

SAFE-TWO-HAND



The SAFE-TWO-HAND safety relay is an extremely compact, universal safety two-hand control unit. It complies with EN ISO 13851, Type IIIC, and is intended for use in safety circuits that are designed in accordance with EN 60204-1, e.g., on presses, punches and bending tools. Due to the internal error monitoring, the two-hand safety relay can be used for all applications up to the highest safety category 4 and PL e according to EN ISO 13849-1, SILCL 3 according to EN 62061 or Type III C according to EN ISO 13851.

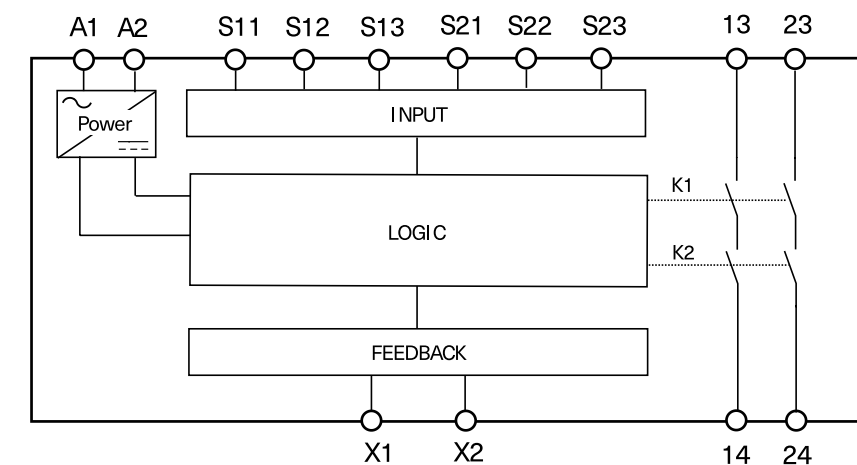
SAFE-TWO-HAND

Functional Safety Module | Safe two-hand control unit up to SIL 3

Features

- 2 non-delayed safety contacts
- Cyclical monitoring of the output contacts
- Connection of two-hand push buttons
- Feedback loop for external contactors or extension modules
- LED indicator for status
- Short-circuit monitoring and ground fault monitoring
- Up to PL e, SILCL 3, category 4, Type IIIC (EN ISO 13849-1, EN 62061, EN ISO 13851)

Function



ORDER DETAILS

Brand	SALZ Automation
Product Name	SAFE-TWO-HAND
Function	Safe two-hand control unit up to SIL 3 and TYPE IIIC
Product SKU/Order No.	SA-SAFE-TH-01-00 1 pc



Operation Instructions

Applications

The arrangement of the two-hand buttons must be designed in accordance with the standards EN ISO 13851 and DIN EN ISO 13855 such that accidental actuation or simple bypassing of the safety function is excluded.

The SAFE-TWO-HAND unit is provided for the connection of two-hand push-buttons, with one normally open or one normally colsed contact.

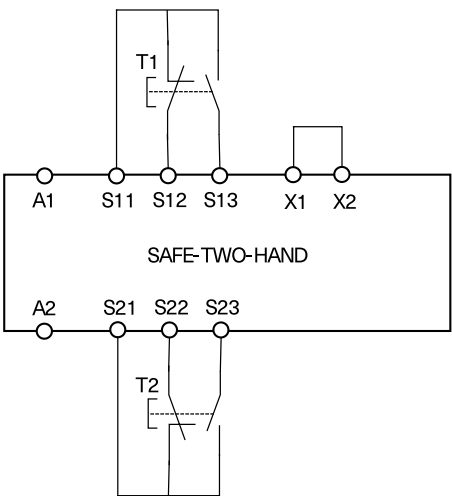


Fig. 1: Wiring of two-hand push buttons according to Type IIIC

Feedback Loop

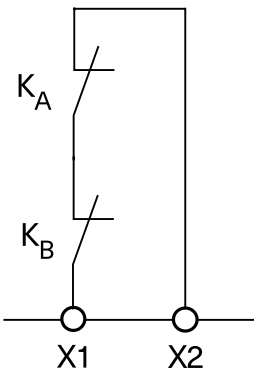


Fig. 2: Feedback loop for automatic start. The feedback loop monitors contactors or the expansion modules.

Technical Data

In compliance with	EN ISO 13851, EN 60204-1, EN ISO 13849-1, EN 62061
Operating voltage	AC/DC 24 V +/- 10 %
Power consumption	AC 3.5 VA/DC 1.5 W
Rated supply frequency	50 - 60 Hz
Control voltage at S11 and S22	DC 24V
Control current	typical 2 x 40 mA
Safety contacts non-delayed	2 NO
Max. switching voltage	AC 250 V
Contact rating of safety contacts 6 switching cycles/min	AC: 250 V, 1500 VA, 6 A for resistive load 250 V, 3 A for AC-15
	DC: 24 V, 144 W, 6 A for resistive load 24 V, 3 A for DC-13
Max. total current through all contacts	12 A
Minimum contact load	5 V, 10 mA
External fuses	10 A gG
Release time for the safety relays after release of a button	< 20 ms
Response delay after actuation of the buttons	< 20 ms
Synchronization time	0.5 s
Max. length of control line	1000 m at 0.75 mm²
Wire width	0.14 - 2.5 mm²
Tightening moment (Min./Max.)	0.5 Nm/0.6 Nm
Contact material	AgSnO ₂
Service Life	mech. approx. 1 x 10 ⁷
Test voltage	2.5 kV (control voltage/contacts)
Rated impulse withstand voltage, leakage path/air gap	4 kV (DIN VDE 0110-1)
Rated insulation voltage	250 V
Degree of pollution/Overvoltage category	2/3 (DIN VDE 0110-0)
Protection	IP20
Temperature range Ambient	-15 °C to +60 °C (max. +40 °C for AC use)
Temperature range Storage	-15 °C to +85 °C
Max. altitude	≤ 2000 m (above sea level)
Weight approx.	190 g
Mounting DIN rail according to EN 60715	TH35