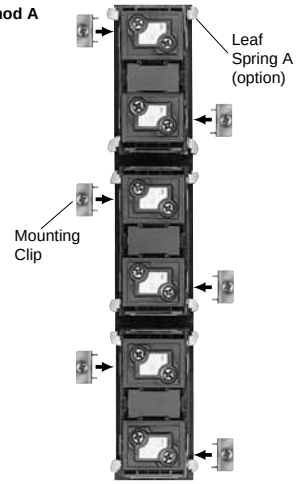
Installation on Panel: SLD72N & SLD48N (Rectangular Types)

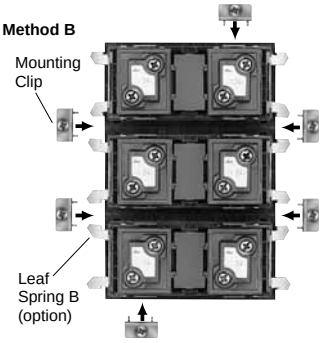
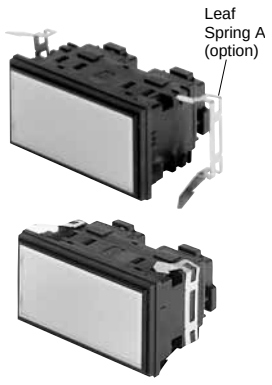
• Single, Horizontal, or Vertical One-row Mounting

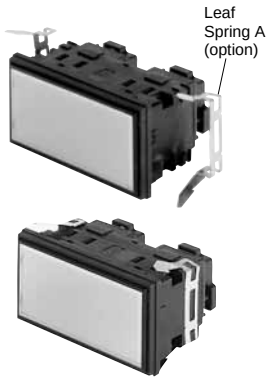
All SLDN units are mounted using the supplied mounting clips. When using leaf springs for temporary fastening, order SLD30KVP or SLD-7KVP (for SLD72N) or SLDN-44KVP or SLDN-8KVP (for SLD48N) separately.

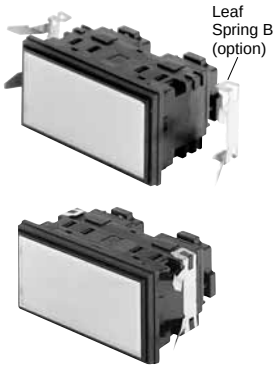
A maximum of 10 SLD72N or SLD48N units can be mounted collectively in a row or integrated form.

<table>
<tr><th>Mounting</th><th>Single Mounting</th><th>Horizontal Mounting</th><th>Vertical Mounting</th></tr>
<tr><td>Outside View</td><td> 
</td><td>Method A
 

Method B
 
</td><td>Method A
 

Method B
 
</td></tr>
<tr><td>Mounting Procedure</td><td>Push the SLDN unit into the panel cut-out from the front of the panel.
When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit.
 

Install two mounting clips and tighten the screws.</td><td>Method A
Push the SLDN units starting from the end of the row into the panel cut-out from the front of the panel.
When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit.
 

Install two mounting clips to each unit and tighten the screws.</td><td>Method B
Push the SLDN units starting from the bottom of the column into the panel cut-out from the front of the panel.
When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit.
 

Install mounting clips to combine adjoining SLDN units and one mounting clip each at the top and bottom of the column, and tighten the screws.</td></tr>
</table>

Note 1: Tighten the mounting clip screws to a torque of approx. 0.4 to 0.5 N·m.

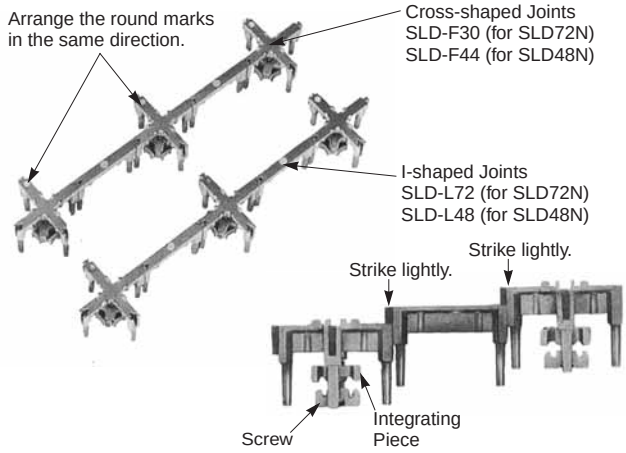
Note 2: Leaf spring A provides wings on the longer side of the SLDN unit. Leaf spring B provides wings on the shorter side of the SLDN unit. Leaf springs are not supplied with the SLDN unit. When leaf springs A are required, specify Type No. SLD-30KVP (for SLD72N) or SLDN-44KVP (for SLD48N) and required quantity in pairs. When leaf springs B are required, specify Type No. SLD-7KVP (for SLD72N) or SLDN-8KVP (for SLD48N) and required quantity in pairs.

Operating Instructions

• Integrated Mounting

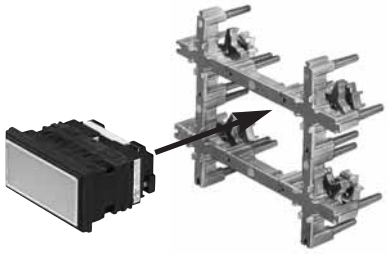
1. Assemble the cross-shaped joints.

First, assemble the cross-shaped joints in a row with round marks in the same direction together with the I-shaped joints. Then, combine the rows of assembled cross-shaped joints together.

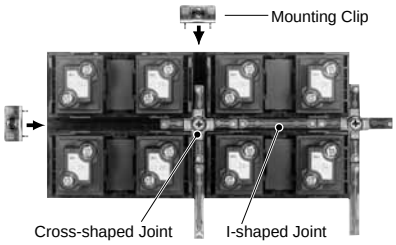


2. Lock the housings with the cross-shaped joints.

Insert the SLDN units into the assembled joints. Tighten the screws to integrate adjoining SLDN units with the integrating pieces on the cross-shaped joints.



3. Install into panel cut-out.



Insert the cluster of SLDN units into the panel cut-out from the front of the panel. Install the mounting clips as shown and tighten the screws lightly to a torque of approximately 0.4 to 0.5 N·m.

Quantity of mounting clips = (N – 1) × 2 + (N' – 1) × 2

Quantity of cross-shaped joints = (N – 1) × (N' – 1)

Quantity of I-shaped joints

For horizontal mounting = (N – 1) × (N' – 2)

For vertical mounting = (N – 2) × (N' – 1)

where N and N' are the numbers of rows and columns, respectively.

• Quantities of Mounting Clips, Cross-shaped Joints, and I-shaped Joints Used for Integrated Mounting

Columns (N')	Mounting Clips and Joints	Rows (N)			
		2	3	4	5
2	Mounting Clips Cross-shaped Joints I-shaped Joints	4 1 0	6 2 1	8 3 2	10 4 3
3	Mounting Clips Cross-shaped Joints I-shaped Joints	6 2 0	8 4 2	10 6 4	12 8 6
4	Mounting Clips Cross-shaped Joints I-shaped Joints	8 3 0	10 6 3	12 9 6	14 12 9
5	Mounting Clips Cross-shaped Joints I-shaped Joints	10 4 0	12 8 4	14 12 8	—

Quantity of SLDN units = N × N'

The maximum quantity of square SLD30N and SLD44N units for integrated mounting is 20.

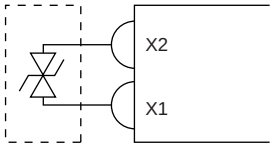
The maximum quantity of rectangular SLD72N and SLD48N units for integrated mounting is 10 as shown with shading in the table above.

Operating Instructions

Notes for Using LED Units

• Precautions for Noise

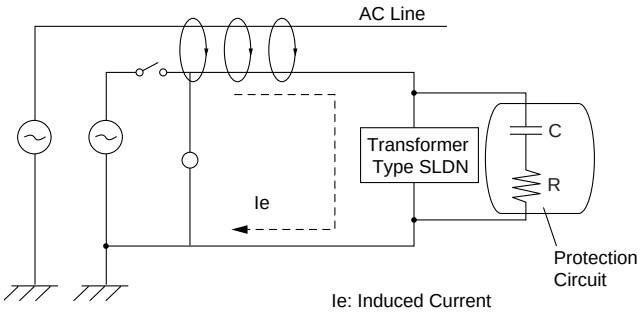
When using the SLDN unit in an environment where the SLDN is subjected to noise, connect a noise suppressor across terminals X1 and X2 as shown below.



• Countermeasures against Dim Lighting

The SLDN unit contains 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 type SLDN unit.

For the values of the resistor and capacitor, see the following table.

SLDN Rated Operating Voltage	Resistor R		Capacitor C (μF)
	(Ω)	(W)	
100/110V AC (50/60 Hz)	120	0.25	0.33
200/220V AC (50/60 Hz)	120	0.25	0.10

• Installation Location

Amber, white, and yellow LED units generate very weak infrared rays. When the environment is vulnerable to infrared rays, provide appropriate protection.

Ordering Information

Notes for Ordering

1. When ordering SLDN units and accessories, specify the Type No. and quantity.
2. All SLDN units except for 6V and 12V AC/DC types are supplied with LED unit(s). For 6V and 12V AC/DC type units, order LED units separately.
3. When ordering 2-way or 3-way split illumination type SLD72N and SLD48N units (24V AC/DC full voltage and transformer types) shown on pages 10 and 14, specify the Type No. including standard color codes.
4. All SLDN units are supplied with two mounting clips.
5. All SLDN units are not supplied with leaf springs. When using leaf springs for temporary fastening, order applicable leaf springs separately. See pages 23 and 24.
6. All SLDN units are supplied with a clear marking plate of the full illumination face size and white color screens of the specified split face size. When color display is required during power off for a full illumination face, order a color screen. When color display is required for a split illumination face, order color screens of the split face size and a white marking plate of the full illumination face size. See page 18.

Ordering Examples

• Single Mounting

[Ex. 1] 24V AC/DC Full Voltage Type Units

SLDN Unit	SLD30N-1DH2BR	10 pcs

[Ex. 2] 6V AC/DC Full Voltage Type Units

SLDN Unit	SLD30N-1DH0B-6	10 pcs
LED Unit	SLDN-36F-RT	5 pcs
LED Unit	SLDN-36F-GT	5 pcs

[Ex. 3] 24V AC/DC Full Voltage Type Units (2-way split)

SLDN Unit	SLD72N-2DH2BGR	10 pcs
SLDN Unit	SLD72N-2DH2BRW	10 pcs

[Ex. 4] 6V AC/DC Full Voltage Type Units (2-way split)

SLDN Unit	SLD72N-2DH0B-6	10 pcs
LED Unit	SLDN-96F-RT	10 pcs
LED Unit	SLDN-96F-GT	10 pcs

[Ex. 5] 24V AC/DC Full Voltage Type Units (3-way split)

SLDN Unit	SLD48N-3DH2BGAR	10 pcs

[Ex. 6] 115/120V AC Transformer Type Units (3-way split)

SLDN Unit	SLD48N-3TH12BGRW	10 pcs

[Ex. 7] 6V AC/DC Full Voltage Type Units (3-way split)

SLDN Unit	SLD48N-3DH0B-6	10 pcs
LED Unit	SLDN-76F-GT	10 pcs
LED Unit	SLDN-76F-AT	10 pcs
LED Unit	SLDN-76F-RT	10 pcs

• Integrated Mounting

[Ex. 8] Square Type Units (4 rows × 5 columns)

SLDN Unit	SLD30N-1DH2BR	20 pcs
Cross-shaped Joint	SLD-F30PN05	3 packs (15 pcs)

[Ex. 9] Rectangular Type Units (2 rows × 5 columns)

SLDN Unit	SLD48N-1DH2BR	10 pcs
Cross-shaped Joint	SLD-F44PN05	1 pack (5 pcs)
I-shaped Joint	SLD-L48PN05	1 pack (5 pcs)

• Color Display When Lamp Off

[Ex. 10] 1-color Full Illumination Units

SLDN Unit	SLD72N-1DH2BR	10 pcs
Color Screen	SLDN-7C-RPN05	2 packs (10 pcs)

[Ex. 11] 3-way Split Illumination Units

SLDN Unit	SLD72N-3DH2BGAR	10 pcs
Marking Plate (white)	SLDN-7C-FWPN05	2 packs (10 pcs)
Color Screen	SLDN-7C3-GPN05	2 packs (10 pcs)
Color Screen	SLDN-7C3-APN05	2 packs (10 pcs)
Color Screen	SLDN-7C3-RPN05	2 packs (10 pcs)

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

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