

# IDEM SCR21 Series Single/Dual Channel Viper Safety Relays



SCR21-280001

The Viper Safety Relay series from IDEM are designed with enhanced LED diagnostics and simplified wiring. Applications include guard door monitoring, emergency stop devices and sensors. The SCR21 series' 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

- Single or dual channel operation
- Monitored manual or auto start /reset
- Up to 2 safety output contacts and 1 auxiliary output contact
- Easy diagnostics of status via 6 LEDs
- 22.5 mm DIN rail mounting

## Safety Data per EN 13849-1

<b>Category</b>	<b>4</b>
<b>Performance level</b>	Ple
<b>MTTF<sub>d</sub></b>	142a (High)
<b>DC<sub>avg</sub></b>	99% (High)

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

<b>SIL CL</b>	SIL CL 3
<b>SIL</b>	SIL3
<b>HFT</b>	1 (Dual channel)
<b>DC<sub>avg</sub></b>	99% (High)
<b>SFF</b>	90-99%
<b>PFH<sub>d</sub> (t-20a)</b>	3.60E-05

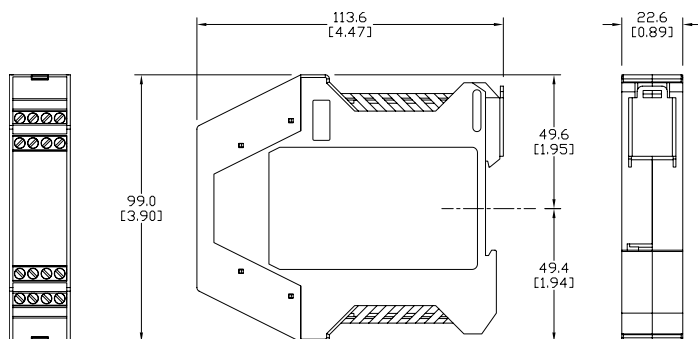
## SCR21 Series Single/Dual Channel Safety Relays

Part Number	Price	Type	Voltage	Outputs	Connection
<b>SCR21-280001</b>	\$159.00	Single and dual channel operation	24V AC/DC	2 NO / 1 NC	Fixed screw terminals
<b>SCR21-280001-P</b>	\$159.00				Pluggable terminals




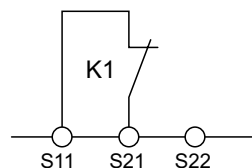
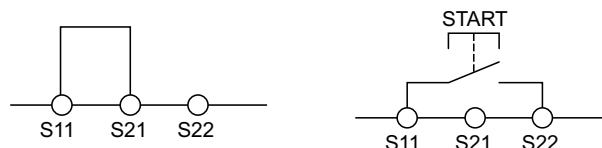
## SCR21 Series Specifications

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>	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>	2 NC positively driven and 1 NO auxiliary contacts
<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

**mm [in]**

Power	Power applied to device
Reset	Reset circuit is closed
CH1	External switch input 1 closed
CH2	External switch input 2 closed
K1	Internal relay safety output contacts closed
K2	Internal relay safety output contacts closed

13	23		31
A1	S11	S21	S22
<b>SEU-21-<i>i</i></b> <input type="radio"/> POWER <input type="radio"/> RESET <input type="radio"/> CH1 <input type="radio"/> CH2 <input type="radio"/> K1 <input type="radio"/> K2			
			
S12	S13	S10	A2
14	24		32



# Safety Products



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