

# IDEM SEU31TD Series Viper Expansion Modules w/Configurable Delay

**SEU31TD-280008**

The SEU31TD series Viper safety relay expansion modules can be directly wired to the SCR21, SCR31, SCR73, and SCR3142TD series safety relays to increase the number of safety output contacts and expand functionality of the base unit safety relays. They can also be used in conjunction with the SEU31 series expansion modules.

**Note:** Not for use with safety light curtains

## Features

- Configurable time delay between 0-30 seconds
- Fault monitored via feedback contacts
- Multiple expansion modules can be connected to a single base SCR unit
- Easy diagnostics of status via 3 LEDs
- 22.5 mm DIN rail mounting



## Safety Data per EN 13849-1

|                          | Instant     | Delayed     |
|--------------------------|-------------|-------------|
| <b>Category</b>          | 4           | 3           |
| <b>Performance level</b> | Ple         | Ple         |
| <b>MTTF<sub>d</sub></b>  | 134a (High) | 134a (High) |
| <b>DC<sub>avg</sub></b>  | 95% (High)  | 95% (High)  |

## Safety Data per IEC/EN 62061, IEC/EN 61508

|                                |                  |                  |
|--------------------------------|------------------|------------------|
| <b>SIL CL</b>                  | SIL CL 3         | SIL CL 3         |
| <b>SIL</b>                     | SIL3             | SIL3             |
| <b>HFT</b>                     | 1 (Dual channel) | 1 (Dual channel) |
| <b>DC<sub>avg</sub></b>        | 95% (High)       | 95% (High)       |
| <b>SFF</b>                     | 90-99%           | 90-99%           |
| <b>PFH<sub>d</sub> (t-20a)</b> | 2.00E-04         | 2.00E-04         |

## SEU31TD Series Release Delay Expansion Modules

| Part Number                             | Price    | Type             | Voltage   | Outputs                               | Connection            |
|-----------------------------------------|----------|------------------|-----------|---------------------------------------|-----------------------|
| <a href="#"><u>SEU31TD-280008</u></a>   | \$289.00 | Expansion module | 24V AC/DC | Delayed: 3 NO and 1 NC (0-30 Seconds) | Fixed screw terminals |
| <a href="#"><u>SEU31TD-280008-P</u></a> | \$337.00 |                  |           |                                       | Pluggable terminals   |

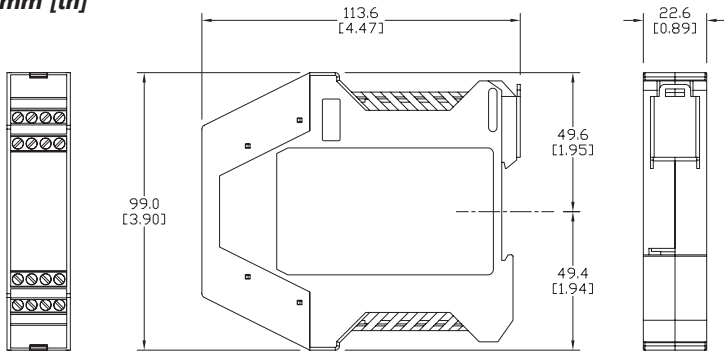
## SEU31TD Series Specifications

|                                           | General Specifications                                                                                                                      |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Temperature</b>                        | -20° to +55°C [-4° to +131°F]                                                                                                               |
| <b>Altitude</b>                           | < 2,000 meters                                                                                                                              |
| <b>Vibration Resistance</b>               | Tested to IEC 60068-2-6                                                                                                                     |
| <b>Degree Of Protection</b>               | IP20                                                                                                                                        |
| <b>Housing</b>                            | UL 94V-0 Thermoplastic                                                                                                                      |
| <b>Weight</b>                             | 150g (5.3 oz)                                                                                                                               |
| <b>Agency Approvals and Standard</b>      | cULus file E258676, CE, TUV                                                                                                                 |
| <b>Terminal Designation per EN 50 005</b> | 1 x 4 mm <sup>2</sup> stranded ferruled (isolated) or 2 x 1.5 mm <sup>2</sup> stranded ferruled (isolated) or 2 x 2.5 mm <sup>2</sup> solid |
| <b>Wire Fixing</b>                        | M3.5 terminals with self-lifting wire protection or cage clamp terminals                                                                    |
|                                           | Input Specifications                                                                                                                        |
| <b>Nominal Voltage</b>                    | 24V AC/DC                                                                                                                                   |
| <b>Voltage Range</b>                      | 85-110%                                                                                                                                     |
| <b>Maximum Consumption</b>                | 2.5 W (24VDC)                                                                                                                               |
| <b>Nominal Frequency</b>                  | 50Hz-60Hz                                                                                                                                   |
| <b>Control Voltage</b>                    | N/A                                                                                                                                         |
| <b>Control Current</b>                    | N/A                                                                                                                                         |
| <b>Short Circuit Protection</b>           | Internal PTC (Positive Temperature Coefficient resistor)                                                                                    |
| <b>Over Voltage Protection</b>            | Internal VDR (Voltage Dependent resistor)                                                                                                   |
|                                           | Output Specifications                                                                                                                       |
| <b>Electrical Contact Life</b>            | 6A / 250VAC 100,000 cycles, 1A / 250VAC 1,000,000 cycles                                                                                    |
| <b>Mechanical Life</b>                    | 10 x 10 <sup>6</sup>                                                                                                                        |
| <b>Contact Type</b>                       | Delayed: 3 NC and 1 NO (0 to 30 seconds)                                                                                                    |
| <b>Operate Delay</b>                      | 100ms                                                                                                                                       |
| <b>Release Delay</b>                      | 25ms                                                                                                                                        |
| <b>Nominal Output Voltage</b>             | 250VAC                                                                                                                                      |
| <b>Thermal Current (I<sub>th</sub>)</b>   | Max. 6A                                                                                                                                     |
| <b>Short Circuit Strength</b>             | Minimum Contact Fuses - 4A slow blow, 6A fast blow                                                                                          |
| <b>Switching Capacity</b>                 | AC - 250V, 1500V, 6A, Ohmic 230V, 4A for AC-15; DC - 24V, 30W, 1.25 A, Ohmic                                                                |
| <b>Switching Frequency</b>                | Max. 360 switching cycles/hr                                                                                                                |

# IDEM SEU31TD Series Viper Expansion Modules w/Configurable Delay

## Dimensions

mm [in]

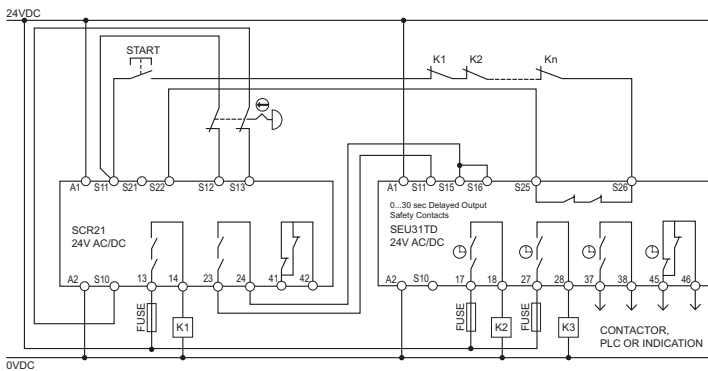


## LED Diagnostics

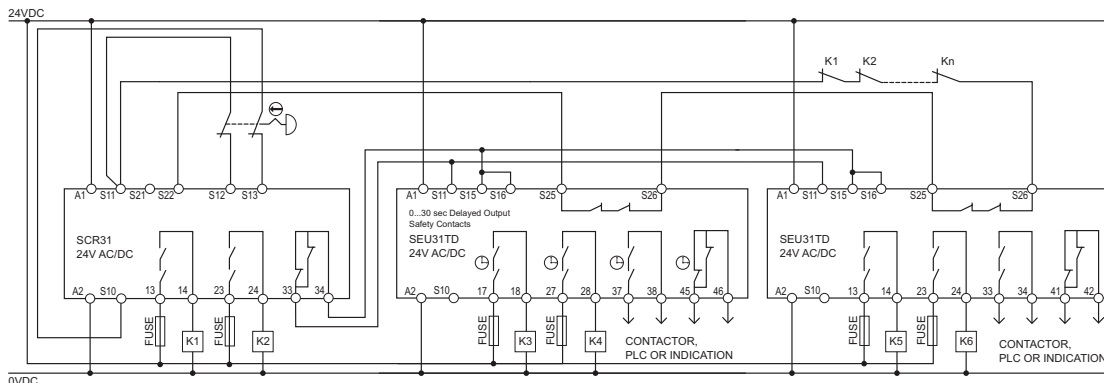
|                   |     |     |     |
|-------------------|-----|-----|-----|
| 17                | 27  | 37  | 45  |
| A1                | S11 | S25 | S26 |
| <b>SEU-31TD-i</b> |     |     |     |
| ○ <b>POWER</b>    |     |     |     |
| ○ <b>K1</b>       |     |     |     |
| ○ <b>K2</b>       |     |     |     |
| <b>VIPER</b>      |     |     |     |
| S15               | S16 | S10 | A2  |
| 18                | 28  | 38  | 46  |

POWER Power to the safety relay  
K1 Power to internal relay K1  
K2 Power to internal relay K2

## Applications



**Dual channel, E-Stop, manual reset with expansion unit**



**Dual channel, E-Stop, auto reset with multiple SEU31TD expansion units**

**Note:** A power supply unit with electrical isolation from the mains supply must be connected. External fusing of each safety output contact is necessary, a 4A slow-blow or 6A (quick action) must be provided. The maximum cabling and connecting resistance of control lines must not be exceed 300 Ohms.

# Safety Products



*Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.*

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