

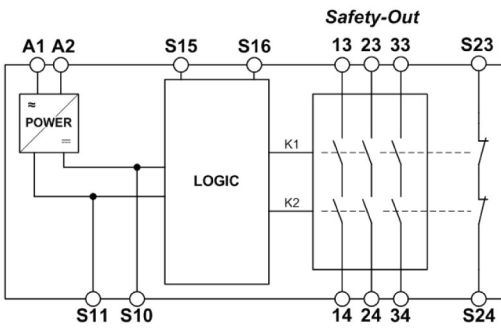
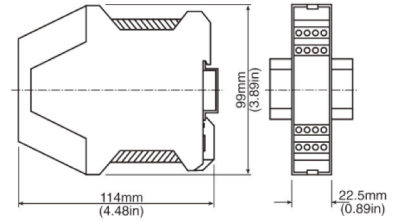
# SEU-1 Expansion Module - for use with SCR-2 and SCR-3

## SEU-1 Safety Expansion Relay offering 3NC Outputs

The SEU-1 is an expansion unit which offers 3 additional NC Safety Output Contacts.  
An existing system using SCR-2 or SCR-3 can be expanded modularly.  
The safety actuation is achieved from the basic SCR-2 or SCR-3 relay.

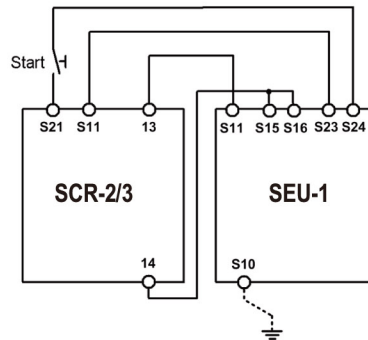
### Features:

- 3NC relay outputs
- 1NO auxiliary contact – (fault monitoring)
- Standards: EN 60204-1, EN954-1, ISO13849-1, EN62061
- Stop Category : 1
- Up to Category : 4 EN 954-1
- Up to : PLe ISO13849-1
- Force Guided Contacts : 3
- Fault Monitoring by basic SCR device.

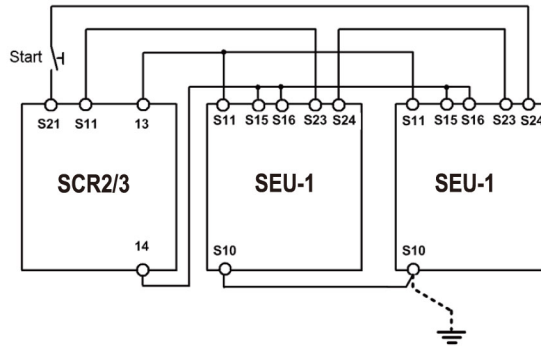


Block diagram and electrical connection SEU-1

- A1 A2 Power
- S11 24V.dc control voltage
- S10 S15 S16 Control lines
- S23 S24 Fault monitoring
- 13-14 Safety Contact 1
- 23-24 Safety Contact 2
- 33-34 Safety Contact 3



Connection of an SEU-1 to a basic device SCR-2 or SCR-3.



Connection of several SEU-1 to a basic device SCR-2 or SCR-3.

Safety Classification and Reliability Data: The specified PL or SILCL were determined under worst case conditions:

Standards	SEU-1 EN60204-1, EN 292, EN 418, EN60204-1 EN 954-1, ISO13849-1, EN 1088 EN62061
Safety Switching Outputs	3 NC
Auxiliary Contact	1 NO
Operating voltage	AC/DC24V AC110V AC230V by part number
Supply deviation	+/- 10%
Control voltage at S11	24V.dc
Control current S11 to S14	40mA approx.
Maximum line conductor cross section	2.5 sq.mm
Maximum length of control line	1000m. with 0.75 Sq.mm
Contact material	AgNi
Indication - Green	LED 1 and 2 OSSD closed
Contact service life	Mechanical 1 x 10 <sup>7</sup> Electrical 1 x 10 <sup>5</sup>
Safety Contact breaking capacity	AC 250V, 1500VA, 6A. ohmic 230V, 4A for AC15 DC 24V, 30W, 1.25A. ohmic 24V, 30W, 2.0A for DC-13
External Fuse protection – Safety outputs	4A slow blow or 6A quick blow
Minimum voltage and current	24V, 20mA dc
Rated insulation voltage	250V
Degree of protection	IP20
Rated impulse withstand voltage	4 kV
Operating temperature	-15°C +40°C
IP Protection	IEC529 Terminals IP20
Mounting	35mm DIN rail
Weight	0.25kg approx.

ISO 13849-1:	Performance level	e
Category (ISO13849-1 / EN 954-1)	MTTFd	4
DC (avg.)	DC (avg.)	567 years
Proof Test Interval (Life)	DC (avg.)	99%
Safety Data Annual usage	Proof Test Interval (Life)	20 years
	Safety Data Annual usage	365 days per year
		24 hours per day
		3600 seconds/ cycle
		Full Load AC15
EN 62061:	SILCL	3
Proof Test Interval (Life)	Proof Test Interval (Life)	20 years
Hardware fault tolerance	Hardware fault tolerance	1
DC (avg.)	DC (avg.)	99%
Safe Failure Fraction SFF	Safe Failure Fraction SFF	99.6%
PFHd	PFHd	4.10 x 10 <sup>-8</sup>

Sales Number	Type	Terminal Type	Supply Voltage	Output Contacts	Auxiliary Output Contacts
180010	SEU-1	Standard	24V.ac/dc	3NC	1NO
180011	SEU-1	Screw	110V.ac	3NC	1NO
180012	SEU-1	Terminals	230V.ac	3NC	1NO
180010-P	SEU-1	Pluggable	24V.ac/dc	3NC	1NO
180011-P	SEU-1	Screw	110V.ac	3NC	1NO
180012-P	SEU-1	Terminals	230V.ac	3NC	1NO