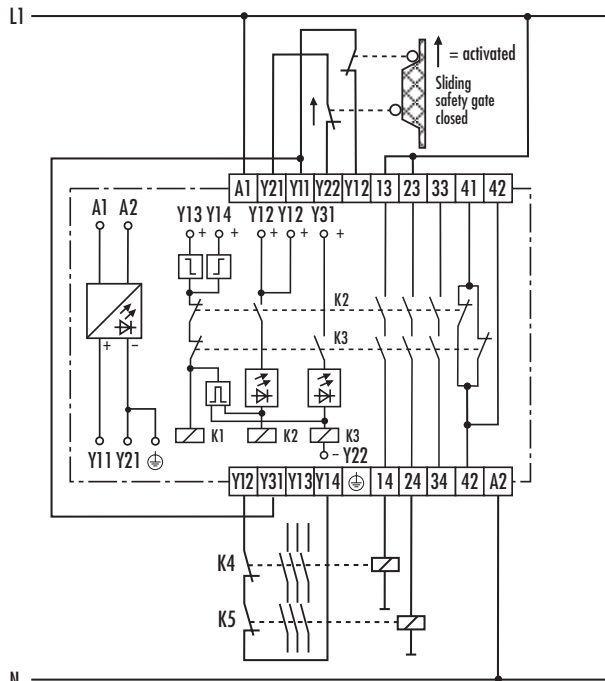




Application Example

A 1125

Two-Channel Sliding Protective Gate Monitoring (Cross-Monitoring) with Automatic START

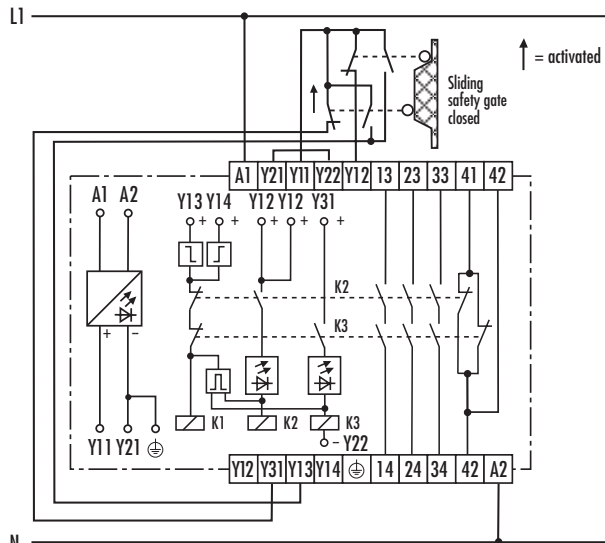


The position of the sliding protective gate is monitored via channel 1 (Y12) and channel 2 (Y22). The SNO 2005-xx can be activated only if the feedback circuit Y12/Y14 is closed (NC contacts of the contactors K4 and K5). A simultaneity check of 0,5 s approx. for the position switches is performed when closing channel 1 (Y12) before channel 2 (Y22). If channel 2 (Y22) is closed before channel 1 (Y12) there is no simultaneity check ($t = \infty$). If the sliding protective gate is opened the E-Stop relay goes back to its off-position (the enabling current paths 13/14, 23/24, 33/34 open). If the protective gate is closed again, the NC contacts of the contactors K4 and K5 allow the device to activate again (automatic START).

Application Example

A 1126

Two-Channel Sliding Protective Gate Monitoring with Automatic START (without Cross-Monitoring)

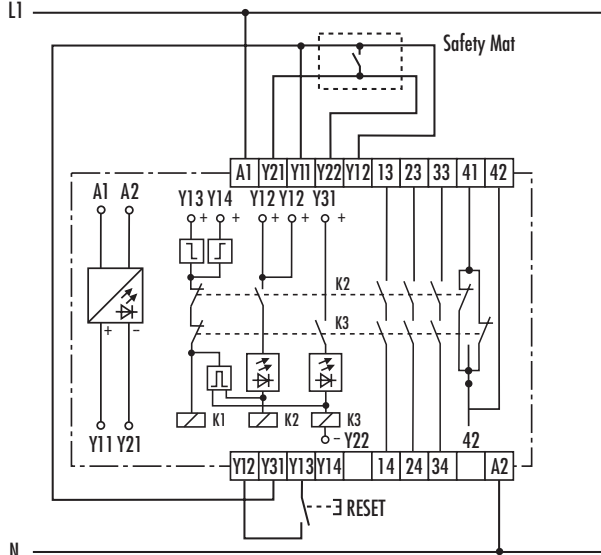


In this application example no simultaneity check ($t = \infty$) is performed.

Application Example

A 1127

Two-Channel Safety Mat Monitoring (Cross-Monitoring) with Manual START and RESET Key Monitoring

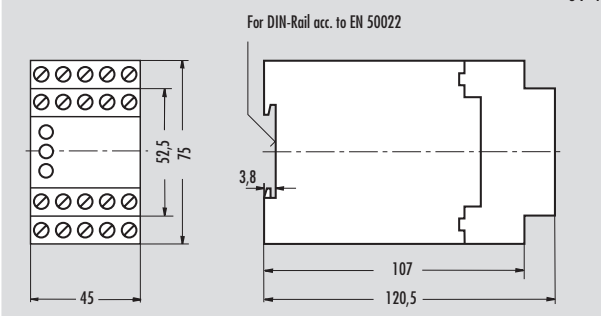


The function function corresponds to the one of the application example A 1106. As additional feature it is possible to connect all safety contact mats, safety contact strips or safety contact edges with forced guided contacts electrically isolated. The safety contact mats, strips and edges operate causing a short circuit between two wires. In case the value of the internal wire resistance in the safety mat, strip or bumper is $< 50 \Omega$ per channel and there is a presence of a short circuit between the channels (terminals Y11/Y12 and Y21/Y22) the item will be completely shut down. This is possible because the item is designed with the cross monitoring feature which requires a dual channel control circuit. Safety mats which operate causing a short circuit can only be connected to those items with AC external power supply.



Dimension Diagram

S7-4



Approvals



ET 97030



Order Example

SNO 2005-24 24 V AC
SNO 2005-17 24 V DC

Type Rated Voltage



TECHNICAL DATA

FUNCTION According to EN 60204-1
Function Display
Function Diagram

POWER SUPPLY DATA

Rated Voltage U_N	V AC
Rated Voltage U_N	V DC
Rated Consumption at 50 Hz and U_N (AC)	VA
Rated Consumption at 50 Hz and U_N (AC)	W
Rated Consumption at U_N (DC)	W
Residual Ripple	V _{ss}
Rated Frequency	Hz
Operating Voltage Range	

CONTROL CIRCUIT

only for supplying the control inputs
Control Output Y11 with respect to Y21:

Line Resistance (Control Inputs)	Ω
Rated Output Voltage	V DC
No-Load Voltage (AC-Unit)	V DC
Rated Current	mA
Rated Short-Circuit Current I_K max.	mA
Fuse	
Response Time (PTC)	s
Recovery Time (PTC)	s

Control Inputs Y12, Y13, Y14, Y31:

Rated Current Input K1	mA
Rated Current Input K2, K3	mA
Response Time t_{A1} K2, K3 (with RESET monitoring)	ms
Response Time t_{A2} K2, K3 (without RESET monitoring)	ms
Release Time t_r for the E-Stop K2, K3	ms
Release Time t_R for Failure of the Network	ms
Minimum Swith-ON Time t_M for K1	ms
Recovery Time t_W (without RESET monitoring)	ms

OUTPUT CIRCUIT

Contact Equipment

Contact Type	
Contact Material	
Switching Voltage U_n	V AC/DC
Maximum Rated Current I_n per Contact	A
Maximum Total Current for all Contacts	A
Application Category According to EN 60947-5-1:1991	
Short-Circuit Protection, Max. Fuse Element Class gG	A
Permissible Switching Frequency	Switching Cycle/h
Mechanical Lifetime	Switching Cycle

GENERAL DATA

Creepage and Clearance Distances Between Circuits According to DIN VDE 0110-1:04.97: Rated Withstand Voltage	kV
Over-Voltage Category	
Contamination Level	
Design Voltage	V AC
Test Voltage U_{eff} 50 Hz acc. to DIN VDE 0110-1, Table A.1	kV
Protection Class Housing/Terminals acc. to DIN VDE 0470 Sec. 1:11.92	
Radiated Noise	
Noise Immunity	
Ambient Temperature, Working Range	°C
Dimension Diagram	
Connection Diagram	
Weight	kg
Accessories	
Approvals	

GENERAL TECHNICAL SPECIFICATIONS

SNO 2005-xx

Emergency - Stop Relay
3 LEDs, green
FD 0221-14-1 W1, FD 0221-14-2 W1

	24	115	120	230
24				
	3,2	3,2	3,2	3,2
	2,5	2,5	2,5	2,5
1,0				
2,4				
50 to 60				
0,85 to 1,1 x U_N				

≤ 70
24
≤ 40
40
800
AC: Short-Circuit Proof Transformer
DC: PTC-Resistance
3
2

40
15
80
500
50
100
50
500

3 N.O. Safety Contact
1 N.C. Control Contact
Forced Contact
Ag - Alloy; Gold-Plated
230/230
6
18
AC-15: U_e 230 V AC, I_e 6 A (3600 Sch/h)
DC-13: U_e 24 V DC, I_e 6 A (360 Sch/h)
DC-13: U_e 24 V DC, I_e 3 A (3600 Sch/h)
6
3600
10×10^6

4
III
3 Outside, 2 Inside
300
2,21
IP 40/IP 20
EN 50081-1:03.93, -2:03.94
EN 50082-2:1995

- 25 to + 55
S 7-4
KS 0221-14 W1
0,36 (AC-Unit), 0,3 (DC-Unit)
Holder Z 31
BG, CSA, SAG, UL

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