

CONT. REL. FOR RAIL, 2NO+1NC, 110 V DC, 0.7...1.25*US, W.
INTEGRATED SUPPRESSOR DIODE, SIZE S00, SPRING-TYPE
TERMINALS SUITABLE FOR PLC OUTPUTS



Product brand name	SIRIUS
Product designation	contactor relay
Product type designation	3RH2
General technical data	
Size of contactor	S00
Product extension	
• Auxiliary switch	Yes
Insulation voltage	
• with degree of pollution 3 rated value	690 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
Protection class IP	
• on the front	IP20
Shock resistance at rectangular impulse	
• at DC	10g / 5 ms, 5g / 10 ms
Shock resistance with sine pulse	
• at DC	15g / 5 ms, 8g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical	30 000 000

• of the contactor with added electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
Equipment marking	
• acc. to DIN EN 61346-2	K
• acc. to DIN EN 81346-2	K
Ambient conditions	
Ambient temperature	
• during operation	-40 ... +70 °C
• during operation	Railway application: See catalog for rated conditions
• during storage	-55 ... +80 °C
Main circuit	
No-load switching frequency	
• at AC	10 000 1/h
• at DC	10 000 1/h
Control circuit/ Control	
Type of voltage of the control supply voltage	DC
Control supply voltage at DC	
• rated value	110 V
Design of the surge suppressor	with suppressor diode
Closing power of magnet coil at DC	13 W
Holding power of magnet coil at DC	4 W
Closing delay	
• at DC	30 ... 100 ms
Opening delay	
• at DC	7 ... 13 ms
Arcing time	10 ... 15 ms
Auxiliary circuit	
Number of NC contacts	
• for auxiliary contacts	1
— instantaneous contact	1
Number of NO contacts	
• for auxiliary contacts	2
— instantaneous contact	2
Identification number and letter for switching elements	21
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A

• at 500 V rated value • at 690 V rated value	2 A 1 A
Operating current at 1 current path at DC-12	
• at 24 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value	10 A 3 A 1 A 0.3 A 0.15 A
Operating current with 2 current paths in series at DC-12	
• at 24 V rated value • at 60 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value	10 A 10 A 4 A 2 A 1.3 A 0.65 A
Operating current with 3 current paths in series at DC-12	
• at 24 V rated value • at 60 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value	10 A 10 A 10 A 3.6 A 2.5 A 1.8 A
Operating frequency at DC-12 maximum	1 000 1/h
Operating current at 1 current path at DC-13	
• at 24 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value	10 A 1 A 0.3 A 0.14 A 0.1 A
Operating current with 2 current paths in series at DC-13	
• at 24 V rated value • at 60 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value	10 A 3.5 A 1.3 A 0.9 A 0.2 A 0.1 A
Operating current with 3 current paths in series at DC-13	
• at 24 V rated value	10 A

• at 60 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value	4.7 A 3 A 1.2 A 0.5 A 0.26 A
Operating frequency at DC-13 maximum	1 000 1/h
Design of the miniature circuit breaker • for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 6 A; 0.4 kA
Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings

Contact rating of auxiliary contacts according to UL	A600 / Q600
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Short-circuit protection

Design of the fuse link • for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A
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Installation/ mounting/ dimensions

Mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail
Height	70 mm
Width	45 mm
Depth	116 mm
Required spacing • for grounded parts — at the side • for live parts — at the side	6 mm 6 mm

Connections/Terminals

Type of electrical connection • for auxiliary and control current circuit	spring-loaded terminals
Type of connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing • at AWG conductors for auxiliary contacts	2x (0,5 ... 4 mm²) 2x (0.5 ... 2.5 mm²) 2x (0.5 ... 2.5 mm²) 2x (20 ... 12)

Safety related data

B10 value	
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• with high demand rate acc. to SN 31920	1 000 000; With 0.3 x Ie
Proportion of dangerous failures	
• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	73 %
Failure rate [FIT]	
• with low demand rate acc. to SN 31920	100 FIT
Product function	
• positively driven operation acc. to IEC 60947-5-1	Yes
T1 value for proof test interval or service life acc. to IEC 61508	20 y

Certificates/approvals

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
 CCC	 EAC	 EG-Konf.
 CSA	 UL	Type Examination

Test Certificates	Marine / Shipping
Special Test Certificate	 ABS
Type Test Certificates/Test Report	 BUREAU VERITAS
	 GL
	 LRS

Marine / Shipping	other
 PRS	Environmental Confirmations
 RINA	Confirmation
 RMRS	
 DNV-GL	

other	Railway
 VDE	Vibration and Shock

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2122-2KF40-0LA0>

Cax online generator

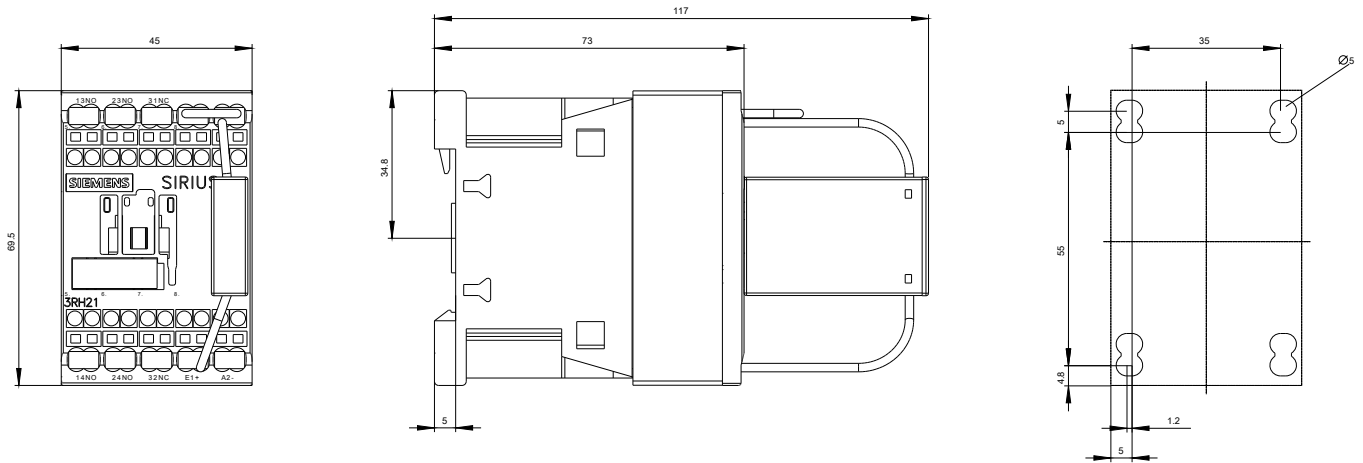
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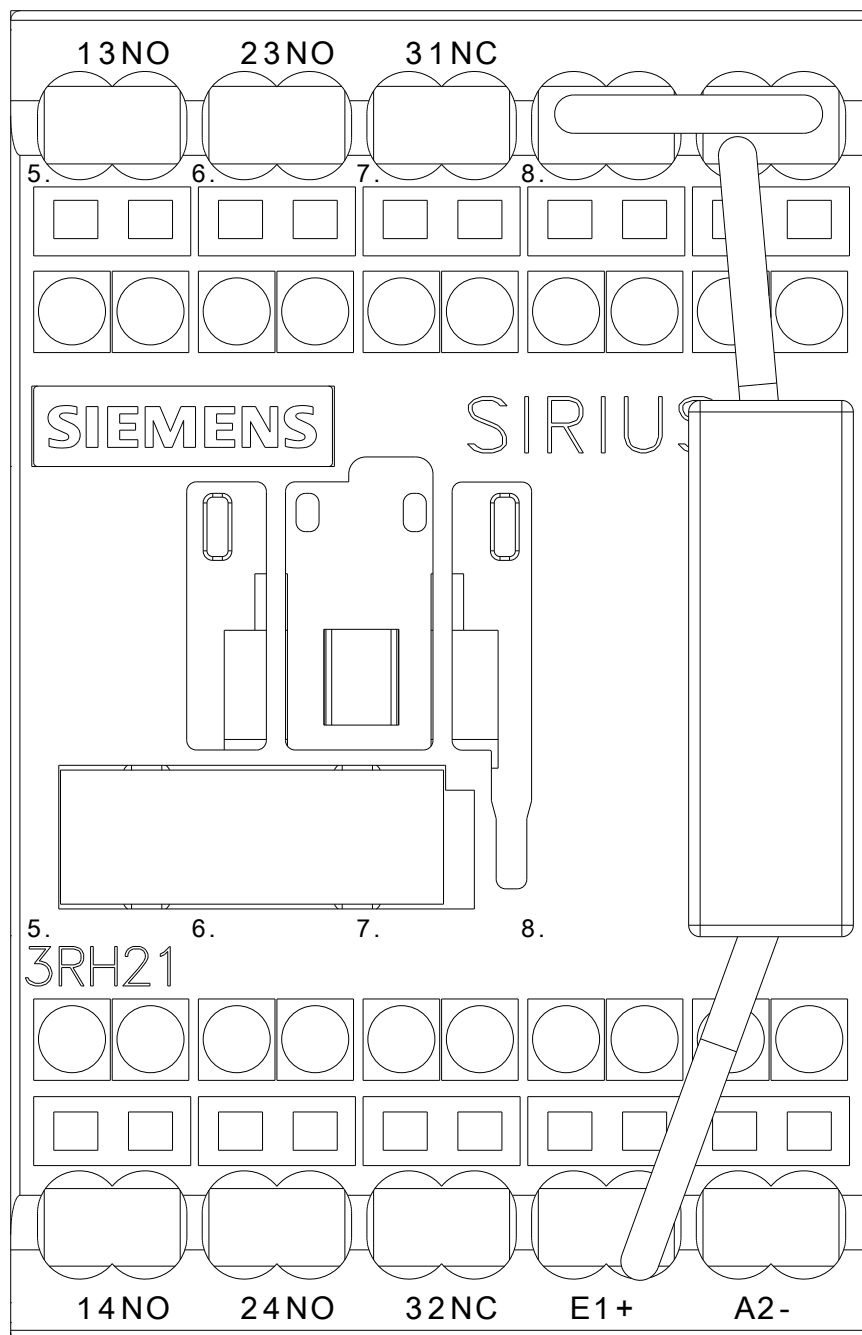
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

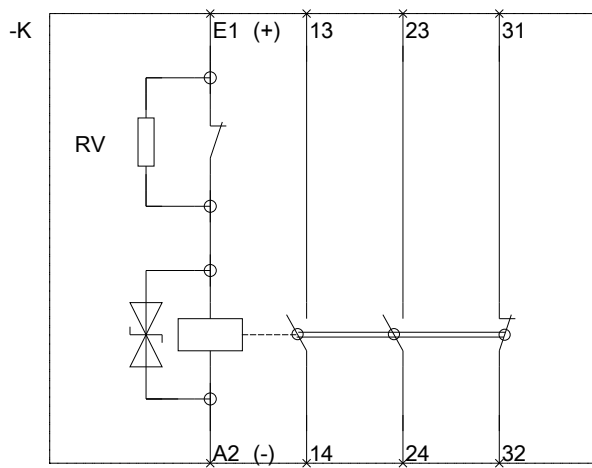
<https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2KF40-0LA0>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2122-2KF40-0LA0&lang=en







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