SLDN Series Display Lights

Super Bright LED Illumination Increased Visibility for Higher Safety

- Super bright LED illumination. Color arrangements can be easily changed on split illumination types.
- The spring-up terminals save wiring time and ensures safety.
- The integrated terminal cover prevents electrical shocks.
- Marking films (not supplied) can be inserted or easy legend marking.
- Prevention against dim lighting caused by leakage currents and induced voltage.
- UL and c-UL recognized. TÜV approved. EN compliant.

Applicable Standards	Mark	File No. or Organization
UL508 CSA C22.2 No.14	C UL US LISTED	UL/c-UL Listed File No. E68961
EN60947-5-1 (Note)	TÜV	TÜV SÜD
	CE	EU Low Voltage Directive

Note: Except for DC-DC converter types.

Reduced Wiring Time

The captive spring-up terminals reduce wiring time. The integrated terminal cover prevents electrical shocks. For 2-color alternate and check terminal type units, separate terminal covers are available.
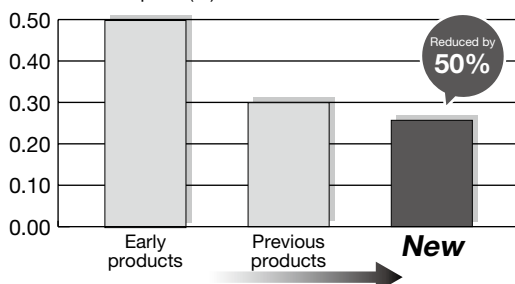
Jumpers with protection sheath enhance safety

Jumper

Energy Saving Design

Power consumption is reduced by 50% compared with early products.

Power Consumption (W)

Reduced by 50%

Early products | Previous products | *New*

Easy Replacement of LED Units

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

Selection Guide

Model	Shape	Frame Size (Lens Size)	Input Voltage	Illumination Face	Rated Voltage	Illumination Color
SLD30N		DIN Size 36 × 36 mm (28 × 28 mm)	Full Voltage	1-color Full	24V AC/DC	Amber, Green, Pure White, Red, Blue, Yellow
				1-color Full w/check terminal	24V DC	
				2-color Alternate	24V AC/DC	Red/Green
			Transformer	1-color Full	100/110V AC 115/120V AC 200/220V AC 230/240V AC	Amber, Green, Pure White, Red, Blue, 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	24V AC/DC	Amber, Green, Pure White, Red, Blue, Yellow
				1-color Full w/check terminal	24V DC	
				2-color Alternate	24V AC/DC	Red/Green
			Transformer	1-color Full	100/110V AC 115/120V AC 200/220V AC 230/240V AC	Amber, Green, Pure White, Red, Blue, 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	24V AC/DC	Amber, Green, Pure White, Red, Blue, Yellow
				2-way Split		
				3-way Split		
				1-color Full w/check terminal	24V DC	
				2-color Alternate	24V AC/DC	Red/Green
			Transformer	1-color Full	100/110V AC 115/120V AC 200/220V AC 230/240V AC	Amber, Green, Pure White, Red, Blue, 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	24V AC/DC	Amber, Green, Pure White, Red, Blue, Yellow
				2-way Split		
				3-way Split		
				1-color Full w/check terminal	24V DC	
				2-color Alternate	24V AC/DC	Red/Green
			Transformer	1-color Full	100/110V AC 115/120V AC 200/220V AC 230/240V AC	Amber, Green, Pure White, Red, Blue, Yellow
				2-way Split		
				3-way Split		
			DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	

Part 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

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

Power Voltage
[Full Voltage]
DH2:   24V AC/DC
DHM2: 24V DC (with check terminal)
DW2:   24V AC/DC (2-color alternate)
[Transformer]
TH1:   100/110V AC
TH12:   115/120V AC
TH2:   200/220V AC
TH24:   230/240V AC
[DC-DC Converter]
CH1:   110V DC

Housing Color
B: Black

Illumination Color
A: Amber
G: Green
PW: Pure White
R: Red
S: Blue
Y: Yellow

Packaging

SLDN series are packaged in two different ways depending on the model and illumination face.

1. **SLDN series with built-in LED units**
   SLD30N, SLD44N - All models
   SLD72N, SLD48N - 1-color full, 2-way split (combinations GR and RG), 3-way split (combinations GAR)
2. **SLDN series supplied with LED units (not built-in)**
   SLDN72N, SLD48N - 2-way split (except combinations GR and RG), 3-way split (except combinations GAR)

LED Unit

Mounting Clip 2 pcs
Jumper 1 pc

Color Screen / Lens

SLDN Unit
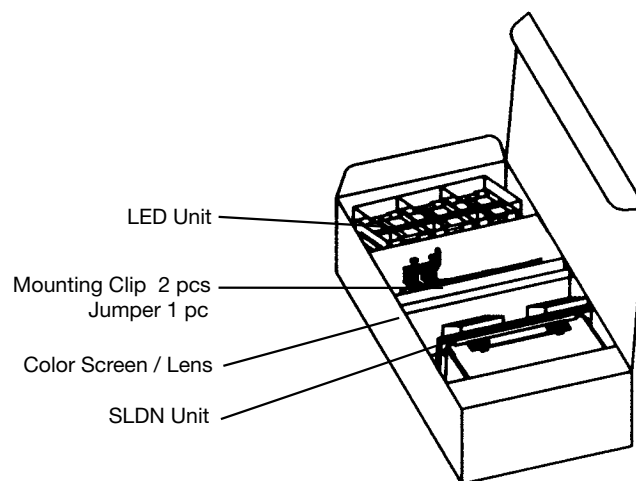
Color Designation for 2-way and 3-way Split

Specify the color designation from the table below. (Except illumination combinations GR and RG for 2-way split and combinations GAR for 3-way split)

2-way Split

Color Code	Combination	Color Code	Combination
AA	AA	RR	RR
AG	AG / GA	RR	RS / SR
AR	AR / RA	RY	RY / YR
AS	AS / SA	SS	SS
AY	AY / YA	SY	SY / YS
APW	APW / PWA	YY	YY
GG	GG	PWPW	PWPW
GS	GS / SG	PWR	PWR / RPW
GY	GY / YG	PWS	PWR / SPW
GPW	GPW / PWG	PWY	PWY / YPW

3-way Split

Color code	Combination	Color code	Combination	Color code	Combination	Color code	Combination	Color code	Combination
AAA	AAA	ARS	ARS / ASR / RAS / RSA / SAR / SRA	GGG	GGG	GPWR	GPWR / GRPW / PWGR / PWRG / RGPW / RPWG	YYY	YYY
AAG	AAG / AGA / GAA	ARY	ARY / AYR / RAY / RYA / YAR / YRA	GGR	GGR / GRG / RGG	GPWS	GPWS / GSPW / PWGS / PWSG / SGPW / SPWG	PWPWPW	PWPWPW
AAR	AAR / ARA / RAA	ASS	ASS / SAS / SSA	GGS	GGS / GSG / SGG	GPWY	GPWY / GYPW / PWGY / PWYG / YGPW / YPWG	PWPWR	PWPWR / RPWPW / PWRPW
AAS	AAS / ASA / SAA	ASY	ASY / AYS / SAY / SYA / YAS / YSA	GGY	GGY / GYG / YGG	RRR	RRR	PWPWS	PWPWS / PWSPW / SPWPW
AAY	AAY / AYA / YAA	AYY	AYY / YAY / YYA	GGPW	GGPW / GPWG / PWGG	RRS	RRS / RSR / SRR	PWPWY	PWPWY / YPWPW / PWYPW
AAPW	AAPW / APWA / PWAA	APWPW	APWPW / PWAPW / PWPWA	GRR	GRR / RGR / RRG	RRY	RRY / RYR / YRR	PWRR	PWRR / RPWR / RRPW
AGG	AGG / GAG / GGA	APWR	APWR / ARPW / PWAR / PWRA / RAPW / RPWA	GRS	GRS / GSR / RGS / RSG / SGR / SRG	RSS	RSS / SRS / SSR	PWRS	PWRS / PWSR / RPWS / RSPW / SPWR / SRPW
AGR	AGR / ARG / GRA / RAG / RGA / GAR (*1)	APWS	APWS / ASPW / PWAS / PWSA / SAPW / SPWA	GRY	GRY / GYR / RGY / RYG / YGR / YRG	RSY	RSY / RYS / SRY / SYR / YRS / YSR	PWRY	PWRY / PWYR / RPWY / RYPW / YPWR / YRPW
AGS	AGS / ASG / GAS / GSA / SAG / SGA	APWY	APWY / AYPW / PWAY / PWYA / YAPW / YPWA	GSS	GSS / SGS / SSG	RYY	RYY / YRY / YYR	PWSS	PWSS / SPWS / SSPW
AGY	AGY / AYG / GAY / GYA / YAG / YGA			GSY	GSY / GYS / SGY / SYG / YGS / YSG	SSS	SSS	PWSY	PWSY / PWYS / SPWY / SYPW / YPWS / YSPW
AGPW	AGPW / APWG / GAPW / GPWA / PWAG / PWGA			GYY	GYY / YGY / YYG	SSY	SSY / SYS / YSS	PWYY	PWYY / YPWY / YYPW
ARR	ARR / RAR / RRA			GPWPW	GPWPW / PWGPW / PWPWG	SYY	SYY / YSY / YYS		

Note: LED built-in models available.

SLD30N	DIN36mm Square (lens size 28mm square)

Specifications

Input	Full Voltage	Transformer	DC-DC Converter
Rated Voltage	24V AC/DC 24V DC (Note 1)	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit (Note 2)	1-color LED unit	
LED Life (reference)	Approx. 50,000 hours (when used on complete DC at 25ºC, brightness reduces to 50% of the initial intensity)		
Illumination Face	Full		
Illumination Color	Amber, Green, Pure White, Red, Blue, Yellow Red/Green (Note 2)	Amber, Green, Pure White, Red, Blue, Yellow	
Color Screen (supplied)	Combination of white and clear color screens		
Color Screen Size	27 × 27 × 1 mm (marking film 27 × 27 × 0.2 mm can be inserted)		
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/s² (100G)		
Operating Temperature	−20 to +40°C (no freezing)	−10 to +40°C (no freezing)	
Storage Temperature	−30 to +80°C (no freezing)		
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black (Munsell N1.5 or equivalent)		
Weight (approx.)	38g (1-color full) 43g (w/check terminal) 43g (2-color alternate)	85g (1-color full)	53g (1-color full)

Note 1: 24V DC is only for units with a check terminal.
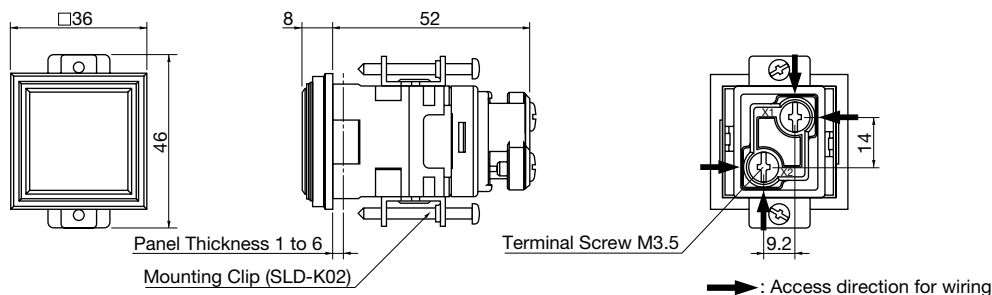Note 2: For 2-color alternate only.

SLD30N

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

• Specify a color code in place of ∗ in the Part No.: A (amber), G (green), PW (pure white), R (red), S (blue), Y (yellow).
• The above SLD30N units contain an LED unit of the specified color. LED units are installed in the SLD30N housings at the factory. See page 17 for maintenance LED units.
• Every SLD30N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with the color screen. For instructions, see page 22.
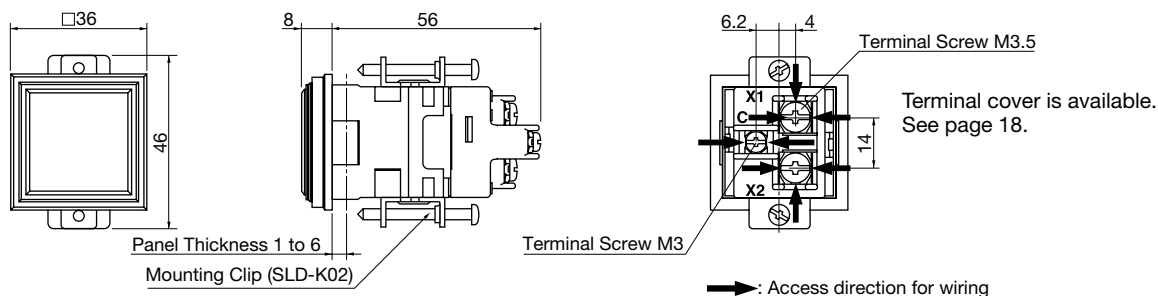
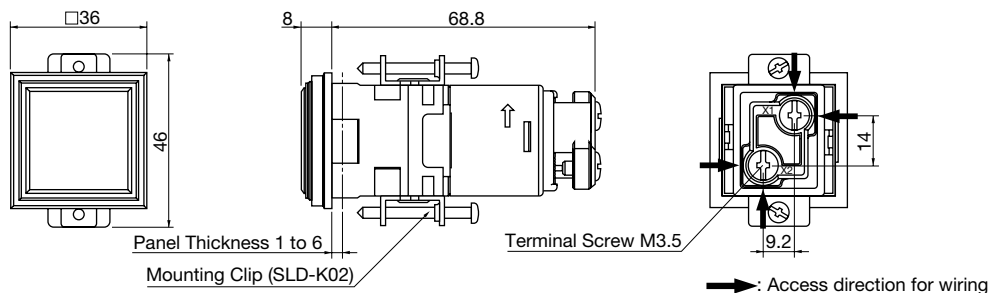## SLD30N | DIN36mm Square (lens size 28mm square)
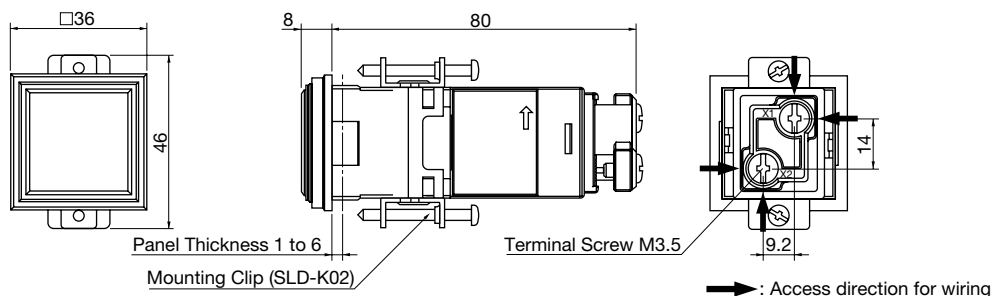
Dimensions

Full Voltage (1-color full)

□36
46
8 52
Panel Thickness 1 to 6
Mounting Clip (SLD-K02)
Terminal Screw M3.5
14
9.2
➡ : Access direction for wiring

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

□36
46
8 56
Panel Thickness 1 to 6
Mounting Clip (SLD-K02)
6.2 4
Terminal Screw M3.5
Terminal cover is available.
See page 18.
X1
C
X2
14
Terminal Screw M3
➡ : Access direction for wiring

Transformer

□36
46
8 68.8
Panel Thickness 1 to 6
Mounting Clip (SLD-K02)
Terminal Screw M3.5
14
9.2
➡ : Access direction for wiring

DC-DC Converter

□36
46
8 80
Panel Thickness 1 to 6
Mounting Clip (SLD-K02)
Terminal Screw M3.5
14
9.2
➡ : Access direction for wiring

Panel Cut-out

Single Mounting

$31^{+0.6}_{-0.4}$
$31^{+0.6}_{-0.4}$

Horizontal Mounting

$31^{+0.6}_{-0.4}$
20 units maximum
$(36N-5)^{+1.0}_{0}$

Vertical Mounting

$(36N-5)^{+1.0}_{0}$
20 units maximum
$31^{+0.6}_{-0.4}$

Integrated Mounting

$(36N-5)^{+1.0}_{0}$
20 units maximum
$(36N-5)^{+1.0}_{0}$

N: No. of units (rows/columns)
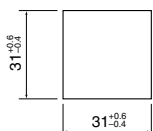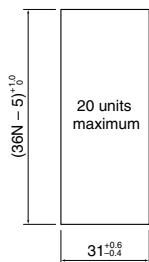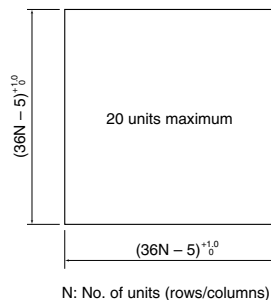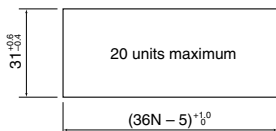
See page 24 to assemble the cross-shaped joints for integrated mounting.

When using leaf springs for temporary fastening, order SLD-30KVP separately. See page 18.

IDEC

SLD44N	40mm Square (lens size 32mm square)

Specifications

Input	Full Voltage	Transformer	DC-DC Converter
Rated Voltage	24V AC/DC, 24V DC (Note 1)	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit (Note 2)	1-color LED unit	
LED Life (reference)	Approx. 50,000 hours (when used on complete DC at 25°C, brightness reduces to 50% of the initial intensity)		
Face Division	Full		
Illumination Color	Amber, Green, Pure white, Red, Blue, Yellow Red/Green (Note 2)	Amber, Green, Pure White, Red, Blue, Yellow	
Color Screen (supplied)	Combination of clear and white color screens		
Color Screen Size	31 × 31 × 1 mm (marking film 31 × 31 × 0.2 mm can be inserted)		
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/s² (100G)		
Operating Temperature	−20 to +40°C (no freezing)		−10 to +40°C (no freezing)
Storage Temperature	−30 to +80°C (no freezing)		
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black (Munsell N1.5 or equivalent)		
Weight (approx.)	46g (1-color full) 49g (w/check terminal) 49g (2-color alternate)	93g (1-color full)	60g (1-color full)

Note 1: 24V DC is only for units with a check terminal.
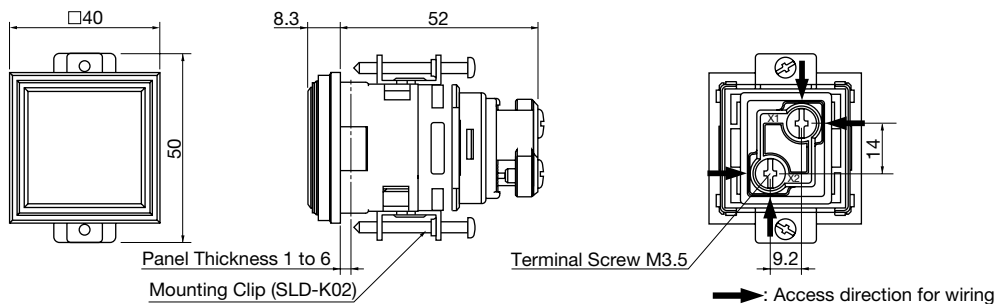Note 2: For 2-color alternate only.

SLD44N

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

• Specify a color code in place of ∗ in the Part No.: A (amber), G (green), PW (pure white), R (red), S (blue), Y (yellow).
• The above SLD44N units contain an LED unit of the specified color. The LED unit is installed in the SLD44N housing at the factory. See page 17 for maintenance LED units.
• Every SLD44N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with the color screen. For instructions, see page 22.
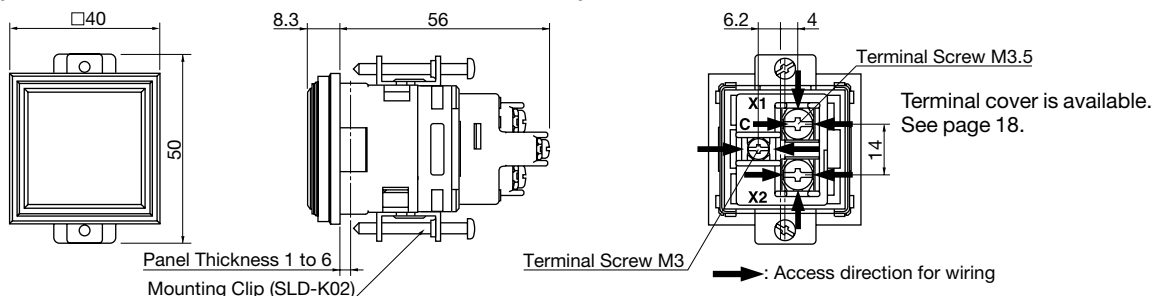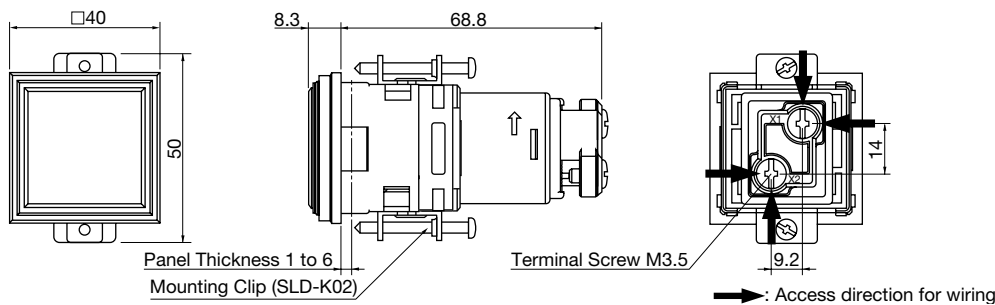
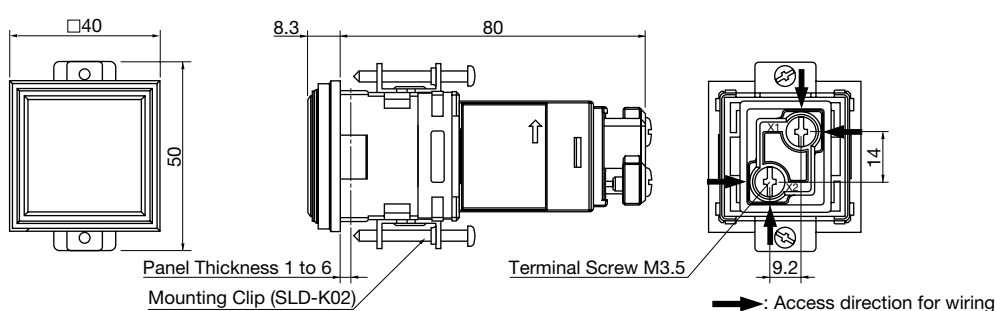| SLD44N | 40mm Square (lens size 32mm square) |

Dimensions

Full Voltage (1-color full)

□40

8.3　　52

50

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3.5

14

9.2

→ : Access direction for wiring

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

□40

8.3　　56

50

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3

6.2　4

X1
C
X2

Terminal Screw M3.5

Terminal cover is available.
See page 18.

14

→ : Access direction for wiring

Transformer

□40

8.3　　68.8

50

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3.5

X1

X2

14

9.2

→ : Access direction for wiring

DC-DC Converter

□40

8.3　　80

50

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3.5

X1

14

9.2

→ : Access direction for wiring

Panel Cut-Out

Single Mounting

$35^{+0.6}_{-0.4}$

$35^{+0.6}_{-0.4}$

Horizontal Mounting

$35^{+0.6}_{-0.4}$

20 units maximum

$(40N - 5)^{+1.0}_{0}$

Vertical Mounting

$(40N - 5)^{+1.0}_{0}$

20 units
maximum

$35^{+0.6}_{-0.4}$

Integrated Mounting

$(40N - 5)^{+1.0}_{0}$

20 units maximum

$(40N - 5)^{+1.0}_{0}$
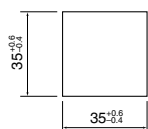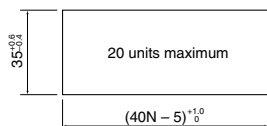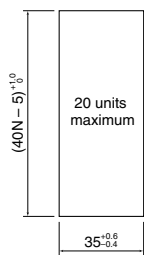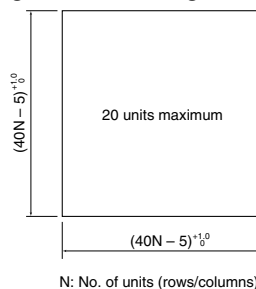
N: No. of units (rows/columns)

See page 24 to
assemble the cross-
shaped joints for
integrated mounting.

When using leaf springs for temporary fastening, order SLDN-44KVP separately. See page 18.

All dimensions in mm.

SLD72N	DIN36 × 72mm (lens size 28 × 64mm)

Specifications

Input	Full Voltage	Transformer	DC-DC Converter
Rated Voltage	24V AC/DC 24V DC (Note 1)	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit (Note 2)	1-color LED unit	
LED Life (reference)	Approx. 50,000 hours (when used on complete DC at 25ºC, brightness reduces to 50% of the initial intensity)		
Face Division	Full, 2-way split, 3-way split (Note 2)	Full, 2-way split, 3-way split	Full
Illumination Color	Amber, Green, Pure White, Red, Blue, Yellow, Red/Green (Note 2)	Amber, Green, Pure, Red, Blue, Yellow	
Color Screen (supplied)	Combination of clear and white color screen		
Color Screen Size	Full: 27 × 63 × 1 mm (marking film 27 × 63 × 0.2 mm can be inserted) 2-way split: 27 × 31.5 × 1 mm 3-way split: 27 × 21 × 1 mm		
Engraving Area	Full: 25 × 61 × 1.0 mm 2-way split: 25 × 29.5 × 1.0 mm 3-way split: 25 × 19 × 1.0 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/s² (100G)		
Operating Temperature	–20 to +40°C (no freezing)		–10 to +40°C (no freezing)
Storage Temperature	–30 to +80°C (no freezing)		
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black (Munsell N1.5 or equivalent)		
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)

Note 1: 24V DC is only for units with a check terminal.
Note 2: The 2-color alternate is full face illumination only.

SLD72N	DIN36 × 72mm (lens size 28 × 64mm)

SLD72N (with LED units installed in housing)

The LED units are built-in the SLD72N at the factory. The LED unit can be replaced using an exclusive tool (MT-101).

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

- Specify a color code in place of ∗ in the Part No. : A (amber), G (green), PW (pure white), R (red), S (blue), Y (yellow).
- Specify a rated voltage code of the transformer in place of □ in the Part No.:
  1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
- The above SLD72N units contain LED units of the specified color. See page 17 for maintenance LED units.
- Every SLD72N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with a color screen. For instructions, see page 22.

SLD72N (with LED units supplied in package)

The LED units are not built-in but supplied in the same packaging. Color combination can be selected by the customer.

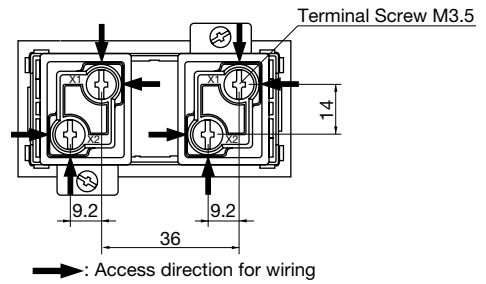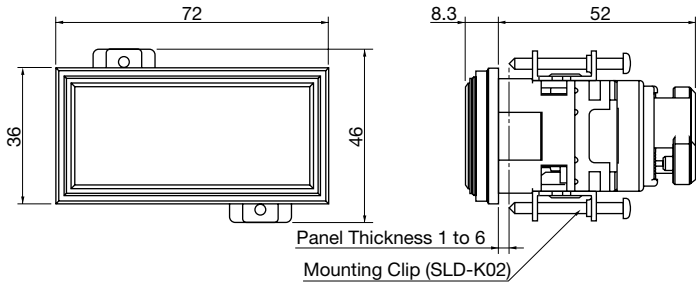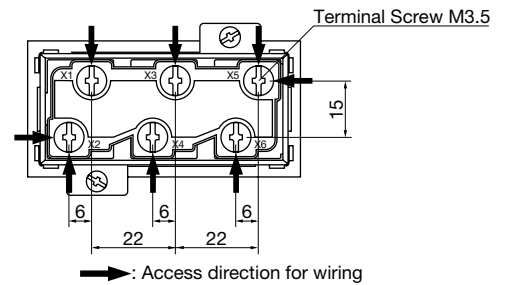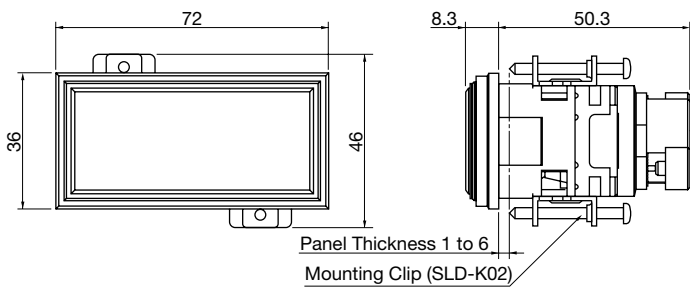| Input	Illumination Face	Rated Voltage	Part No.	Illumination Color Code	Supplied LED Units (see ratings on page 17)
Full Voltage	2-way Split	24V AC/DC	**SLD72N-2DH2B**∗∗	A, G, PW, R, S, Y	**SLDN-92M-**∗**T** (2 units)
	3-way Split		**SLD72N-3DH2B**∗∗∗	A, G, PW, R, S, Y	**SLDN-72M-**∗**T** (3 units)
Transformer	2-way Split	100/110, 115/120, 200/220, 230/240V AC	**SLD72N-2TH□B**∗∗	A, G, PW, R, S, Y	**SLDN-92M-**∗**T** (2 units)
	3-way Split		**SLD72N-3TH□B**∗∗∗	A, G, PW, R, S, Y	**SLDN-72M-**∗**T** (3 units)

- Specify a color code in place of ∗ in the Part No. : A (amber), G (green), PW (pure white), R (red), S (blue), Y (yellow). See page 4 for color designation.
- Specify a rated voltage code of the transformer in place of □ in the Part No.:
  1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
- The above SLD72N units contain LED units of the specified color. See page 17 for maintenance LED units.
- Every SLD72N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with a color screen. For instructions, see page 22.
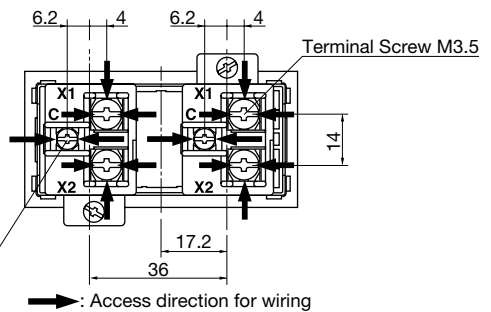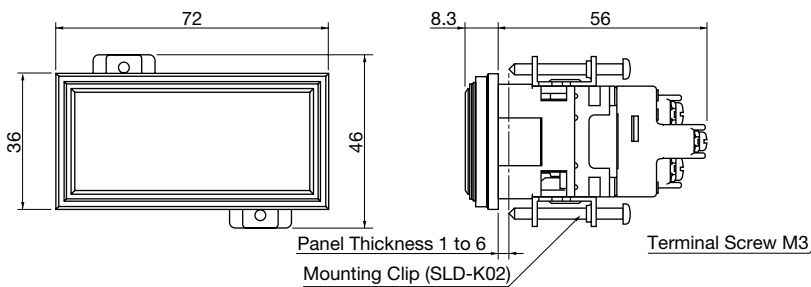
| SLD72N | DIN36 × 72mm (lens size 28 × 64mm) |

Dimensions

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

72
36
8.3
52
46
Panel Thickness 1 to 6
Mounting Clip (SLD-K02)
Terminal Screw M3.5
X1
X2
X1
X2
14
9.2
9.2
36
: Access direction for wiring

Full Voltage (3-way split)

72
36
8.3
50.3
46
Panel Thickness 1 to 6
Mounting Clip (SLD-K02)
Terminal Screw M3.5
X1
X2
X3
X4
X5
X6
15
6
6
6
22
22
: Access direction for wiring

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

72
36
8.3
56
46
Panel Thickness 1 to 6
Mounting Clip (SLD-K02)
Terminal Screw M3
6.2
4
6.2
4
Terminal Screw M3.5
X1
C
X2
X1
C
X2
14
17.2
36
: Access direction for wiring

Terminal cover is available.
See page 18.

Transformer (1-color full and 2-way split)
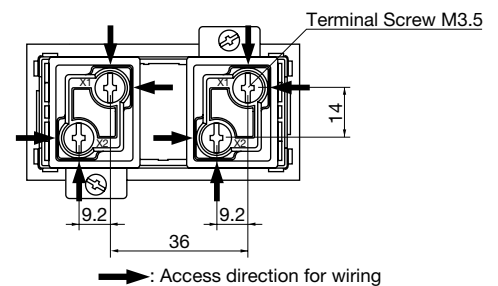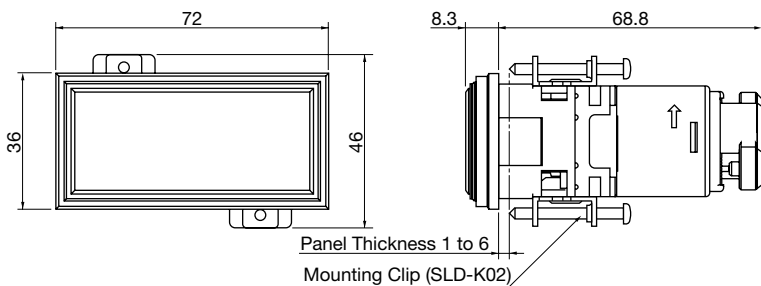
72
36
8.3
68.8
46
Panel Thickness 1 to 6
Mounting Clip (SLD-K02)
Terminal Screw M3.5
X1
X2
X1
X2
14
9.2
9.2
36
: Access direction for wiring

When using leaf springs for temporary fastening, order
SLD-30KVP or SLD-7KVP separately. See page 18.

All dimensions in mm.

SLD72N — DIN36 × 72mm (lens size 28 × 64mm)
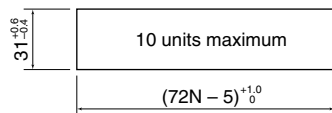
Dimensions

Transformer (3-way split)

72   36   46   8.3   79.5

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3.5
15
6   6   6
22   22
→ : Access direction for wiring

DC-DC Converter

72   36   46   8.3   80

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3.5
14
9.2   9.2
36
→ : Access direction for wiring

Panel Cut-out

Single Mounting

$31^{+0.6}_{-0.4}$
$67^{+0.6}_{-0.4}$
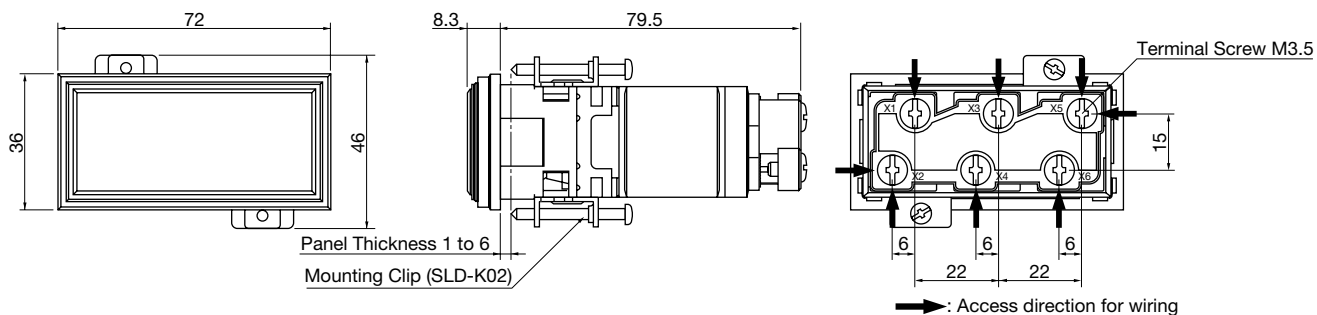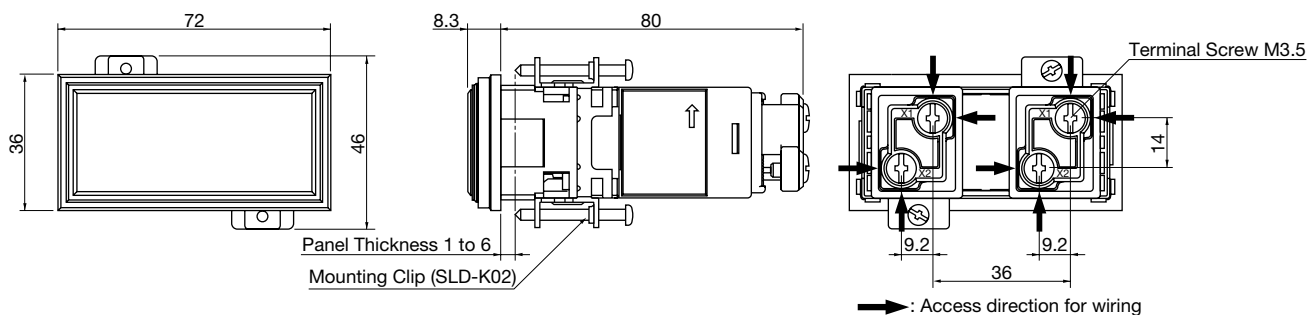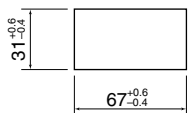
N: No. of units (rows/columns)

Horizontal Mounting
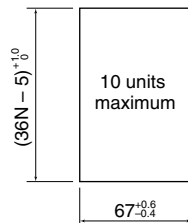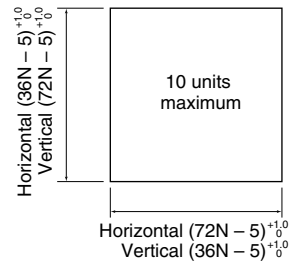
$31^{+0.6}_{-0.4}$
10 units maximum
$(72N - 5)^{+1.0}_{0}$

Vertical Mounting

$(36N - 5)^{+1.0}_{0}$
10 units maximum
$67^{+0.6}_{-0.4}$

Integrated Mounting

Horizontal $(36N - 5)^{+1.0}_{0}$
Vertical $(72N - 5)^{+1.0}_{0}$
10 units maximum
Horizontal $(72N - 5)^{+1.0}_{0}$
Vertical $(36N - 5)^{+1.0}_{0}$

When using leaf springs for temporary fastening, order SLD-30KVP or SLD-7KVP separately. See page 18.

See page 26 to assemble the cross-shaped joints for integrated mounting.

All dimensions in mm.

SLD48N	40 × 80mm (lens size 32 × 72mm)

Specifications

Input	Full Voltage	Transformer	DC-DC Converter
Rated Voltage	24V AC/DC 24V DC (Note 1)	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit (Note 2)	1-color LED unit	
LED Life (reference)	Approx. 50,000 hours (when used on complete DC at 25ºC, brightness reduces to 50% of the initial intensity)		
Face Division	Full, 2-way split, 3-way split (Note 2)	Full, 2-way split, 3-way split	Full
Illumination Color	Amber, Green, Pure White, Red, Blue, Yellow, Red/Green (Note 2)	Amber, Green, Pure White, Red, Blue, Yellow	
Color Screen (supplied)	Combination of clear and white color screen		
Color Screen Size	Full: 31 × 71 × 1 mm (marking film 31 × 71 × 0.2 mm can be inserted) 2-way split: 31 × 35.5 × 1 mm 3-way split: 31 × 23.5 × 1 mm		
Engraving Area	Full: 29 × 69 ×1.0 mm 2-way split: 29 × 33.5 × 1.0 mm 3-way split: 29 × 21.5 × 1.0 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/s² (100G)		
Operating Temperature	–20 to +40°C (no freezing)		–10 to +40°C (no freezing)
Storage Temperature	–30 to +80°C (no freezing)		
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black (Munsell N1.5 or equivalent)		
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)

Note 1: 24V DC is only for units with a check terminal.
Note 2: The 2-color alternate is full face illumination only.

SLD48N	40 × 80mm (lens size 32 × 72mm)

SLD48N (with LED units installed in housing)

The LED units are built-in the SLD72N at the factory. The LED unit can be replaced using an exclusive tool (MT-101).

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

- Specify a color code in place of ∗ in the Part No. : A (amber), G (green), PW (pure white), R (red), S (blue), Y (yellow).
- Specify a rated voltage code of the transformer in place of □ in the Part No.:
  1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
- The above SLD72N units contain LED units of the specified color. See page 17 for maintenance LED units.
- Every SLD72N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with a color screen. For instructions, see page 22.

SLD48N (with LED units supplied in package)

The LED units are not built-in but supplied in the same packaging. Color combination can be selected by the customer.

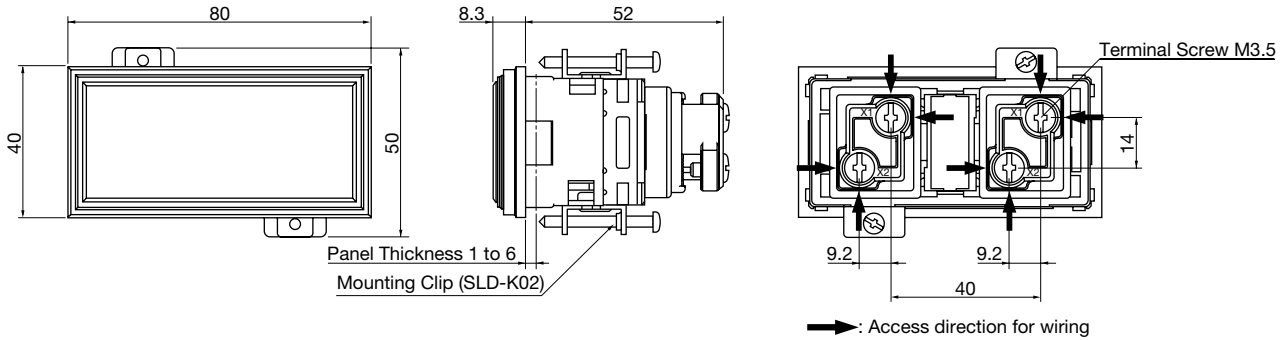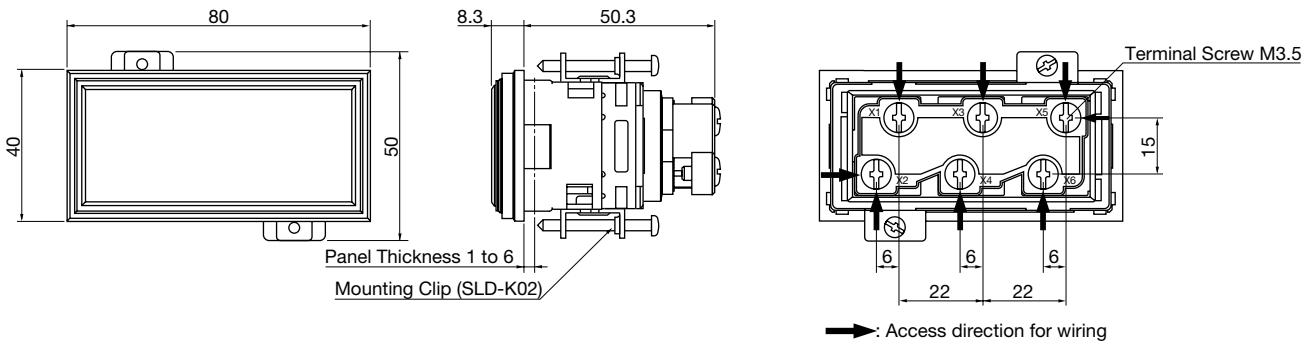| Input	Illumination Face	Rated Voltage	Part No.	Illumination Color Code	Supplied LED Units (see ratings on page 17)
Full Voltage	2-way Split	24V AC/DC	**SLD48N-2DH2B∗∗**	A, G, PW, R, S, Y	**SLDN-92M-∗T** (2 units)
	3-way Split		**SLD48N-3DH2B∗∗∗**	A, G, PW, R, S, Y	**SLDN-72M-∗T** (3 units)
Transformer	2-way Split	100/110, 115/120, 200/220, 230/240V AC	**SLD48N-2TH□B∗∗**	A, G, PW, R, S, Y	**SLDN-92M-∗T** (2 units)
	3-way Split		**SLD48N-3TH□B∗∗∗**	A, G, PW, R, S, Y	**SLDN-72M-∗T** (3 units)

- Specify a color code in place of ∗ in the Part No. : A (amber), G (green), PW (pure white), R (red), S (blue), Y (yellow). See page 4 for color designation.
- Specify a rated voltage code of the transformer in place of □ in the Part No.:
  1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
- The above SLD72N units contain LED units of the specified color. See page 17 for maintenance LED units.
- Every SLD72N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with a color screen. For instructions, see page 22.

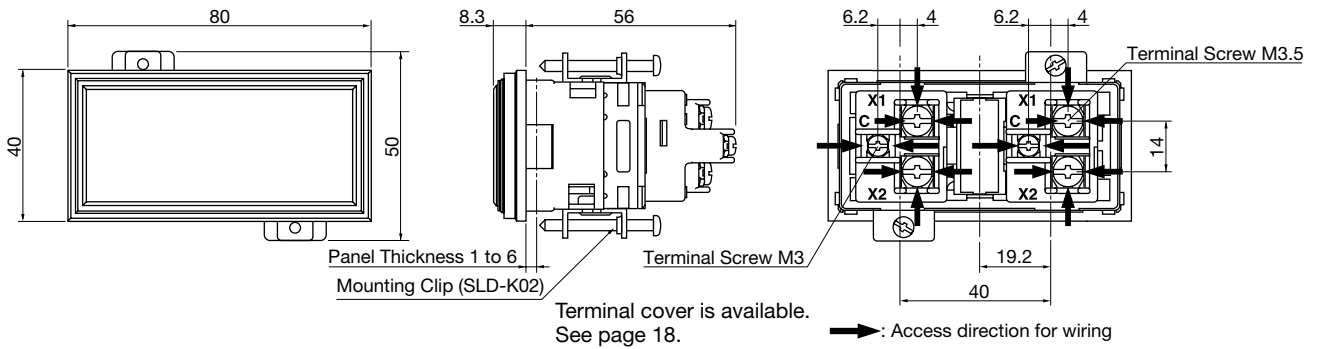## SLD48N | 40 × 80mm (lens size 32 × 72mm)

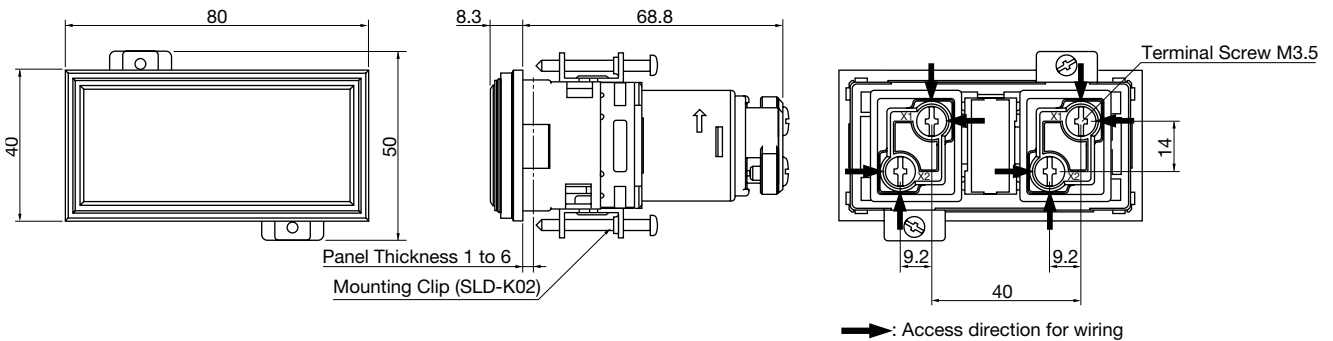## Dimensions

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

80

40

50

8.3

52

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3.5

14

9.2   9.2

40

➤ : Access direction for wiring

Full Voltage (3-way split)

80

40

50

8.3

50.3

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3.5

15

6   6   6

22   22

➤ : Access direction for wiring

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

80

40

50

8.3

56

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3

Terminal cover is available.
See page 18.

6.2   4   6.2   4

Terminal Screw M3.5

14

19.2

40

➤ : Access direction for wiring

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

80

40

50

8.3

68.8

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

Terminal Screw M3.5

14

9.2   9.2

40

➤ : Access direction for wiring

When using leaf springs for temporary fastening, order
SLDN-44KVP or SLDN-8KVP separately. See page 18.

All dimensions in mm.

| SLD48N | 40 × 80mm (lens size 32 × 72mm) |

Dimensions

Transformer (3-way split)

80
8.3 79.5
40
50

Terminal Screw
M3.5

15

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

6   6   6
22   22

➡: Access direction for wiring

DC-DC Converter

80
8.3 80
40
50

Terminal Screw
M3.5

14

Panel Thickness 1 to 6
Mounting Clip (SLD-K02)

9.2   9.2
40

➡: Access direction for wiring

Panel Cut-out

Single Mounting

$35^{+0.6}_{-0.4}$

$75^{+0.6}_{-0.4}$

N: No. of units (rows/columns)

When using leaf springs for temporary fastening, order SLDN-44KVP or SLDN-8KVP separately. See page 18.

Horizontal Mounting

$35^{+0.6}_{-0.4}$

10 units maximum

$(80N – 5)^{+1.0}_{-0}$

Vertical Mounting

$(40N – 5)^{+1.0}_{-0}$

10 units maximum

$75^{+0.6}_{-0.4}$

Integrated Mounting

Horizontal $(40N – 5)^{+1.0}_{-0}$
Vertical $(80N – 5)^{+1.0}_{-0}$

10 units maximum

Horizontal $(80N – 5)^{+1.0}_{-0}$
Vertical $(40N – 5)^{+1.0}_{-0}$

See page 26 to assemble the cross-shaped joints for integrated mounting.

All dimensions in mm.

IDEC
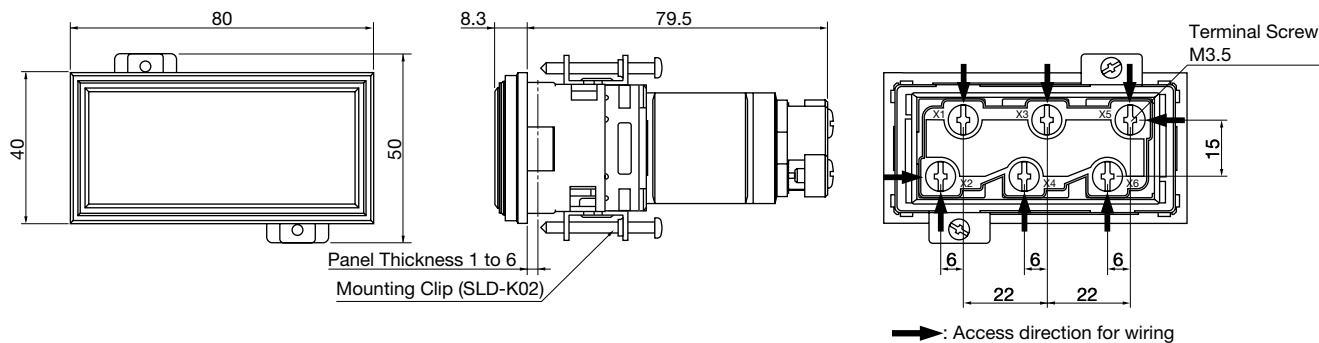
Maintenance LED Units

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

Shape	Applicable Model	Part No.	Illumination Color	Rating	Package Quantity
(supplied)	SLD30N	SLDN-32M-AT	Amber	24V AC/DC, 12 mA	1
		SLDN-32M-GT	Green	24V AC/DC, 11 mA	
		SLDN-32M-PWT	Pure White	24V AC/DC, 11 mA	
		SLDN-32M-RT	Red	24V AC/DC, 12 mA	
		SLDN-32M-ST	Blue	24V AC/DC, 11 mA	
		SLDN-32M-YT	Yellow	24V AC/DC, 11 mA	
		SLDN-32MW-RGT	Red/Green	24V DC, 12 mA (red)/11 mA (green)	
(supplied)	SLD44N SLD72N (Full/2-way split) SLD48N (Full/2-way split)	SLDN-92M-AT	Amber	24V AC/DC, 12 mA	1
		SLDN-92M-GT	Green	24V AC/DC, 11 mA	
		SLDN-92M-PWT	Pure White	24V AC/DC, 11 mA	
		SLDN-92M-RT	Red	24V AC/DC, 12 mA	
		SLDN-92M-ST	Blue	24V AC/DC, 11 mA	
		SLDN-92M-YT	Yellow	24V AC/DC, 11 mA	
		SLDN-92MW-RGT	Red/Green	24V DC, 12 mA (red)/11 mA (green)	
(supplied)	SLD72N (3-way split) SLD48N (3-way split)	SLDN-72M-AT	Amber	24V AC/DC, 12 mA	1
		SLDN-72M-GT	Green	24V AC/DC, 11 mA	
		SLDN-72M-PWT	Pure White	24V AC/DC, 11 mA	
		SLDN-72M-RT	Red	24V AC/DC, 12 mA	
		SLDN-72M-ST	Blue	24V AC/DC, 11 mA	
		SLDN-72M-YT	Yellow	24V AC/DC, 11 mA	

LED Unit Internal Circuits

SLDN-32M-∗T

One-color full
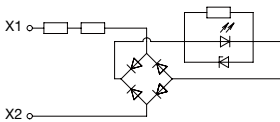
SLDN-32MW-RGT

2-way split (two-color alternate)
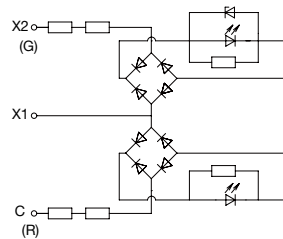
SLDN-92M-∗T

One-color full
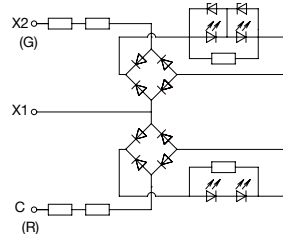(blue, green, pure white, yellow)
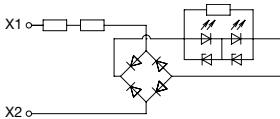
One-color full
(amber, red)
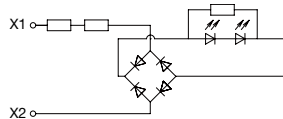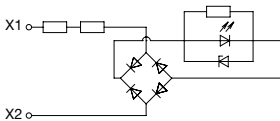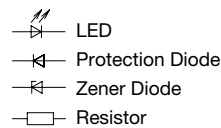

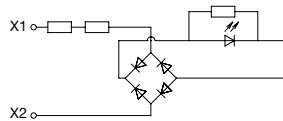**SLDN-92MW-RGT**

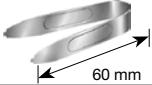2-way split (two-color alternate)

SLDN-72M-∗T

One-color full
(blue, green, pure white, yellow)

One-color full
(amber, red)

LED
Protection Diode
Zener Diode
Resistor

Accessories

Name & Shape	Applicable Model	Material	Part No.	Ordering No.	Package Quantity	Remarks
LED Unit Removal Tool 60 mm	All SLDN	Metal	**MT-101**	**MT-101**	1	Used to remove the LED unit from the SLDN housing.
Lens Unit Removal Tool	All SLDN	Rubber	**MT-S01**	**MT-S01**	1	Used to remove the lens unit from the SLDN housing.
Cross-shaped Joint	SLD30N SLD72N	Diecast	**SLD-F30**	**SLD-F30PN05**	5	Used to connect 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 to connect 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	All SLDN w/check terminal, 2-color alternate	PPE	**SLC30-VL6**	**SLC30-VL6**	1	Terminal cover for 1-color w/check terminal and 2-color alternate.

Leaf Springs

Applicable Model	Part No. (Horizontal Mounting)		Part No. (Vertical Mounting)	
	Type A	Type B	Type A	Type B
SLD30N	**SLD30KVP**	—	**SLD30KVP**	—
SLD44N	**SLDN-44KVP**	—	**SLDN-44KVP**	—
SLD72N	**SLD30KVP**	**SLD-7KVP**	**SLD30KVP**	**SLD-7KVP**
SLD48N	**SLDN-44KVP**	**SLDN-8KVP**	**SLDN-44KVP**	**SLDN-8KVP**
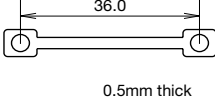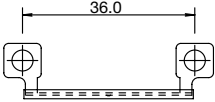
• See page 24 for instructions on mounting leaf springs.

Maintenance Parts

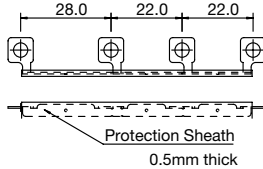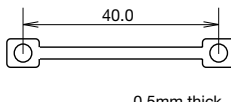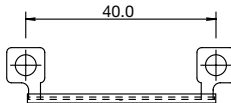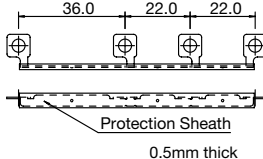| Name & Shape	Applicable Model		Material	Part No.	Ordering No.	Package Quantity	Remarks
Mounting Clip	All SLDN		Metal	**SLD-K02**	**SLD-K02PN10**	10	Used to fasten SLDN units to the panel from the rear in single, row, or integrated mounting. Two mounting clips are supplied with every SLDN unit. Weight: 6g
Color Screen	SLD30N	Full	Acrylic	**SLDN-3C-∗**	**SLDN-3C-∗PN05**	5	Specify a color code in place of ∗. White display when power off: FW (white) Colored display when power off (sold separately): A (amber), C (clear) G (green), R (red) S (blue), Y (yellow) See page 23 for details on color screen.
	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		Polycarbonate	**SLC-3LF-U**	**SLC-3LF-U**	1	□28 H2.8
	SLD44N			**SLD-44L**	**SLD-44L**		□32 H2.6
	SLD72N			**SLD-7L**	**SLD-7L**		W72 D32 H2.6
	SLD48N			**SLD-8L**	**SLD-8L**		W64 D28 H2.6
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**		

Maintenance Parts

Jumpers

Applicable Model		Part No.	Ordering No.	Package Quantity	Dimensions	Application Example
SLD30N	w/Check Terminal 2-color Alternate	**LJ-2**	**LJ-2PN10**	10	36.0 0.5mm thick	• SLD30N/SLD44N 1-color
	Full	**SLDN-JP301**	**SLDN-JP301PN10**	10	36.0 Protection Sheath 0.5mm thick	
SLD72N	Full 2-way Split					
	3-way Split	**SLDN-JP723**	**SLDN-JP723PN10**	10	28.0 22.0 22.0 Protection Sheath 0.5mm thick	• SLD72N/SLD48N 3-way split
	w/Check Terminal 2-color Alternate	**LJ-2**	**LJ-2PN10**	10	36.0 0.5mm thick	
SLD44N	w/Check Terminal 2-color Alternate	**LJ-6**	**LJ-6PN10**	10	40.0 0.5mm thick	
	Full	**SLCN-JP45**	**SLCN-JP45PN10**	10	40.0 Protection Sheath 0.5mm thick	
SLD48N	Full 2-way Split					
	3-way Split	**SLDN-JP483**	**SLDN-JP483PN10**	10	36.0 22.0 22.0 Protection Sheath 0.5mm thick	
	w/Check Terminal 2-color Alternate	**LJ-6**	**LJ-6PN10**	10	40.0 0.5mm thick	• SLD72N/SLD48N w/check terminal, 2-color

Transformer

Shape	Rated Voltage	Operating Voltage	Part No.	Package Quantity
	100/110V AC	100/110V AC ±10%	**TWR512**	1
	200/220V AC	200/220V AC ±10%	**TWR522**	1
	400/440V AC	400/440V AC ±10%	**TWR542**	1

• Terminal covers (TWR-VL3) are supplied.

Applicable LED Units

SLDN	LED Unit Part No.	Can be used with
SLD30N	**SLDN-32M-∗T**	Full face illumination
SLD44N	**SLDN-92M-∗T**	Full face illumination
SLD72N	**SLDN-92M-∗T**	Full face and 2-way split illumination
	SLDN-72M-∗T	3-way split illumination, 24V AC
SLD48N	**SLDN-92M-∗T**	Full face and 2-way split illumination
	SLDN-72M-∗T	3-way split illumination, 24V AC

• Only one LED unit can be connected to each transformer.
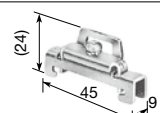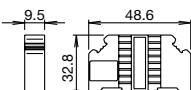• Specify the color code in place of ∗ in the Part No.

Specifications

Rated 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)
Storage Temperature	–40 to +80°C (no freezing)
Relative Humidity	35 to 85% (no condensation)
Vibration Resistance	Operating Extremes: 5 to 55 Hz, amplitude 0.5 mm Damage Limits: 30 Hz, amplitude 1.5 mm
Shock Resistance	Operating Extremes: 100 m/s^2 Damage Limits:1,000 m/s^2
Terminal Screw	M3.5
Applicable Wire	2 mm^2 maximum, 2 wires maximum
Weight	Approx. 87g

Dimensions

Dimensions in mm.

M3.5 Terminal Screw

Secondary Side — Primary Side

Mounting Hole 2–ø3.3

22 / 30

40 / 48

Terminal Cover (TWR-VL3)

52

40 / 41 / 45.5

5
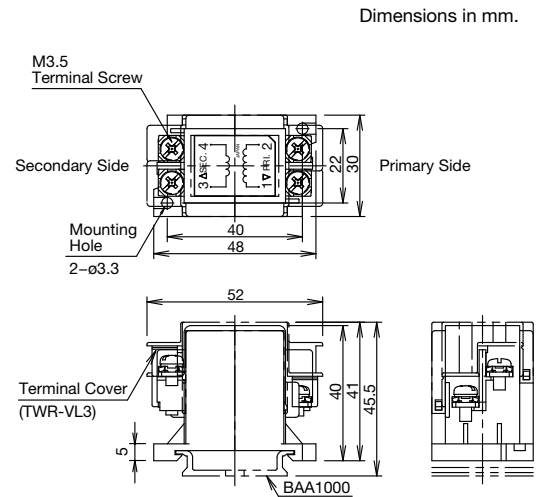
BAA1000

Accessories

Name	Shape	Description	Part No.	Ordering No.	Package Quantity
DIN Rail		Aluminum Weight: Approx. 200g Length: 1m	**BAA1000**	**BAA1000PN10**	10
End Clip	(24) 45 9	Steel Weight: Approx.15g	**BNL6**	**BNL6PN10**	
	9.5 48.6 32.8	Plastic Weight: Approx.15g	**BC9Z-E/NS35N**	**BC9Z-E/NS35NPN10**	

Notes for Ordering

1. When ordering SLDN units and accessories, specify the Part No. and quantity.
2. LED units for 2-way or 3-way split illumination SLD72N and SLD48N units are not built in the SLDN unit at the factory but supplied in the package. However, 2-way split with color combination RG and 3-way split with color combination GAR have LED units built-in at factory. (All colors of full illumination units have LED units built-in.)
3. All SLDN units are supplied with two mounting clips. Leaf springs are not supplied. When using leaf springs for temporary fastening, order applicable leaf springs separately. See pages 18.
4. All SLDN units are supplied with a clear color screen with full face size and white color screens of the specified split face size. When colored display is required during power off, order color screens of the split face size and replace with the clear color screen. See page 22.

5. Jumpers supplied with SLDN units are as listed in the table below.

Applicable Model		Jumper Part No. (For use as split illumination)	Jumper Part No. (For use as full illumination)
SLD72N	2-way spilt models	**SLD-JP301**	**SLDN-JP301** (× 2 pcs)
	3-way split models	**SLDN-JP723**	–
SLD48N	2-way spilt models	**SLD-JP45**	**SLDN-JP45** (× 2 pcs)
	3-way split models	**SLDN-JP483**	–

Safety Precautions

- Turn off the power to the SLDN 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 electrical shock, fire hazards, or damages.
- Do not use the SLDN 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 SLDN units continuously, observe the conditions described in "Notes for Continuous Lighting". If the limits are exceeded, the units may heat up and create fire hazards or cause damages.

- 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.

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

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

Operating Instructions

Illumination Units

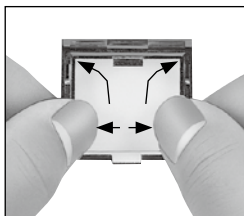#### Removing the Display Window
To remove the display window, insert the tip of a flat screwdriver into the slot on top or bottom of the lens frame. Lens unit removal tool MT-S01 can also be used to remove the display window.
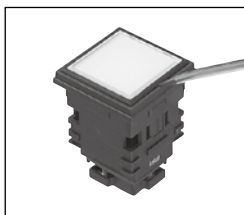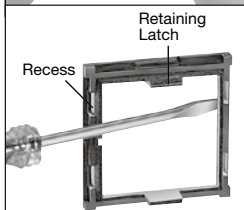
Replacing the Lens and Color Screen
[Removal]
The lens has two retaining projections each on right and left sides. To remove the lens and color screens from the lens frame, push open the lens frame with both hands as shown.
The lens can also be removed by inserting a screwdriver into one of the sides 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 screens 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.
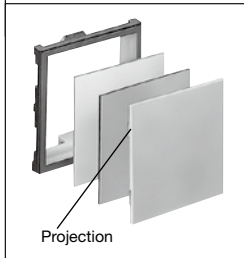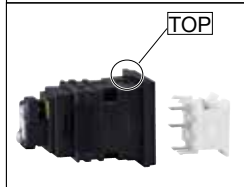
Replacing the LED Unit
[Removal]
Use the LED unit removal tool (MT-101) to pull out the LED unit.

[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 Color Screens
Insert color screens and marking film as described below.

Can be used with	Placement
White Display (lamp off)	Lens — Clear Color Screen — White Color Screen — LED
Colored display (lamp off) Install a color screen and a white plate.	Lens — Color Screen (for colored display) — White Color Screen — LED
Marking Film (not supplied)	Lens — Marking Film — Clear Color Screen — White Color Screen — LED

- Clear color screen and white color screen can be interchanged if necessary.

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.
  - 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 units, do not light the two colors simultaneously.

Notes for Panel Mounting
- Recommended tightening torque for SLD-K02 mounting clip: 0.39 to 0.49 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.

Operating Instructions

Wiring

• Recommended tightening torque of terminal screws are shown in the table below:

| Terminal Screw	Recommended Tightening Torque	Wiring Size
M3	0.6 to 1.0 N·m	Solid wire ø1.6mm (up to 2 wires)
M3.5	1.0 to 1.3 N·m	Stranded wire 2mm² (up to 2 wires)

• Use an insulation sheath or marking tube on the crimping part of crimping terminals to prevent electrical shocks.

Marking

• Markings can be engraved on clear color screens (or other color screens) and white color screens as well as inserting marking films. 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.

Applicable Model	Marking Film Dimensions
SLD30N	27 × 27 mm
SLD44N	31 × 31 mm
SLD72N	27 × 63 mm
SLD48N	31 × 71 mm

• When using a marking film, place the matte surfaces of the clear color screen (or other color screens) in the same direction. If the matte surfaces face with each other, the marking film cannot be inserted.

• Thin marking films can be inserted as illustrated below.

Without Marking Film   **With Marking Film**

Lens   Lens

Matte Surface   Marking Film   Matte Surface
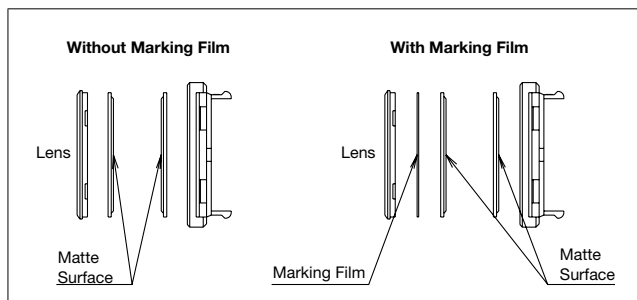
• Legends can be engraved on the clear color screens (color screens) and white color screens. Dimensions are shown below

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

Matte Surface

All dimensions in mm.
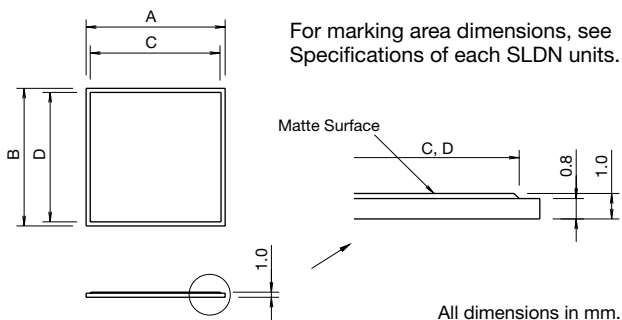
Applicable Model	Face	Part No.	A	B	C	D
SLD30N	Full	**SLDN-3C-□**	27.0	27.0	25.4	25.4
SLD44N	Full	**SLDN-44C-□**	31.0	31.0	29.4	29.4
SLD72N	Full	**SLDN-7C-□**	63.0	27.0	61.4	25.4
	2-way split	**SLDN-7C2-□**	31.5	27.0	29.9	25.4
	3-way split	**SLDN-7C3-□**	21.0	27.0	19.4	25.4
SLD48N	Full	**SLDN-8C-□**	71.0	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

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.

Metal Pins
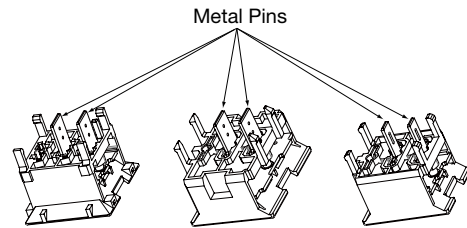
Panel Thickness

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

### 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.

Noise Suppressor

X1

X2

LED Module
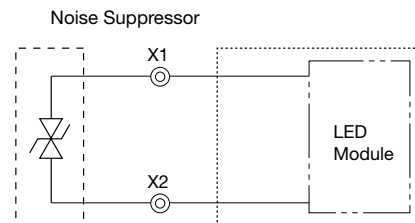
Countermeasures against Dim Lighting

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]

AC Line

Transformer Type SLDN

Ie

C

R

Protection Circuit

Ie: Induced Current
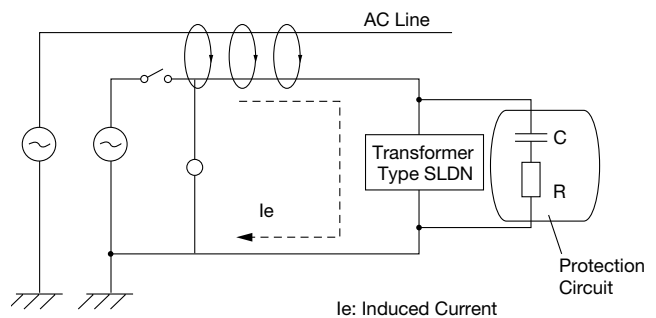
[Countermeasure]

As shown in the diagram above, connect an RC circuit in parallel with the transformer 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

When the environment is vulnerable to infrared rays, provide appropriate protection.

Operating Instructions

Installation on Panel: SLD30N & SLD44N (Square)

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. 0.39 to 0.49 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.
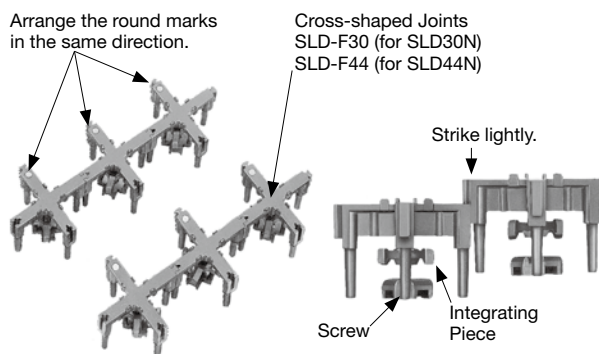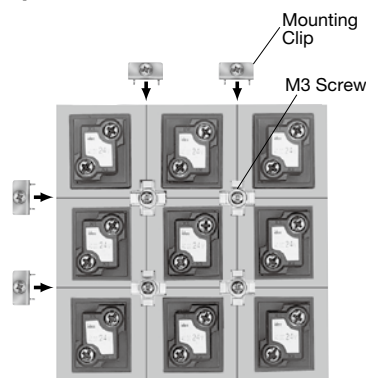

2. Lock the housings with the cross-shaped joints.

Insert the SLDN units into the assembled cross-shaped joints. Then insert the projection of the intergrating piece on the cross-shaped joints into the groove of the unit and tighten t
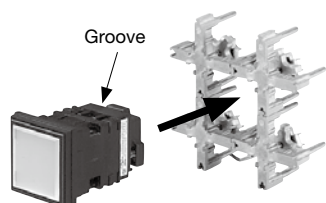
3. Install into panel cut-out.

Insert the joint 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 0.39 to 0.49 N·m.

Quantity of mounting clips = $(N - 1) \times 2 + (N' - 1) \times 2$

Quantity of cross-shaped joints = $(N - 1) \times (N' - 1)$

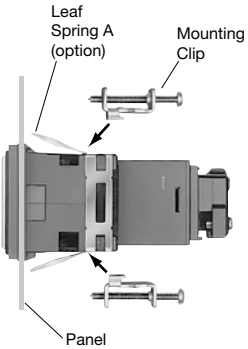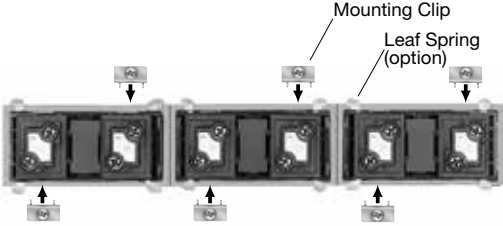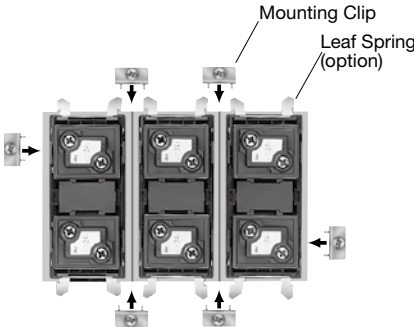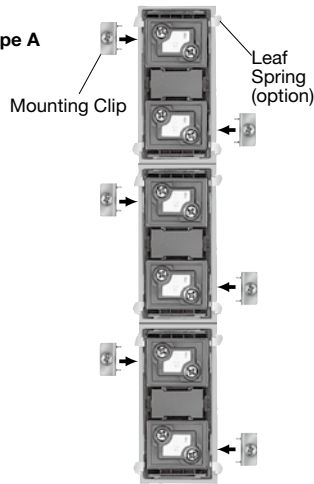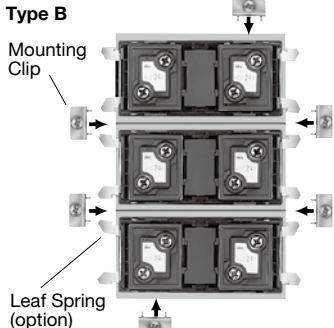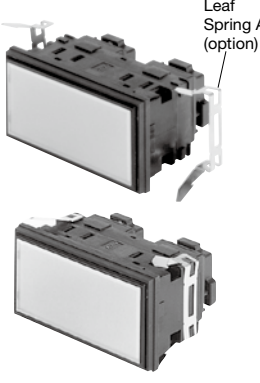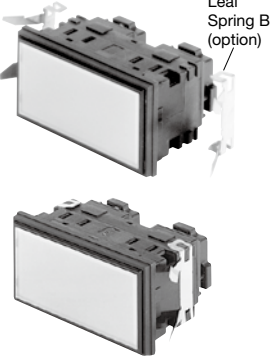where N and N' are the numbers of rows and columns, respectively.

See page 26 on quantities of mounting clips, cross-shaped joints, and I-shaped joints used for integrated mounting.

IDEC

Operating Instructions

Installation on Panel: SLD72N & SLD48N (Rectangular)

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.

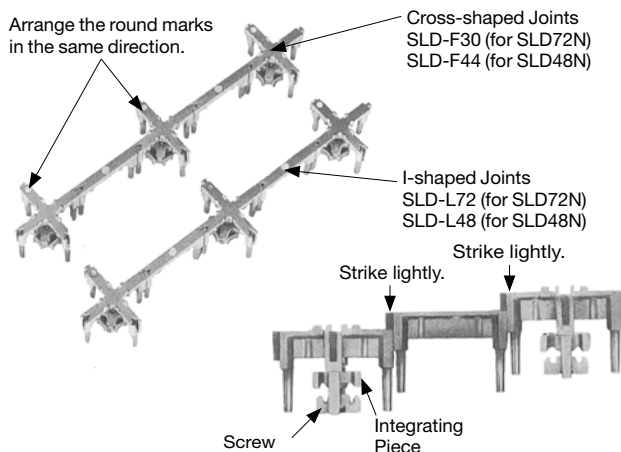| Mounting	Single Mounting	Horizontal Mounting	Vertical Mounting
Outside View	Leaf Spring A (option) / Mounting Clip / Panel	**Type A** Mounting Clip / Leaf Spring (option) **Type B** Mounting Clip / Leaf Spring (option)	**Type A** Mounting Clip / Leaf Spring (option) **Type B** Mounting Clip / Leaf Spring (option)
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. Leaf Spring A (option) Install two mounting clips and tighten the screws.	**Type 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. Leaf Spring A (option) Install two mounting clips to each unit and tighten the screws.	**Type 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. Leaf Spring B (option) 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. 0.39 to 0.47 N·m.
Leaf springs are not supplied with the SLDN unit must be ordered separately.

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.


Arrange the round marks in the same direction.

Cross-shaped Joints
SLD-F30 (for SLD72N)
SLD-F44 (for SLD48N)

I-shaped Joints
SLD-L72 (for SLD72N)
SLD-L48 (for SLD48N)

Strike lightly.

Strike lightly.

Screw

Integrating Piece

2. Lock the housings with the cross-shaped joints.
Insert the SLDN units into the assembled cross-shaped joints. Then insert the projection of the intergrating piece on the cross-shaped joints into the groove of the unit and tighten the screw.

Groove

3. Install into panel cut-out.

Mounting Clip

Cross-shaped Joint

I-shaped Joint
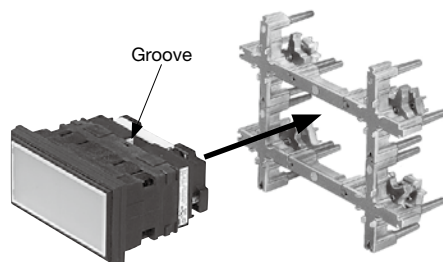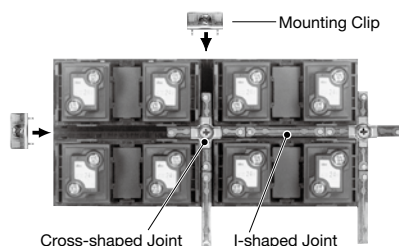
Insert the joint SLDN units into the panel cut-out from the front of the panel. Install the mounting clips as shown and tighten the screws lightly to a torque of approximately 0.39 to 0.49 N·m.

Quantity of mounting clips = $(N - 1) \times 2 + (N' - 1) \times 2$
Quantity of cross-shaped joints = $(N - 1) \times (N' - 1)$
Quantity of I-shaped joints
 For horizontal mounting = $(N - 1) \times (N' - 2)$
 For vertical mounting = $(N - 2) \times (N' - 1)$
where N and N' are the numbers of rows and columns, respectively.

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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	4	6	8	10
	Cross-shaped Joints	1	2	3	4
	I-shaped Joints	0	1	2	3
3	Mounting Clips	6	8	10	12
	Cross-shaped Joints	2	4	6	8
	I-shaped Joints	0	2	4	6
4	Mounting Clips	8	10	12	14
	Cross-shaped Joints	3	6	9	12
	I-shaped Joints	0	3	6	9
5	Mounting Clips	10	12	14	—
	Cross-shaped Joints	4	8	12	
	I-shaped Joints	0	4	8	

Quantity of SLDN units = $N \times N'$
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.

IDEC

Ordering Terms and Conditions

Thank you for using IDEC Products.

By purchasing products listed in our catalogs, datasheets, and the like (hereinafter referred to as "Catalogs") you agree to be bound by these terms and conditions. Please read and agree to the terms and conditions before placing your order.

1. Notes on contents of Catalogs

(1) Rated values, performance values, and specification values of IDEC products listed in this Catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.
Also, durability varies depending on the usage environment and usage conditions.

(2) Reference data and reference values listed in Catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.

(3) The specifications / appearance and accessories of IDEC products listed in Catalogs are subject to change or termination of sales without notice, for improvement or other reasons.

(4) The content of Catalogs is subject to change without notice.

2. Note on applications

(1) If using IDEC products in combination with other products, confirm the applicable laws / regulations and standards.
Also, confirm that IDEC products are compatible with your systems, machines, devices, and the like by using under the actual conditions. IDEC shall bear no liability whatsoever regarding the compatibility with IDEC products.

(2) The usage examples and application examples listed in Catalogs are for reference purposes only. Therefore, when introducing a product, confirm the performance and safety of the instruments, devices, and the like before use. Furthermore, regarding these examples, IDEC does not grant license to use IDEC products to you, and IDEC offers no warranties regarding the ownership of intellectual property rights or non-infringement upon the intellectual property rights of third parties.

(3) When using IDEC products, be cautious when implementing the following.
i. Use of IDEC products with sufficient allowance for rating and performance
ii. Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that an IDEC product fails
iii. Wiring and installation that ensures the IDEC product used in your system, machine, device, or the like can perform and function according to its specifications

(4) Continuing to use an IDEC product even after the performance has deteriorated can result in abnormal heat, smoke, fires, and the like due to insulation deterioration or the like. Perform periodic maintenance for IDEC products and the systems, machines, devices, and the like in which they are used.

(5) IDEC products are developed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use an IDEC product for these applications, unless otherwise agreed upon between you and IDEC, IDEC shall provide no guarantees whatsoever regarding IDEC products.
i. Use in applications that require a high degree of safety, including nuclear power control equipment, transportation equipment (railroads / airplanes / ships / vehicles / vehicle instruments, etc.), equipment for use in outer space, elevating equipment, medical instruments, safety devices, or any other equipment, instruments, or the like that could endanger life or human health
ii. Use in applications that require a high degree of reliability, such as provision systems for gas / waterworks / electricity, etc., systems that operate continuously for 24 hours, and settlement systems
iii. Use in applications where the product may be handled or used deviating from the specifications or conditions / environment listed in the Catalogs, such as equipment used outdoors or applications in environments subject to chemical pollution or electromagnetic interference
If you would like to use IDEC products in the above applications, be sure to consult with an IDEC sales representative.

3. Inspections

We ask that you implement inspections for IDEC products you purchase without delay, as well as thoroughly keep in mind management/maintenance regarding handling of the product before and during the inspection.

4. Warranty

(1) Warranty period
The warranty period for IDEC products shall be one (1) year after purchase or delivery to the specified location. However, this shall not apply in cases where there is a different specification in the Catalogs or there is another agreement in place between you and IDEC.

(2) Warranty scope
Should a failure occur in an IDEC product during the above warranty period for reasons attributable to IDEC, then IDEC shall replace or repair that product, free of charge, at the purchase location / delivery location of the product, or an IDEC service base. However, failures caused by the following reasons shall be deemed outside the scope of this warranty.
i. The product was handled or used deviating from the conditions / environment listed in the Catalogs
ii. The failure was caused by reasons other than an IDEC product
iii. Modification or repair was performed by a party other than IDEC
iv. The failure was caused by a software program of a party other than IDEC
v. The product was used outside of its original purpose
vi. Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and Catalogs
vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from IDEC
viii. The failure was due to other causes not attributable to IDEC (including cases of force majeure such as natural disasters and other disasters)
Furthermore, the warranty described here refers to a warranty on the IDEC product as a unit, and damages induced by the failure of an IDEC product are excluded from this warranty.

5. Limitation of liability

The warranty listed in this Agreement is the full and complete warranty for IDEC products, and IDEC shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to an IDEC product.

6. Service scope

The prices of IDEC products do not include the cost of services, such as dispatching technicians. Therefore, separate fees are required in the following cases.
(1) Instructions for installation / adjustment and accompaniment at test operation (including creating application software and testing operation, etc.)
(2) Maintenance inspections, adjustments, and repairs
(3) Technical instructions and technical training
(4) Product tests or inspections specified by you

The above content assumes transactions and usage within your region. Please consult with an IDEC sales representative regarding transactions and usage outside of your region. Also, IDEC provides no guarantees whatsoever regarding IDEC products sold outside your region.

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