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 use's 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				
Category	4			
Performance level	Ple			
MTTF _d	142a (High)			
DC _{avg}	99% (High)			
Safety Data per IEC/EN 62061, IEC/EN 61508				
Sil CL	SIL CL 3			
Sil	SIL3			
HFT	1 (Dual channel)			
DC _{avg}	99% (High)			
SFF	90-99%			
PFH _d (t-20a)	3.60E ⁻⁰⁵			

SCR21 Series Single/Dual Channel Safety Relays					
Part Number	Price	Туре	Voltage	Outputs	Connection
SCR21-280001	\$155.00	Single and dual channel operation	24V AC/DC	2 NO / 1 NC	Fixed screw terminals
SCR21-280001-P	\$155.00				Pluggable terminals





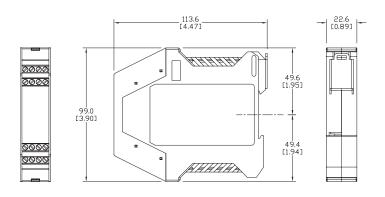


SCR21 Series Specifications				
General Specifications				
Temperature	-20° to +55°C [-4° to +131°F]			
Altitude	< 2,000 meters			
Vibration Resistance	Tested to IEC 60068-2-6			
Degree Of Protection	IP20			
Housing	UL 94V-0 Thermoplastic			
Weight	150g (5.3 oz)			
Agency Approvals and Standard	cULus file E258676, CE, TUV			
Terminal Designation per EN 50 005	1 x 4 mm ² stranded ferruled (isolated) or 2 x 1.5 mm ² stranded ferruled (isolated) or 2 x 2.5 mm ² solid			
Wire Fixing	M3.5 terminals with self-lifting wire protection or cage clamp terminals			
Input Specifications				
Nominal Voltage	24V AC/DC			
Voltage Range	85-110%			
Maximum Consumption	2.5 W (24VDC)			
Nominal Frequency	50Hz-60Hz			
Control Voltage	24VDC (S11)			
Control Current	100mA (S11)			
Short Circuit Protection	Internal PTC (Positive Temperature Coefficient resistor)			
Over Voltage Protection	Internal VDR (Voltage Dependent resistor)			
	Output Specifications			
Electrical Contact Life	6A / 250VAC 100,000 cycles, 1A / 250VAC 1,000,000 cycles			
Mechanical Life	10 x 10 ⁶			
Contact Type	2 NC positively driven and 1 NO auxiliary contacts			
Operate Delay	100ms			
Release Delay	25ms			
Nominal Output Voltage	250VAC			
Thermal Current (I _{th})	Max. 6A			
Short Circuit Strength	Minimum Contact Fuses - 4A slow blow, 6A fast blow			
Switching Capacity	AC - 250V, 1500V, 6A, Ohmic 230V, 4A for AC-15; DC - 24V, 30W, 1.25 A, Ohmic			
Switching Frequency	Max. 360 switching cycles/hr			

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Dimensions

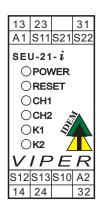
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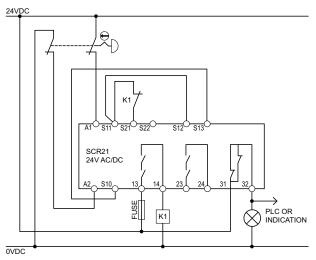
LED Diagnostics

When safety relay in operation

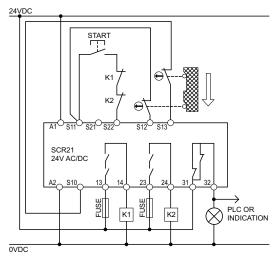
Power	Power applied to device
Reset	Reset circuit is closed
CH1	External switch input 1 closed
CH2	External switch input 2 closed
K1	Internal relay safety ouput contacts closed
K2	Internal relay safety output contacts closed



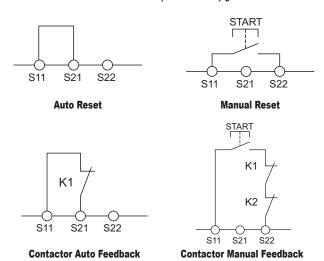
Applications



Automatic restart mode (single channel) E-Stop



Manual restart mode (dual channel) guard



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.

AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.