

# IDEM SCR3142TD Series Dual Channel Viper Safety Relays w/Configurable Delay



SCR3142TD-280006

The SCR3142TD Viper Safety Relays series from IDEM are designed with simplified wiring, configurable delay function and 8 LEDs for easy diagnostics. Applications include guard door monitoring, emergency stop devices and sensors. The SCR3142TD internal logic uses force guided relays to achieve cross monitoring. This ensures that a single fault does not lead to the loss of the safety function and that all faults are detected at or before the next safety demand.

*Note: Not for use with safety light curtains*

## Features

- Emergency stop and guard interlock monitoring
- Monitored manual or automatic start/reset
- Time delay contacts
- Easy diagnostics of status via 8 LEDs
- 45mm housing suitable for 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 <sup>-04</sup>	2.00E <sup>-04</sup>

### SCR3142TD Series Dual Channel Relays with Configurable Delay

Part Number	Price	Type	Voltage	Outputs	Connection
<b>SCR3142TD-280006</b>	\$-01n.j:	Dual channel operation	24V AC/DC	3 NO / 1 NC	Fixed screw terminals
<b>SCR3142TD-280006-P</b>	\$-01n.j:			4 delayed NO 2 delayed NC	Pluggable terminals

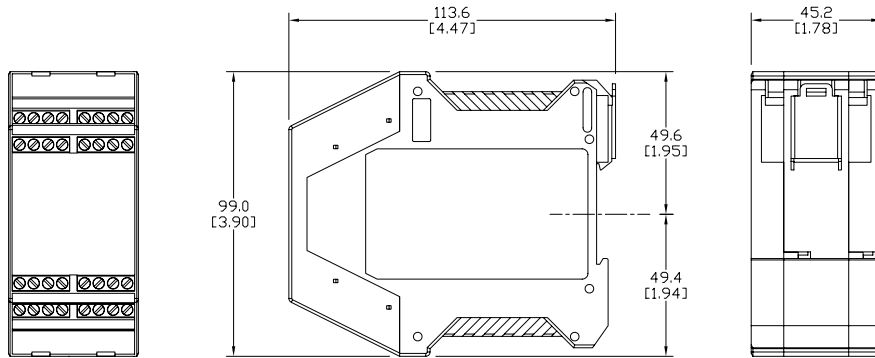
### SCR3142TD Series Specifications

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>	300g (10.5 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>	5W (24VDC)
<b>Nominal Frequency</b>	50Hz-60Hz
<b>Control Voltage</b>	24VDC (S11)
<b>Control Current</b>	100mA (S11)
<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>	3 NO positively driven and 1 NC auxiliary contacts. Delayed: 4 NO and 2 NC
<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

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## Dimensions

mm [in]



## LED Diagnostics

*When safety relay in operation*

Power	Power applied to device
Reset	Reset loop S11-S21 or S11-S22 is closed
CH1	Channel 1 - S11-S12 is closed
CH2	Channel 2 - S13-S10 is closed
K1	Power to internal relay K1
K2	Power to internal relay K2
K3	Power to internal relay K3
K4	Power to internal relay K4

13	23	33	81	47	57	67	77
A1	S11	S21	S22	95	96	105	106

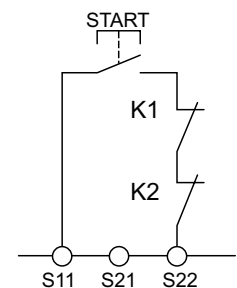
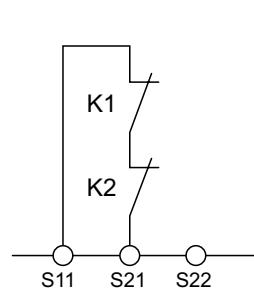
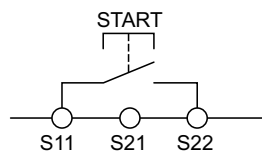
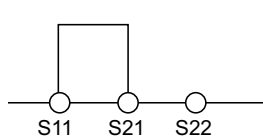
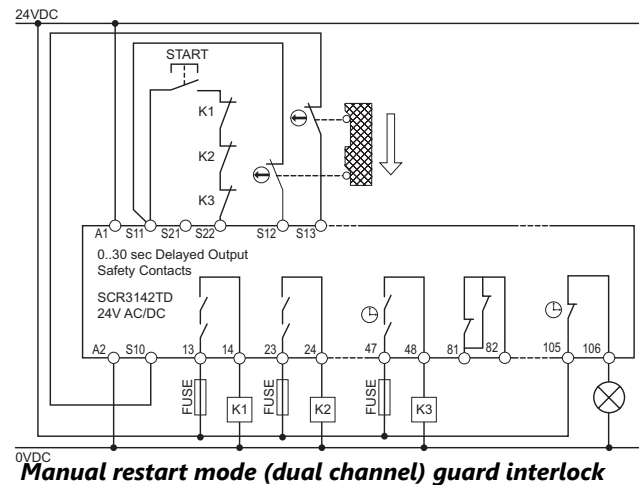
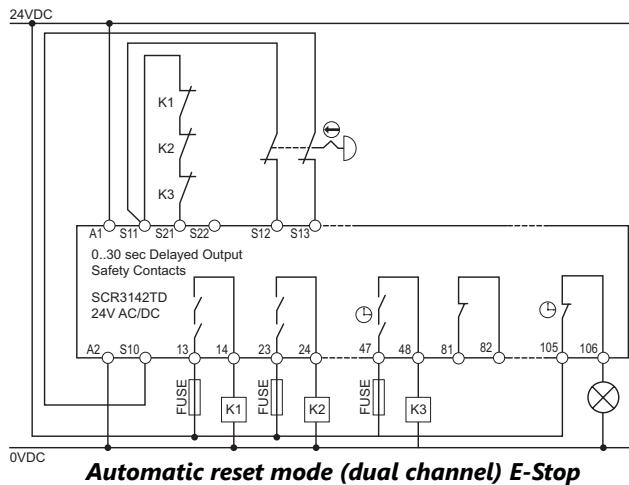
**SCR-31-42TD-i**

☐ POWER  
☐ RESET  
☐ CH1  
☐ CH2  
☐ K1  
☐ K2

**VIPER**

S12	S13	S10	A2				
14	24	34	82	48	58	68	78

## Applications



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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