



Contactor relay, 2 NO + 2 NC, 110 V AC, 50 / 60 Hz, Size S00, screw terminal

product brand name	SIRIUS
product designation	Auxiliary contactor
product type designation	3RH2
<b>General technical data</b>	
size of contactor	S00
product extension auxiliary switch	Yes
power loss [W] for rated value of the current without load current share typical	1.43 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 kV
shock resistance at rectangular impulse	
• at AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,4g / 5 ms, 7,3g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	30 000 000
• of the contactor with added electronically optimized auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	K
Substance Prohibitance (Date)	10/01/2009
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
<b>Environmental footprint</b>	
Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO <sub>2</sub> eq] total	49.2 kg
Global Warming Potential [CO <sub>2</sub> eq] during manufacturing	1.15 kg
Global Warming Potential [CO <sub>2</sub> eq] during operation	48.2 kg
global warming potential [CO <sub>2</sub> eq] after end of life	-0.139 kg
<b>Main circuit</b>	
no-load switching frequency	
• at AC	10 000 1/h
• at DC	10 000 1/h
<b>Control circuit/ Control</b>	

<b>type of voltage of the control supply voltage</b>	AC
<b>control supply voltage at AC</b>	
• at 50 Hz rated value	110 V
• at 60 Hz rated value	110 V
<b>control supply voltage frequency</b>	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
<b>operating range factor control supply voltage rated value of magnet coil at AC</b>	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
<b>apparent pick-up power of magnet coil at AC</b>	37 VA
<b>inductive power factor with closing power of the coil</b>	0.8
<b>apparent holding power of magnet coil at AC</b>	5.7 VA
<b>inductive power factor with the holding power of the coil</b>	0.25
<b>closing delay</b>	
• at AC	8 ... 33 ms
<b>opening delay</b>	
• at AC	4 ... 15 ms
<b>arcing time</b>	10 ... 15 ms
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b>	2
• instantaneous contact	2
<b>number of NO contacts for auxiliary contacts</b>	2
• instantaneous contact	2
<b>identification number and letter for switching elements</b>	22 E
<b>operational current at AC-12 maximum</b>	10 A
<b>operational current at AC-15</b>	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
<b>operational current at 1 current path at DC-12</b>	
• at 24 V rated value	10 A
• at 110 V rated value	3 A
• at 220 V rated value	1 A
• at 440 V rated value	0.3 A
• at 600 V rated value	0.15 A
<b>operational current with 2 current paths in series at DC-12</b>	
• at 24 V rated value	10 A
• at 60 V rated value	10 A
• at 110 V rated value	4 A
• at 220 V rated value	2 A
• at 440 V rated value	1.3 A
• at 600 V rated value	0.65 A
<b>operational current with 3 current paths in series at DC-12</b>	
• at 24 V rated value	10 A
• at 60 V rated value	10 A
• at 110 V rated value	10 A
• at 220 V rated value	3.6 A
• at 440 V rated value	2.5 A
• at 600 V rated value	1.8 A
<b>operating frequency at DC-12 maximum</b>	1 000 1/h
<b>operational current at 1 current path at DC-13</b>	
• at 24 V rated value	10 A
• at 110 V rated value	1 A
• at 220 V rated value	0.3 A
• at 440 V rated value	0.14 A
• at 600 V rated value	0.1 A
<b>operational current with 2 current paths in series at DC-13</b>	
• at 24 V rated value	10 A

• at 60 V rated value	3.5 A
• at 110 V rated value	1.3 A
• at 220 V rated value	0.9 A
• at 440 V rated value	0.2 A
• at 600 V rated value	0.1 A
<b>operational current with 3 current paths in series at DC-13</b>	
• at 24 V rated value	10 A
• at 60 V rated value	4.7 A
• at 110 V rated value	3 A
• at 220 V rated value	1.2 A
• at 440 V rated value	0.5 A
• at 600 V rated value	0.26 A
<b>operating frequency at DC-13 maximum</b>	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
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)
<b>UL/CSA ratings</b>	
<b>contact rating of auxiliary contacts according to UL</b>	A600 / Q600
<b>Short-circuit protection</b>	
design of the fuse link for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN rail
<b>height</b>	57.5 mm
<b>width</b>	45 mm
<b>depth</b>	73 mm
<b>required spacing</b>	
• with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
• for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
<b>Connections/ Terminals</b>	
type of electrical connection for auxiliary and control circuit	screw-type terminals
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid or stranded	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
<b>Safety related data</b>	
product function positively driven operation according to IEC 60947-5-1	Yes
B10 value with high demand rate according to SN 31920	1 000 000; With 0.3 x I <sub>e</sub>
<b>proportion of dangerous failures</b>	
• with low demand rate according to SN 31920	40 %
• with high demand rate according to SN 31920	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC 61508	20 a
<b>protection class IP on the front according to IEC 60529</b>	IP20

touch protection on the front according to IEC 60529

finger-safe, for vertical contact from the front

#### Certificates/ approvals

##### General Product Approval



CCC



CSA



CCC

[Confirmation](#)



UL

[KC](#)

General Product Approval	EMC	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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[Type Examination Certificate](#)



EG-Konf.



[Type Test Certificates/Test Report](#)

Test Certificates	Marine / Shipping
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[Special Test Certificate](#)



ABS



BUREAU  
VERITAS



DNV



LRS



PRIS

Marine / Shipping	other	Railway	Environment
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RINA



[Household and similar appliances](#)

[Confirmation](#)

[Vibration and Shock](#)

[Environmental Confirmations](#)

#### Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2122-1AF00>

Cax online generator

<http://support.automation.siemens.com/WW/CAxorder/default.aspx?lang=en&mlfb=3RH2122-1AF00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-1AF00>

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

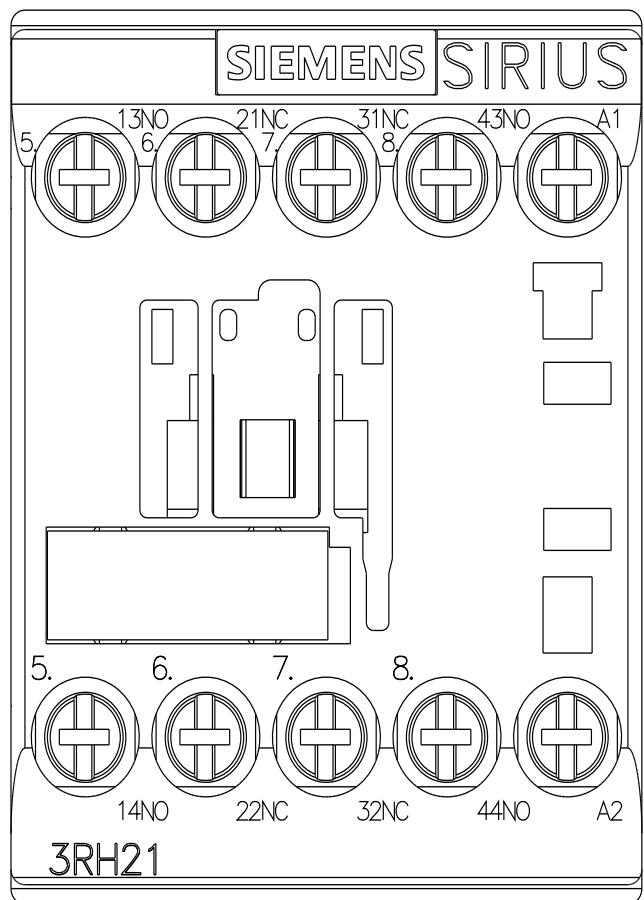
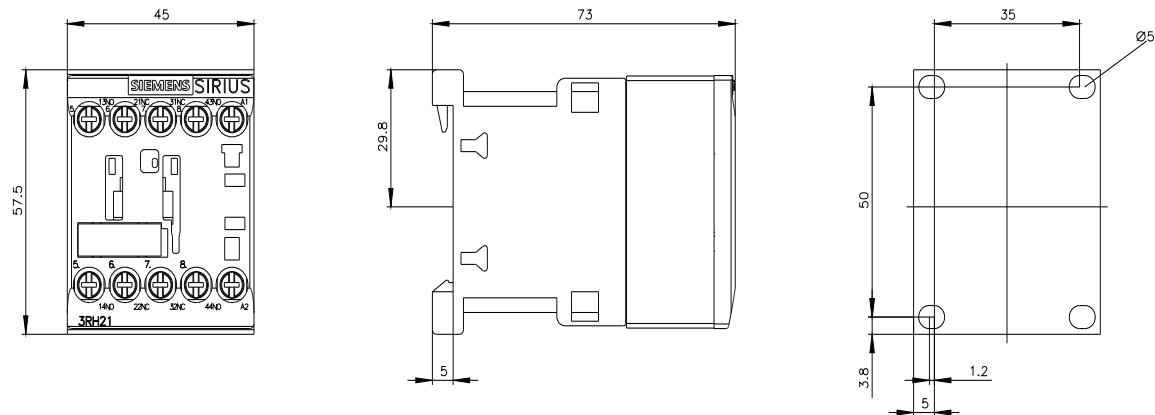
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RH2122-1AF00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2122-1AF00&lang=en)

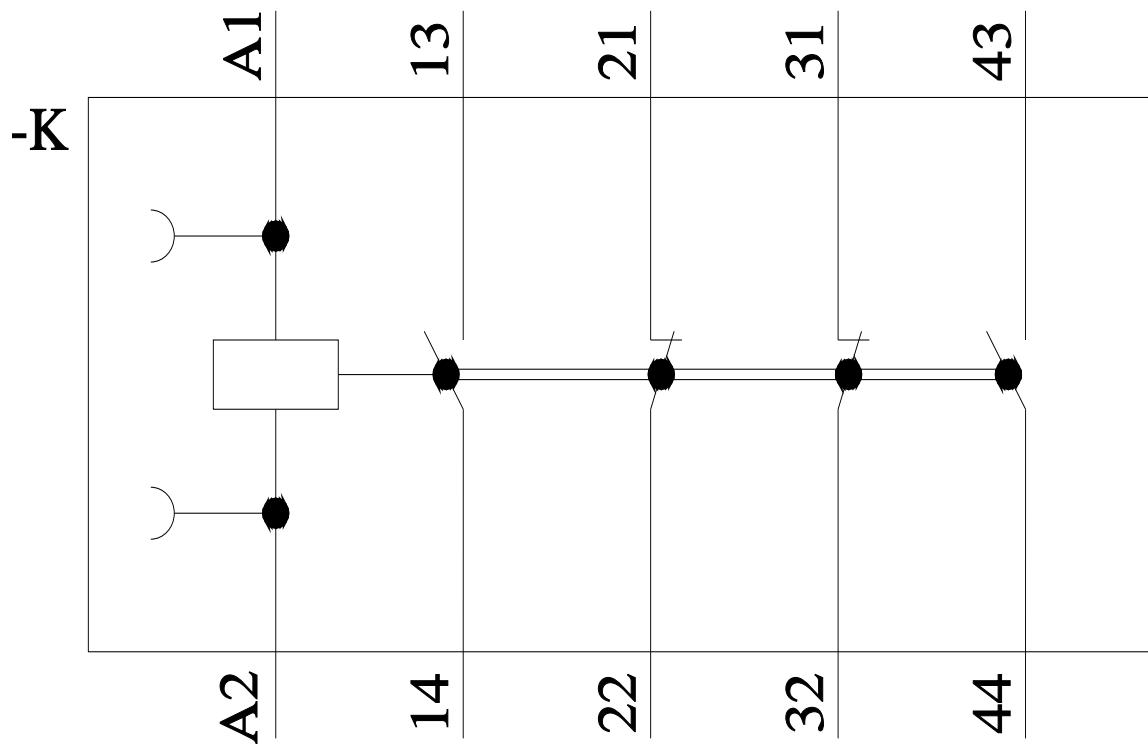
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-1AF00/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2122-1AF00&objecttype=14&gridview=view1>





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