

Introducing the user-friendly safety relay

1. Quick Connector

2. Replaceable Relay

3. Dedicated Power Supply

SL-T11R Type4 Safety Relay Terminal

The SL-T11R combines all of the features necessary to build a Category 4 compatible safety circuit into a single unit. This makes it possible to dramatically reduce the amount of time and labour required by complex circuit design processes. It also boasts quick connectors that simplify the wiring process involved in connecting the relay to the light curtain itself. The SL-T11R eliminates the need for specialised knowledge about safety circuits.



Quick Connector

The safety light curtain is connected via a quick connector, eliminating the danger of wiring mistakes and reducing the amount of time and labour required for wiring.



Space-saving

The SL-T11R case design ensures that the connectors do not extend outside of the unit's footprint, helping to save space inside control panels.



Replaceable Relay

The relay board (OP-84388) can be replaced without removing any wires which eliminates time loss and potential connection mistakes during board rewiring.

*The terminal unit can also be removed separately.

SL-U2 AC Power Supply



SL-U2, dedicated power source with class 2 output

In order to use the SL-V Series as a Type 4 light curtain, it is necessary to have a power supply that meets IEC/EN/UL61496-1 requirements. The SL-U2 is a dedicated power supply unit that meets all of these requirements.

The SL-U2 uses a direct connection, eliminating the need for external wiring.

step 7 Select the controllers and power sources if necessary

Select controllers and power sources for applications where relays and simplified wiring are needed or a controller to allow integration of other safety devices.

The following devices help you easily establish a Category 4 compatible safety circuit.

**▶ Type 4 Safety Relay Terminal dedicated for SL-V [SL-T11R]
Power source dedicated for a Type 4 light curtain
(with class 2 output) [SL-U2]**



Safety Relay Terminal dedicated for the SL-V

| Model | Description | Safety input | Safety output | Other I/O |
|---------|--|---------------------------|--------------------|---|
| | | Safety light curtain | | |
| SL-T11R | Safety Relay Terminal dedicated for SL-V | 1 ch (dedicated for SL-V) | 1 ch (2 terminals) | EDM input, muting input, AUX output, muting lamp output, etc. |

Power Source dedicated for Safety Light Curtain

| System | Model | Description | Input power supply voltage | Output voltage | Output capacity | Power consumption |
|----------------|-------|---|--------------------------------|----------------------|-----------------|-------------------|
| Switching type | SL-U2 | Power supply dedicated for safety light curtain | 100 to 240 VAC ±10% (50/60 Hz) | 24 VDC ±10%, Class 2 | 1.8 A | 135 VA |

step 8 Select the PC configuration software as necessary

The SL-VH1S Makes It Possible to Reduce The On-Site Installation Time!

▶ PC configuration software

NEW
PC Configuration Software
SL-VH1S



NEW Interface Unit
SL-V1UB



NEW USB Cable
OP-51580



(Include with the SL-V1UB)

| Model | Name |
|---------|--|
| SL-V1UB | SL-V Ver.3 Configuration Software Interface Unit (USB cable included with the SL-V1UB) |
| SL-VH1S | SL-V Ver.3 Configuration Software |

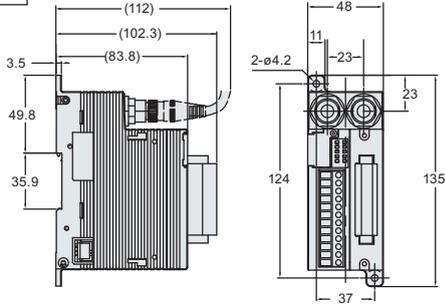
Specifications [For SL-T11R/SL-U2]

| Model | | SL-T11R | |
|---------------------------------|---|---|--|
| Combined light curtain | | SL-V Series | |
| Response time FSD1, 2 | | ON to OFF: 6 ms OFF to ON: 15 ms | |
| Rating | Power voltage | 24 VDC \pm 10% (Ripple P-P 10% or less) | |
| | Current consumption | 100 mA or less (at 24VDC, SL-T11R alone) | |
| Output | FSD1, 2 | 230 VAC, 4 A 30 VDC, 2 A (Resistance load) | |
| | | 230 VAC, 2 A (COS ϕ =0.3) (Inductive load) | |
| | | 30 VDC, 1 A (COS ϕ =0.3) (Inductive load) | |
| Lifespan | Mechanical life: 10 million cycles or more Electrical life: 0.1 million cycles or more | | |
| Environmental resistance | Enclosure rating | IP20 (IEC60529) Set inside the control panel with IP54 or more | |
| | Pollution degree | 2 | |
| | Overvoltage category | III (Relay load) | |
| | Ambient temperature | -10 to +55°C (No freezing) | |
| | Storage ambient temperature | -25 to +65°C (No freezing) | |
| | Relative humidity | 15 to 85% RH (No condensation) | |
| | Storage relative humidity | 15 to 95% RH (No condensation) | |
| | Vibration | 10 to 55 Hz, 0.7 mm compound amplitude, 20 sweeps each in X, Y, and Z directions | |
| | Shock | 100 m/s ² (Approx. 10 G) 16 ms pulse, in X, Y, and Z directions 1,000 times each axis | |
| Material | | Polycarbonate | |
| Weight | | Approx. 330 g | |
| Approved standards | EMC | EMS | UL61496-1, IEC61496-1, EN61496-1 |
| | | EMI | FCC Part15B Class A, ICES-003 Class A, EN55011 Class A |
| | Safety | UL61496-1, IEC61496-1, EN61496-1 (Type 4 ESPE), EN ISO13849-1 (Category 4, PL _e), UL508 | |

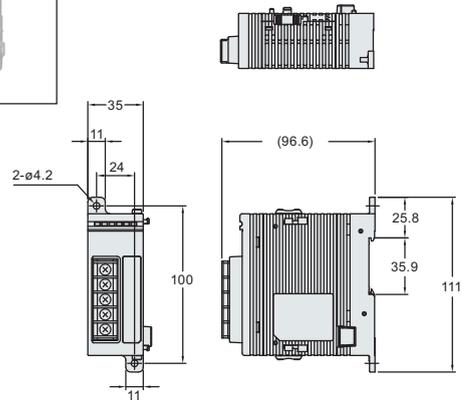
* For the specifications for the outputs other than FSD and for each input, refer to the SL-V Instruction Manual.

| Model | | SL-U2 | |
|--|---------------|---|--|
| System | | Switching type | |
| Input power supply voltage | | 100 to 240 VAC \pm 10% (50/60 Hz) | |
| Overvoltage category | | II | |
| Output voltage | | 24 VDC \pm 10%, Class 2 | |
| Ripple/noise | | 240 mVp-p or less | |
| Output capacity | | 1.8 A | |
| Ambient temperature | | -10 to +55°C (No freezing) | |
| Relative humidity | | 35 to 85% RH (No condensation) | |
| Pollution degree | | 2 | |
| Withstand voltage | | 1,500 VAC, 1 min. (between all external terminals and case) | |
| Vibration resistance | | 10 to 55 Hz, double amplitude 0.7 mm, 20 sweeps each in X, Y, and Z directions | |
| Shock resistance | | 100 m/s ² (Approx. 10 G), 16 ms pulse, 1,000 iterations each in X, Y, and Z directions | |
| Insulation resistance | | At least 50 M Ω (500 VDC mega, between all external terminals and case) | |
| Power consumption | | 135 VA | |
| Supply voltage interruption | | 10 ms or less | |
| Weight (excluding dedicated brackets) | | Approx. 240 g | |
| Approved standards | EMC | EMS | IEC61496-1, EN61496-1, UL61496-1 |
| | | EMI | IEC61000-3-2, EN61000-3-2, EN55011 Class A, FCC Part15 Class A, ICES-003 Class A |
| | Safety | EN60950, EN50178, UL60950-1, UL508 | |

SL-T11R



SL-U2



Please visit: www.keyence.com



SAFETY INFORMATION

Please read the instruction manual carefully in order to safely operate any KEYENCE product.

KEYENCE GLOBAL HEADQUARTERS

1-3-14, Higashi-Nakajima, Higashi-Yodogawa-ku, Osaka, 533-8555, Japan PHONE: +81-6-6379-2211

AUSTRIA

Phone: +43 22 36-3782 66-0 Fax: +43 22 36-3782 66-30

BELGIUM

Phone: +32 27 16 40 63 Fax: +32 27 16 47 27

CANADA

Phone: +1-905-696-9970 Fax: +1-905-696-8340

CHINA

Phone: +86-21-68757500 Fax: +86-21-68757550

CZECH REPUBLIC

Phone: +420 222 191 483 Fax: +420 222 191 505

FRANCE

Phone: +33 1 56 37 78 00 Fax: +33 1 56 37 78 01

GERMANY

Phone: +49 61 02 36 89-0 Fax: +49 61 02 36 89-100

HONG KONG

Phone: +852-3104-1010 Fax: +852-3104-1080

HUNGARY

Phone: +36 1 802 73 60 Fax: +36 1 802 73 61

ITALY

Phone: +39-02-6688220 Fax: +39-02-66825099

JAPAN

Phone: +81-6-6379-2211 Fax: +81-6-6379-2131

KOREA

Phone: +82-31-642-1270 Fax: +82-31-642-1271

MALAYSIA

Phone: +60-3-2092-2211 Fax: +60-3-2092-2131

MEXICO

Phone: +52-81-8220-7900 Fax: +52-81-8220-9097

NETHERLANDS

Phone: +31 40 20 66 100 Fax: +31 40 20 66 112

POLAND

Phone: +48 71 36861 60 Fax: +48 71 36861 62

SINGAPORE

Phone: +65-6392-1011 Fax: +65-6392-5055

SLOVAKIA

Phone: +421 2 5939 6461 Fax: +421 2 5939 6200

SWITZERLAND

Phone: +41 43-45577 30 Fax: +41 43-45577 40

TAIWAN

Phone: +886-2-2718-8700 Fax: +886-2-2718-8711

THAILAND

Phone: +66-2-369-2777 Fax: +66-2-369-2775

UK & IRELAND

Phone: +44-1908-696900 Fax: +44-1908-696777

USA

Phone: +1-201-930-0100 Fax: +1-201-930-0099

