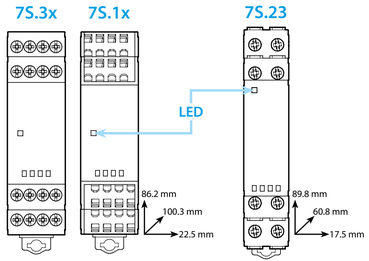
finder
SWITCH TO THE FUTURE

7S.xx

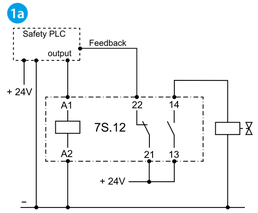
7S.23

	7S.xx.8.xxx.xxx0 230 U_{min} - U_{max} (195...264)V AC 120 U_{min} - U_{max} (93.5...137.5)V AC	**7S.xx.9.xxx.xxx0** 012 U_{min} - U_{max} (9.6...14.4)V DC 024 U_{min} - U_{max} (16.8...30)V DC 110 U_{min} - U_{max} (77...137.5)V DC	**7S.23.9.xxx.0210** 012 U_{min} - U_{max} (9.6...14.4)V DC 024 U_{min} - U_{max} (19.2...28.8)V DC 048 U_{min} - U_{max} (38.4...57.6)V DC 110 U_{min} - U_{max} (88...132)V DC
	P 2.3 VA (50 Hz) / 1 W		
	6 A 250 V AC		10 A 250 V AC
	AC1 1500 VA AC15 (230V) 3 A DC1 (30/110/220)V (6/0.6/0.2) A [7S.x2] (6/0.9/0.3) A DC13 (24V) 1 A [7S.x2] 3 A [7S.x4] 3 A [7S.x6]	AC1 2300 VA AC15 (230 V) 5 A DC1 (30/110/220)V (6/0.6/0.2)A DC13 (24 V) 5 A	
	(–40...+70)°C		
	IP20		

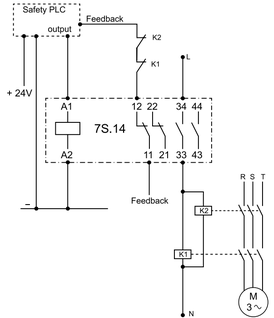
EN 61810-3 TYPE A

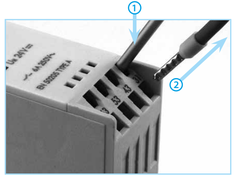


1a



1b

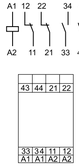




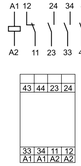
	9mm	9mm
	1x6 / 2x2.5 mm² 1x10 / 2x14 AWG	1x4 / 2x2.5 mm² 1x12 / 2x14 AWG
	1x1.5 mm² 1x14 AWG	1x1.5 mm² 1x16 AWG

7SX2...5110

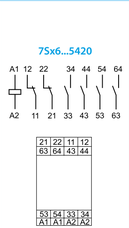
7Sx4...4220



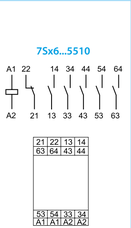
7Sx4...4310



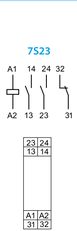
7Sx6...5420



7Sx6...5510



7S23



Relay	Load	Vn (V)	In (A)	PFD	PFH	T cycle (s)	B10d	DC avg/SIL
7S.12/32...5100 (T)	AC1	250 V AC	6	5.21E-04	5.21E-08	180	220.000	90%/SIL2
			4	4.88E-04	4.88E-08	120	350.000	90%/SIL2
	DC13	24 V DC	1	2.02E-04	2.02E-08	450	210.000	90%/SIL2
	AC15	250 V AC	1	3.29E-04	3.29E-08	240	250.000	90%/SIL2
			2	7.51E-04	7.51E-08	180	160.000	90%/SIL2
			3	1.42E-03	1.42E-07	180	85.000	90%/SIL2
7S.14/7S.34...4220 (T) 7S.14/7S.34...4310 (T)	DC13	24 DC	3	8.00E-03	8.00E-07	100	450.000	90%/SIL2
			1	6.00E-03	6.00E-07	30	2.000.000	90%/SIL2
			0,75	6.00E-03	6.00E-07	30	2.000.000	90%/SIL2
	AC15	250 V AC	3	1.50E-03	1.50E-07	600	400.000	90%/SIL2
			0.1	1.20E-03	1.20E-07	30	10.000.000	90%/SIL2
	AC1	250 V AC	6	1.20E-03	1.20E-07	600	500.000	90%/SIL2
			4	1.00E-03	1.00E-07	600	600.000	90%/SIL2
			2	1.20E-03	1.20E-07	300	1.000.000	90%/SIL2
7S.16/7S.36...5420 (T) 7S.16/7S.36...5510 (T)	DC13	24 V DC	3	4.00E-03	4.00E-07	300	300.000	90%/SIL2
			2	6.00E-03	6.00E-07	30	2.000.000	90%/SIL2
			1	1.71E-03	1.71E-07	30	7.000.000	90%/SIL2
	AC15	250 V AC	3	5.22E-03	5.22E-07	300	230.000	90%/SIL2
			1	3.16E-03	3.16E-07	300	380.000	90%/SIL2
	AC1	250 V AC	6	2.40E-03	2.40E-07	300	500.000	90%/SIL2
			4	1.40E-03	1.40E-07	300	860.000	90%/SIL2
			2	9.23E-03	9.23E-07	30	1.300.000	90%/SIL2
7S.23/7S.P3...0210 (T)	DC13	24 V DC	5	2.00E-03	2.00E-07	300	600.000	90%/SIL2
	AC15	230 V AC	5	1.33E-03	1.33E-07	300	900.000	90%/SIL2

Probabilistic constraints	
T1	1 year
MTTR	8h
MTR	0.5 h
PFD*	1E5 x PFH

ENGLISH

7S
Relay modules with forcibly guided contacts

1a Direct load switching and contact diagnostics , with a common supply
1b Indirect load switching and contact diagnostics, with a different load supply

Relays with forcibly guided contacts for applications up to SIL2.
Being a single channel system (1oo1), the diagnostics, entrusted for example to a safety PLC, should aim at identifying the fault before the safety function is required.
Dynamic tests are not foreseen or imposed by the relay manufacturer.
If the NO contacts fail to open when the coil is de-energised the NC contact will not close, and restarting the machinery 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 from the load when the coil is de-energised.
On these assumptions, the failure of the NO contact to close is a failure in safety while the failure to open is a dangerous fault.
The system is built in 1oo1 logic and should provide for a system proof test interval equal to T1.
It is assumed the time to restart the system after a dangerous failure equals MTTR and the time to carry out the replacement of the 7S equals MTR.

✱ Consider that the calling frequency of the safety function does not exceed 1.14 years (10,000 hours)

Installation advice
- It is recommended to install overvoltage protection devices (SPD) to protect the safety devices
- It is recommended to install overcurrent protection devices to protect the load
- It is recommended to evaluate the appropriate IP degree of the enclosure in which the 7S will be mounted, dependent on the application

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