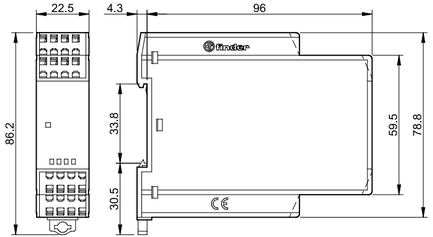
finder
SWITCH TO THE FUTURE

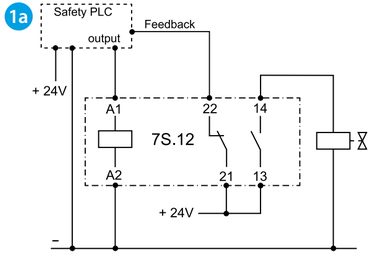
7S

	7S.1x.8.xxx.xxx0 120 U_N (110...125)V AC 230 U_N (230...240)V AC U_{min} - U_{max} (0.85...1.1)U_N	**7S.1x.9.xxx.xxx0** 012 U_N 12 V DC U_{min} - U_{max} (0.8...1.2)U_N 024 U_N 24 V DC 110 U_N 110 V DC U_{min} - U_{max} (0.7...1.25)U_N
	P 2.3 VA (50 Hz) / 1 W	
	7S.12.x.xxx.5110 1NO (SPST– NO) + 1NC (SPST– NC) **7S.14.x.xxx.0220** 2NO (SPST– NO) + 2NC (SPST– NC) **7S.14.x.xxx.0310** 3NO (SPST– NO) + 1NC (SPST– NC) **7S.16.x.xxx.0420** 4NO (SPST– NO) + 2NC (SPST– NC)	
	6 A 250 V AC (∑ I ≤ 12 A)	
	AC1 AC15 (230V) DC1 (30/110/220)V DC13 (24V)	1500 VA 500 VA 700VA (7S.12) (6/0.6/0.3)A (6/0.6/0.2)A (7S.12) 1A
	(–40...+70)°C	
	IP20	

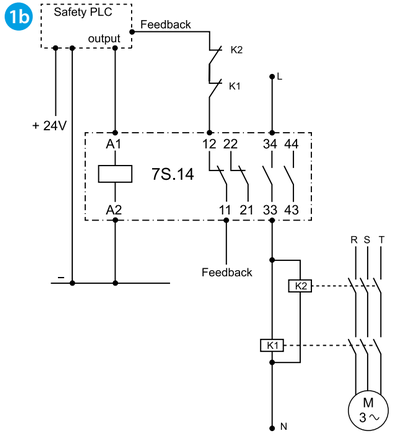
EN 61810-3

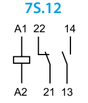
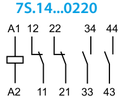
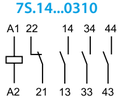
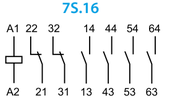
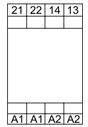
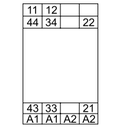
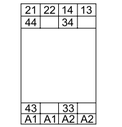
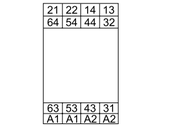


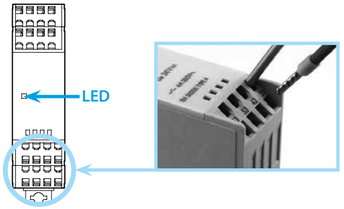
1a

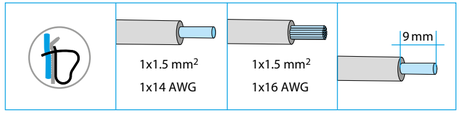


1b



7S.12	7S.14...0220	7S.14...0310	7S.16
			
			





ENGLISH

7S.12/14/16 SIL2 - IEC61508

Use of relay with forcibly guided contacts for applications up to SIL2. Considering that 7S is a single channel device, the diagnostics, entrusted for example to safety PLC, should be aimed at identifying the fault before the safety function is required. There is no requirement for dynamic tests to be imposed on the relay, but it is required that the frequency of the demand for the NO to open under emergency function will not exceed 1/100 of the demand for it to open under normal machine cycling.
Any time the NO contact fails to open when the coil is de-energized the NC contact will not close, and restarting the machine must then be prevented. Using the relay as a device for realising a safety function requires that circuit techniques well established for safety purposes are followed. ie. Using the NO contacts of a relay which will remove the power supply circuit from the load when the coil is de-energised. On this basis, the failure of the NO contact to close is a failure in safety, whereas failure to open is a dangerous failure.

We have:
7S 12.9.024.5 11 0

Relay interface type 7S.12.9xxx.5110

SIL	Load Type	Cycle time (s)	PFH_D (1/h)	External diagnostic	Architecture	DC avg
2	AC1-8 A 250 V	180	$9*10^{-7}$	YES	Single channel	90%
2	AC1-4 A 250 V	120	$8.5*10^{-7}$	YES	Single channel	90%
2	AC15-3 A 250 V	450	$9.4*10^{-7}$	YES	Single channel	90%
2	AC15-2 A 250 V	240	$9.3*10^{-7}$	YES	Single channel	90%
2	AC15-1 A 250 V	180	$8*10^{-7}$	YES	Single channel	90%
2	DC13-1 A 24 V, 60 ms	180	$9.5*10^{-7}$	YES	Single channel	90%

Relay interface type 7S.14.9xxx.0310 - 7S.14.9xxx.0220 - 7S.16.9xxx.0420

SIL	Load Type	Cycle time (s)	PFH_D (1/h)	External diagnostic	Architecture	DC avg
2	AC15-3A 230V	30	$6*10^{-7}$	YES	Single channel	90%
2	AC15 - 1.5 A 230V	12	$9.3*10^{-7}$	YES	Single channel	90%
2	DC13-5 A 24 V, 100 ms	60	$7.7*10^{-7}$	YES	Single channel	90%

1a Direct load switching & contact diagnostics-common supply
1b Indirect load switching & contact diagnostics-different load supply

finder