

# VIPER Safety Relays Type: SEU-31-i (with added diagnostics)

## DESCRIPTION:

The Viper Safety Relays range from IDEM are designed to meet the latest safety standards and offer enhanced LED diagnostics and simplified wiring. Applications include the monitoring of safety interlock switches (guard door monitoring), emergency stop devices and sensors.

The SEU-31-i is an expansion unit designed to connect to a standard SCR-i relay to offer extra output contacts to the end user.

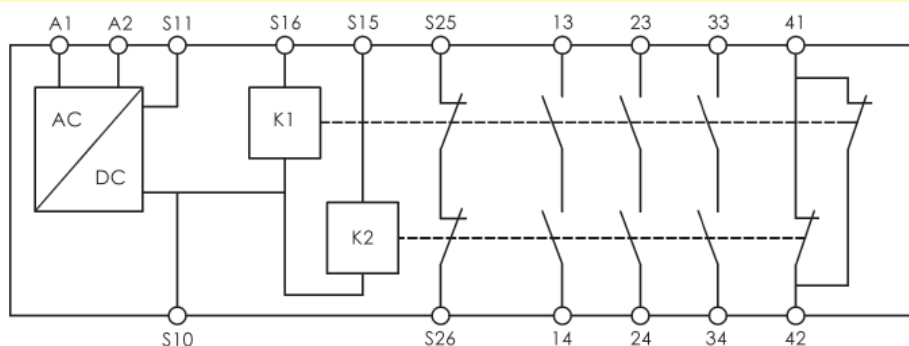


## FEATURES:

- Output contacts: 3NC 1NO.
- Easy diagnosis of status via visual indication of LEDs.
- Up to PLe, SILCL 3, Category 4.
- Monitored manual or automatic start.
- Single and dual channel operation.
- Output expansion units available to increase number of outputs.



## BLOCK DIAGRAM AND ELECTRICAL CONNECTION:



### Electrical Connection

A1 A2	Power 24Vac/dc
S11	Control Output
S15 S16 S10	Control Inputs
S25 S26	Feedback Check Contacts
13-14	Safety Output Contact 1
23-24	Safety Output Contact 2
33-34	Safety Output Contact 3
41-42	Auxiliary Output Contact

## SPECIFICATIONS:

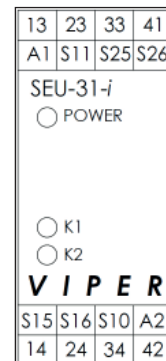
STANDARDS			
EN ISO13849-1	EN62061	EN60204-1	EN ISO12100
POWER SUPPLY CIRCUIT			
Operating Voltage	24V AC/DC		
Operating Voltage Tolerance	85-110%		
Rated Supply Frequency	50Hz-60Hz		
Power Consumption	2.5W (24V AC/DC)		
CONTROL CIRCUITS			
Rated Output Voltage	24V DC (S11)		
Output Current	100mA (S11)		
Response Time	30ms		
Release Time	25ms		
Recovery Time	90ms		
OUTPUT CIRCUITS			
Rated Output Voltage	250V AC		
Maximum Current per Output	6A		
Maximum Total Current all Outputs	8A		
Safety Contact Breaking Capacity AC	250V, 1500V, 6A, Ohmic 230V, 4A for AC-15		
	DC 24V, 30W, 1.25A, Ohmic		
Minimum Contact Load	10V 10mA		
Minimum Contact Fuses	4A slow blow, 6A fast blow		
Contact Material	AgSnO <sub>2</sub>		
Contact Service Life	10 x 10 <sup>6</sup>		
GENERAL DATA			
Rated Impulse Withstand Voltage	4kV		
Rated Insulation Voltage	250V		
Degree of Protection	IP20		
Temperature Range	-20C to +55C		
Degree of Contamination	2		
Overvoltage Category	III		
Weight	160gr (5.5 oz.)		
Mounting	Any position		

SAFETY CHARACTERISTICS	
EN62061	SIL3
ISO13849-1	Ple Category 4
PFH	8.4E-10 1/h (0.8% of SIL3 (1 E-07 1/h))
PFD Av. (T=20a)	7.2E-05 (7.2% of SIL3 (1 E-03))
MTTFd	71a (High)
DC Av.	99% (High)

## LED DIAGNOSTICS:

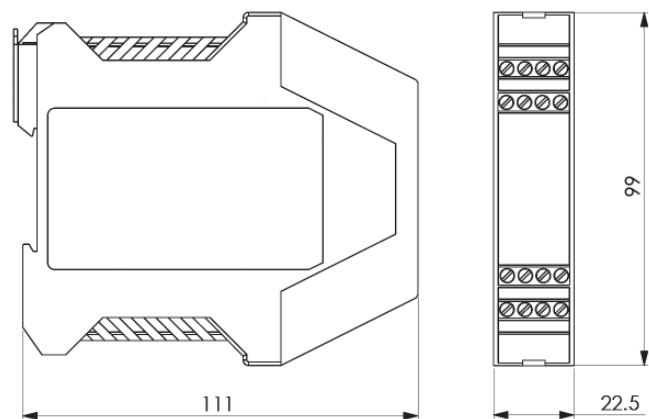
### WHEN SAFETY RELAY IN OPERATION

- Power Power applied to device
- K1 Internal relay safety output contacts closed.
- K2 Internal relay safety output contacts closed.

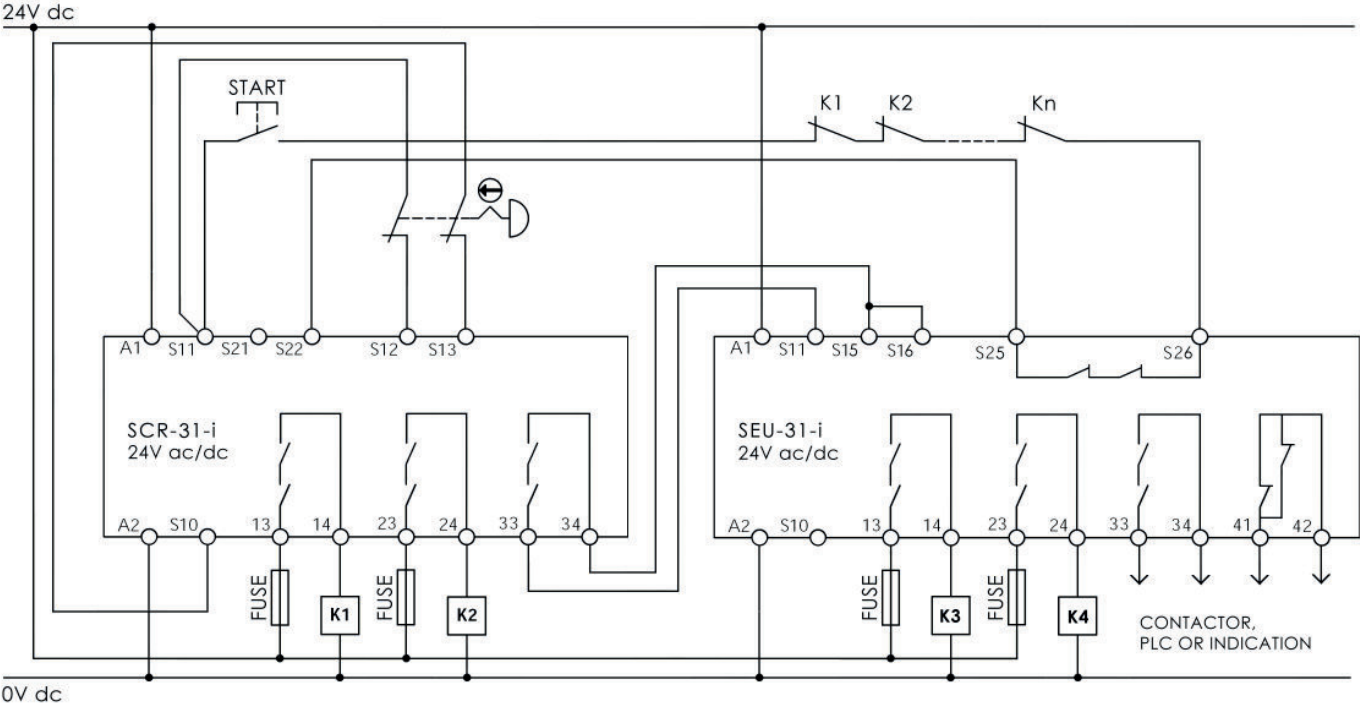


# VIPER Safety Relays Type: SEU-31-i (with added diagnostics)

## DIMENSIONS:



## MANUAL RESTART MODE (Dual Channel) E-STOP (shown with SCR-31-i):



## SELECTION CHART & ORDERING:

SALES NUMBER	TYPE	TERMINAL TYPE	SUPPLY VOLTAGE	SWITCH INPUT CIRCUITS	OUTPUT CONTACTS
280007	SEU-31-i	Standard Screw Terminals	24Vac/dc	2NC	3NC 1NO
280007-P	SEU-31-i	Pluggable Screw Terminals	24Vac/dc	2NC	3NC 1NO