# IDEM SEU31 Series Viper Safety Relay Expansion Modules



The SEU31 series Viper safety relay expansion modules can be directly wired to the SCR21, SCR31, SCR73, and SCR3142TD series safety relays to increase the number of safety output contacts and expand functionality of the base unit safety relays.



Note: Not for use with safety light curtains

#### **Features**

- Stop category 0
- Fault monitored via feedback contacts
- Multiple expansion modules can be connected to a single base unit
- Easy diagnostics of status via 3 LEDs
- 2.5 mm DIN rail mounting

SEU31 Series Safety Relay Expansion Modules						
Part Number	Price	Туре	Voltage	Outputs	Connection	
SEU31-280007	\$161.00	Expansion module	24V AC/DC	3 NO positively driven and 1 NC auxiliary	Fixed screw terminals	
<u>SEU31-280007-P</u>	\$207.00				Pluggable terminals	

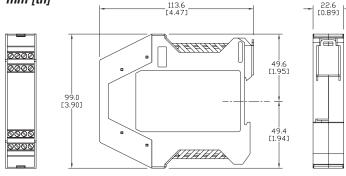
Safety Data per EN 13849-1					
Category	4				
Performance level	Ple				
MTTF <sub>d</sub>	71a (High)				
DC <sub>avg</sub>	99% (High)				
Safety Data per IEC/EN 62061, IEC/EN 61508					
Sil CL	SIL CL 3				
Sil	SIL3				
HFT	1 (Dual channel)				
DC <sub>avg</sub>	99% (High)				
SFF	90-99%				
PFH <sub>d</sub> (t-20a)	7.20E <sup>-05</sup>				

SEU31 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 <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			
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	N/A			
Control Current	N/A			
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 <sup>6</sup>			
Contact Type	3 NC positively driven and 1 NO auxiliary contacts			
Operate Delay	100ms			
Release Delay	25ms			
Nominal Output Voltage	250VAC			
Thermal Current (I <sub>th</sub> )	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**

mm [in]

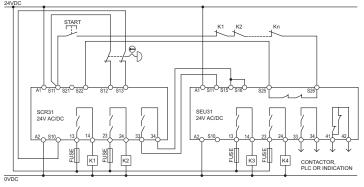


### **LED Diagnostics**

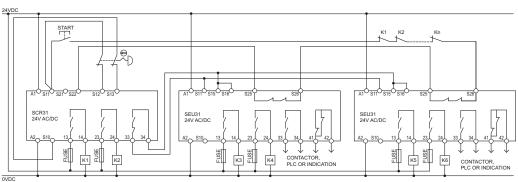


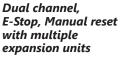
POWER	Power to the safety relay	
K1	Power to internal relay K1	
K2	Power to internal relay K2	

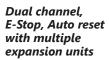
### Applications

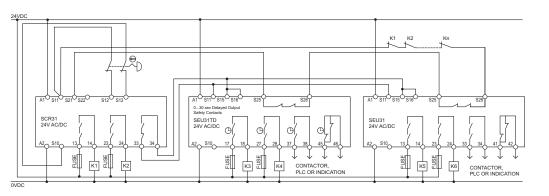


Dual channel, E-Stop, manual reset with expansion unit









Note: A safety transformer according to EN 61558-2-6 or a power supply unit with electrical isolation from the mains supply must be connected. External fusing of the safety contacts (6A slow-blow or 8A quick action or 10 AgG) must be provided. A maximum length of the control lines of 1000m with a line cross section of 0.75 mm<sup>2</sup> must not be exceeded. The line cross section must not exceed 2.5 mm<sup>2</sup>. If the device does not function after commissioning, it must be returned to the AutomationDirect unopened. Opening the device will void the warranty.

## **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.