IDEM SCR31P Series Dual Channel Viper OSSD/Light Curtain Safety Relays

SCR31P-280003-P

The Viper Safety Relay series from IDEM is designed with enhanced LED diagnostics and simplified wiring. Applications include Output Signal Switching Device (OSSD) monitoring such as light curtains and other OSSD safety devices. The SCR31P series' internal logic uses force guided relays.

Features

- Monitored manual or auto start /reset
- Up to three safety output contacts and 1 NC 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%
PHD_{avg} (T=20a)	3.60E-05

SCR31P Series Single/Dual Channel Safety Relays

Part Number	Price	Type	Voltage	Outputs	Connection	Dimensional Drawing
SCR31P-280003	$203.00	OSSD / Light Curtain	24V AC/DC	2 NO 1 NC	Fixed screw terminals	PDF
SCR31P-280003-P	$248.00				Pluggable terminals	PDF

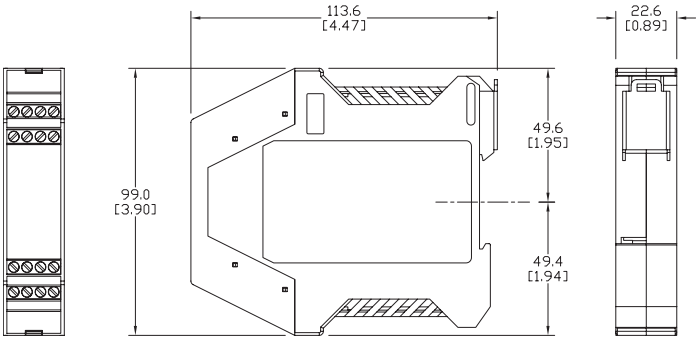
SCR21 Series Specifications

General Specifications	
Temperature	-20° to +55°C [-4° to +131°F]
Altitude	< 2,000m [6562ft]
Vibration Resistance	Tested to IEC 60068-2-6
Degree Of Protection	IP20
Housing	UL 94V-0 Thermoplastic
Weight	160g (5.64 oz)
Agency Approvals and Standard	cULus, 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 (24V AC/DC)
Nominal Frequency	50Hz-60Hz
Control Voltage	24VDC (S11)
Control Current	100mA (S11 through S14)
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	3 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-15 230VAC, 4A; DC-13 24VDC, 30W, 2A
Switching Frequency	Max. 360 switching cycles/hr

IDEM SCR31P Series Dual Channel Viper OSSD/Light Curtain Safety Relays

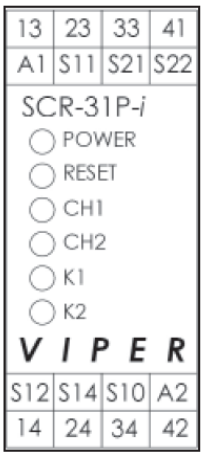
Dimensions

(mm [in])



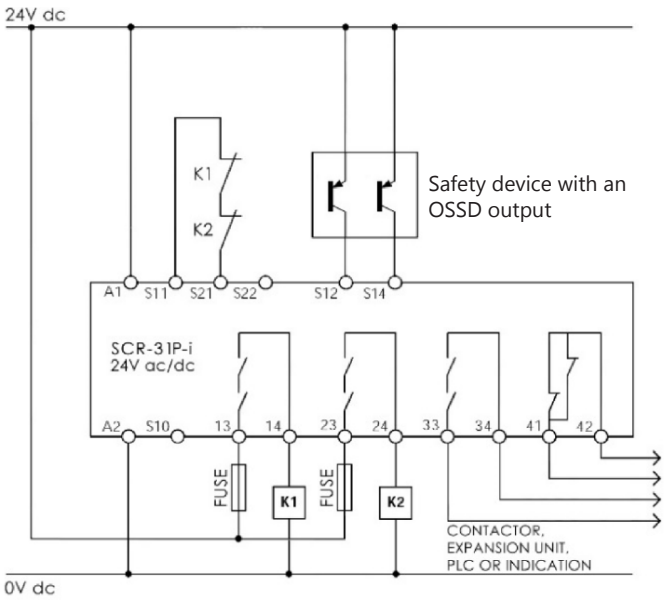
LED Diagnostics

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

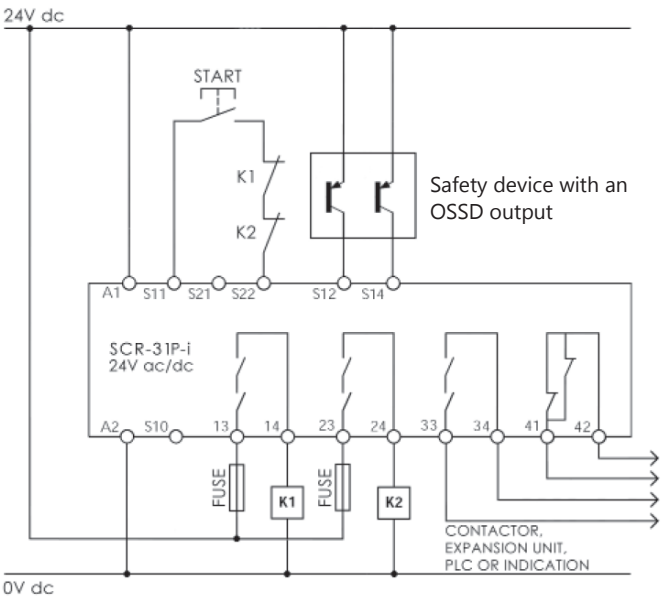


Applications

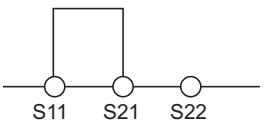
Auto Restart (Dual Channel) OSSD (PNP) INPUTS



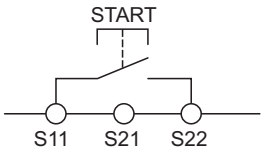
Manual Restart (Dual Channel) OSSD (PNP) INPUTS



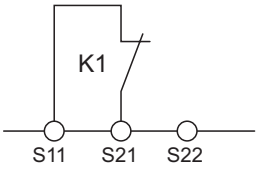
Reset Wiring Options



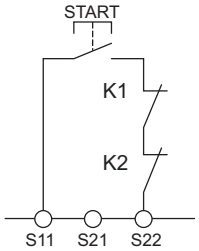
Auto Reset



Manual Reset



Contactor Auto Feedback



Contactor Manual Feedback

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 exceed 300Ω.

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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