

MECHAN CONTROLS



Installation Guide : SRL-3 Safety Relay

Keep this guide for future reference

This information is designed to help suitably qualified personnel install and operate Mechan Safety equipment. Before using this product, read this guide thoroughly along with any relevant European and/or National standards e.g. Machinery Directive 2006/42/EC and it's amendments, Provision and Use of Work Equipment Regulations.

Further information can be obtained from Mechan Controls

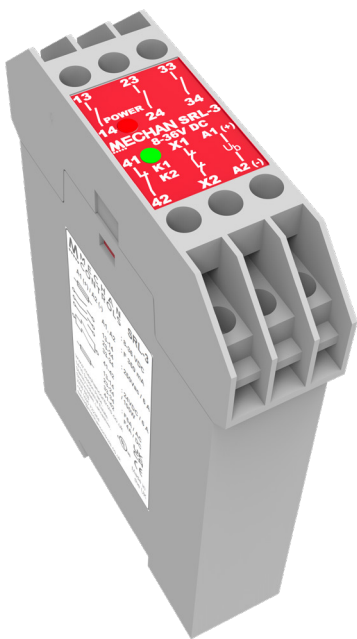
Description

The SRL-3 Safety relay has a single or dual channel inputs, three normally open safety outputs and one normally closed auxiliary output.

With LED indication to speed up fault finding and a slim 22.5mm DIN rail mounting enclosure the SRL-3 takes up minimum control panel space.

Designed for operation with single or dual channel Emergency Stop buttons, or safety devices with 1 or 2 safety outputs e.g mechanical safety switches.

SRL-3 can be used to acheive CAT-3 / PLd of the machine guard safety standard.



Operation

POWER ON

The SRL3 safety relay can work from 8vdc to 36vdc. When the power is applied to the SRL3 the green Power LED will illuminate. The green output led (K1 & K2) will illuminate and all safety circuit (13-14, 23-24, 33-34) will close and the auxiliary contact (41-42) will open, providing X1 and X2 reset circuit is closed.

AUTOMATIC RESET

X1 & X2 is linked for automatic reset mode or a normally open momentary push button is connected in series with normally closed contact of K1 & K2 as shown in the connection diagram.

MANUAL RESET

If the SRL3 safety relay is set for monitoring operation (this has to be set by the factory) the normally open momentarily push button is connected in series with normally closed contact of K1 & K2 as shown in the connection diagram.

APPROVALS	
CE	Complies with all relevant sections of the CE marking directive
UKCA	Complies with all relevant sections of the UKCA marking directive
EUROPEAN DIRECTIVES	
Machinery Directive 2006/42/EC	
Low Voltage Directive 2014/35/EU	
Electromagnetic Compatibility Directive 2014/30/EU	
EUROPEAN STANDARDS	
EN ISO 13849-1	Safety of Machinery Safety related parts of control systems
EN ISO 62061	Safety of Machinery - Functional safety of safety related electrical, electronic and programmable electronic control systems
EN 60204	Safety of Machinery Electrical equipment for machines
EN 60947-5-1	Low voltage switch gear and control gear
EN 1088	Interlocking devices associated with guards
EN 60947-5-3	Safety of Machinery Specification for low voltage switchgear and control gear

Declaration of Conformity

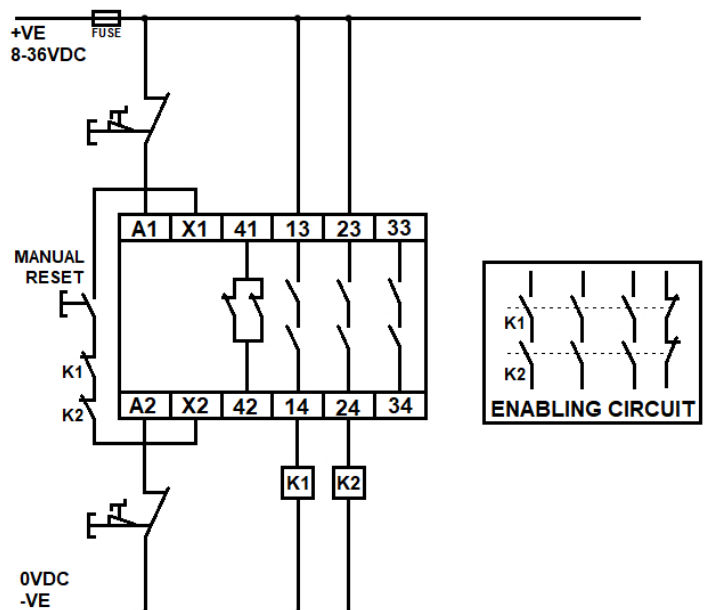
Declaration of conformity can be obtained by contacting
Mechan Controls Ltd.
Telephone : +44 (0)1695 722264
Email : sales@mechancontrols.co.uk

Electrical data	
Supply voltage	8-36 VDC
Voltage Range	0,90 ... 1,1 UB
Power Consumption	2,5 VA
Impulse Withstand Voltage	2500V
Fuses, output	6A quick acting
Max. cross section of conductor, Solid thread: Multiwire with ferrule:	2 x 2,5 mm ² 2 x 1,5 mm ²
Max. overall cable resistance, input terminals	A1 - A2, X1 - X2: < 100 Ohm Ω
Capacity	150 nF/km
Contact-allocation	3NO / 1NC
Contact type	Positive guided relay
Contract material	AgSnO ₂ 0,5µ Au
Min. Switching current/voltage	10mA/10V
Max. Switching current	6A
Max. switching capability Din EN 60947-5-1	AC 15 230V / 5 A; DC 13 24V / 5A
Max. switching current	1380 VA (ohms load)
Mechanical Lifetime	>10 millions
Creeping distance and clearance DIN VDE 0160	Pollution grade 2: Over voltage category 3 / 250V Basis Isolation: Over voltage category 3 / 250V
Reactivation time by emergency stop	<60 ms.
Indication LEDs	Green = Output and Power
Conductor Size	1 x 2.5mm ² (14AWG) stranded, 1 x 4mm ² (12AWG) solid
Torque Settings - terminal screws	1N·m (8.85lb·in)
Housing material	Polycarbonate
Dimensions (WxHxD)	22.5 x 82 x 98.8 mm
Mounting	Click-fastening for DIN-Rail
Max tightening torque	<1 Nm
Weight	~ 200g
Storage temperature	-30 - +70°C
Operating Temperature	-30 - +55°C
Enclosure rating, Terminals, Housing	IP20 (DIN VDE 0470); IP40 (DIN VDE 0470)
Vibration	0.75mm (0.30in) peakm 10-55Hz
Shock	30g, 11ms half sine
Tested in acc. with PL / Category MTTFd (Years)	EN ISO 13849 - 1 d / 3 DC 125,80 years AC 125,65 years
DC	89%

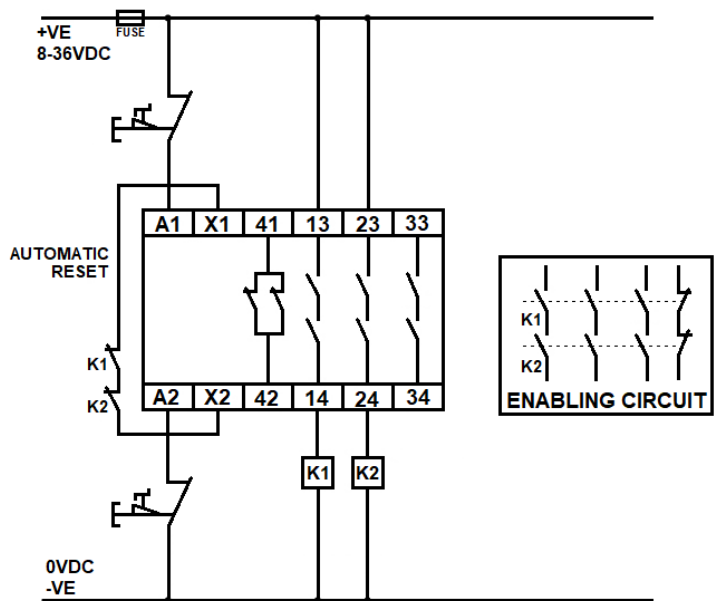
When K1 & K2 is energised, the green LED will illuminate, the outputs 13/14 & 23/24 & 31/32 will be closed, 41/42 auxiliary output will open.

Connection

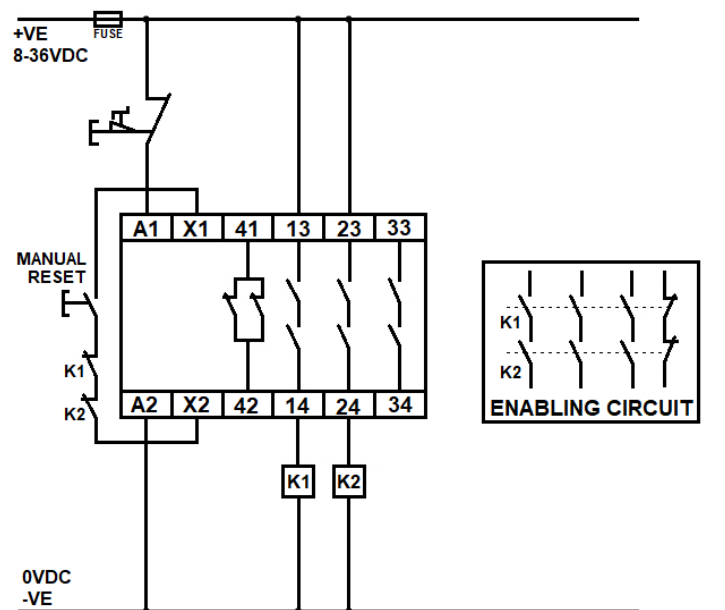
Dual Channel with Manual Reset



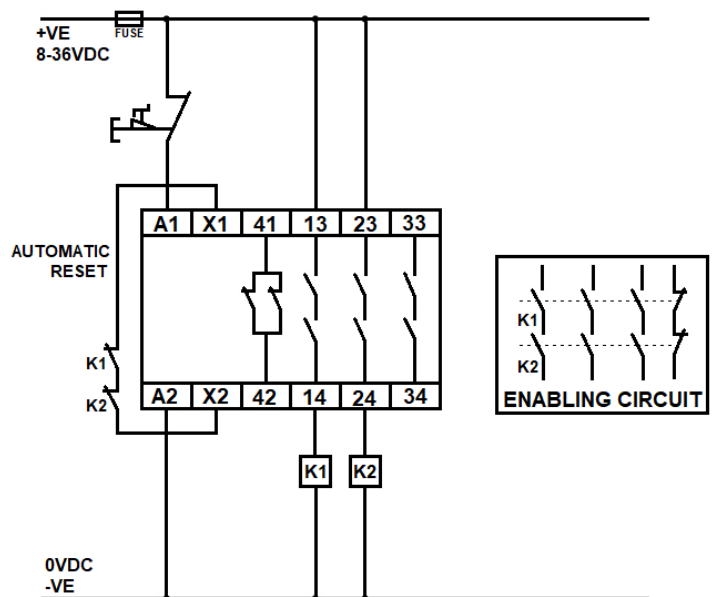
Dual Channel with Automatic Reset



Single Channel with Manual Reset



Single Channel with Automatic Reset



Notes

In the interest of product development specifications are subject to change without notice. It is the responsibility of the user to ensure compliance with any acts or by-laws in place.

All information regarding Mechan equipment is believed to be accurate at the time of printing. Responsibility cannot be accepted for errors or omissions.

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