

Coupling contactor relay railway 2 NO + 2 NC, 110 V DC, 0.7 ...  
1.25\* US, with varistor integrated, Size S00, Spring-type terminal



Product brand name	SIRIUS
Product designation	Coupling relay for switching auxiliary circuits
Product type designation	3RH2
<b>General technical data</b>	
Size of contactor	S00
Product extension	No
<ul style="list-style-type: none"> <li>Auxiliary switch</li> </ul>	No
Insulation voltage	690 V
<ul style="list-style-type: none"> <li>with degree of pollution 3 rated value</li> </ul>	690 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
Protection class IP	IP20
<ul style="list-style-type: none"> <li>on the front</li> </ul>	IP20
Shock resistance at rectangular impulse	10g / 5 ms, 5g / 10 ms
<ul style="list-style-type: none"> <li>at DC</li> </ul>	10g / 5 ms, 5g / 10 ms
Shock resistance with sine pulse	15g / 5 ms, 8g / 10 ms
<ul style="list-style-type: none"> <li>at DC</li> </ul>	15g / 5 ms, 8g / 10 ms
Mechanical service life (switching cycles)	30 000 000
<ul style="list-style-type: none"> <li>of contactor typical</li> </ul>	30 000 000

Reference code acc. to DIN EN 81346-2	K
Reference code acc. to DIN EN 61346-2	K
<b>Ambient conditions</b>	
<b>Installation altitude at height above sea level</b>	
• maximum	2 000 m
<b>Ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
<b>Main circuit</b>	
<b>No-load switching frequency</b>	
• 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>	DC
<b>Control supply voltage at DC</b>	
• rated value	110 V
<b>Operating range factor control supply voltage rated value of magnet coil at DC</b>	
• initial value	0.7
• Full-scale value	1.25
<b>Design of the surge suppressor</b>	with varistor
<b>Closing power of magnet coil at DC</b>	2.8 W
<b>Holding power of magnet coil at DC</b>	2.8 W
<b>Closing delay</b>	
• at DC	30 ... 100 ms
<b>Opening delay</b>	
• at DC	7 ... 13 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>Operating current at AC-12 maximum</b>	10 A
<b>Operating 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>Operating 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>Operating 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>Operating 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>Operating 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>Operating 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>Operating 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

<ul style="list-style-type: none"> <li>• at 220 V rated value</li> <li>• at 440 V rated value</li> <li>• at 600 V rated value</li> </ul>	<p>1.2 A</p> <p>0.5 A</p> <p>0.26 A</p>
<b>Operating frequency at DC-13 maximum</b>	1 000 1/h
<b>Design of the miniature circuit breaker</b>	C characteristic: 6 A; 0.4 kA
<ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary circuit up to 230 V</li> </ul>	
<b>Contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)

### UL/CSA ratings

<b>Contact rating of auxiliary contacts according to UL</b>	A600 / Q600
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### Short-circuit protection

<b>Design of the fuse link</b>	fuse gL/gG: 10 A
<ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	

### Installation/ mounting/ dimensions

<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>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail	
<b>Height</b>	70 mm	
<b>Width</b>	45 mm	
<b>Depth</b>	73 mm	
<b>Required spacing</b>		
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>		
<ul style="list-style-type: none"> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> </ul>		
<ul style="list-style-type: none"> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>		
		10 mm
		10 mm
		10 mm
		0 mm
		10 mm
		10 mm
		6 mm
		10 mm
		10 mm
	10 mm	
	6 mm	

### Connections/ Terminals

<b>Type of electrical connection</b>	spring-loaded terminals
<ul style="list-style-type: none"> <li>• for auxiliary and control current circuit</li> </ul>	

<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• at AWG conductors for auxiliary contacts</li> </ul>	<p>2x (0,5 ... 4 mm<sup>2</sup>)</p> <p>2x (0.5 ... 2.5 mm<sup>2</sup>)</p> <p>2x (0.5 ... 2.5 mm<sup>2</sup>)</p> <p>2x (20 ... 12)</p>

**Safety related data**

<b>B10 value</b>	
<ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul>	1 000 000; With 0.3 x I <sub>e</sub>
<b>Proportion of dangerous failures</b>	
<ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> <li>• with high demand rate acc. to SN 31920</li> </ul>	<p>40 %</p> <p>73 %</p>
<b>Failure rate [FIT]</b>	
<ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> </ul>	100 FIT
<b>Product function</b>	
<ul style="list-style-type: none"> <li>• positively driven operation acc. to IEC 60947-5-1</li> </ul>	Yes
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y

**Certificates/ approvals**

General Product Approval	EMC
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[KC](#)



Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	Marine / Shipping
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[Type Examination Certificate](#)



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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[Confirmation](#)

other
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### Further information

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

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2122-2LF40>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2122-2LF40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2LF40>

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

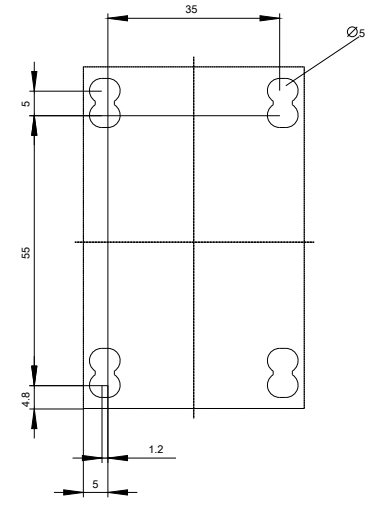
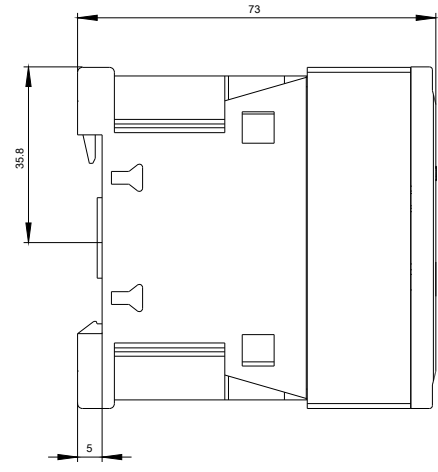
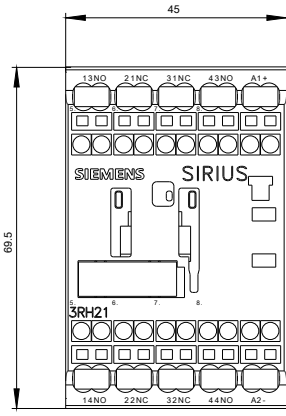
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RH2122-2LF40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2122-2LF40&lang=en)

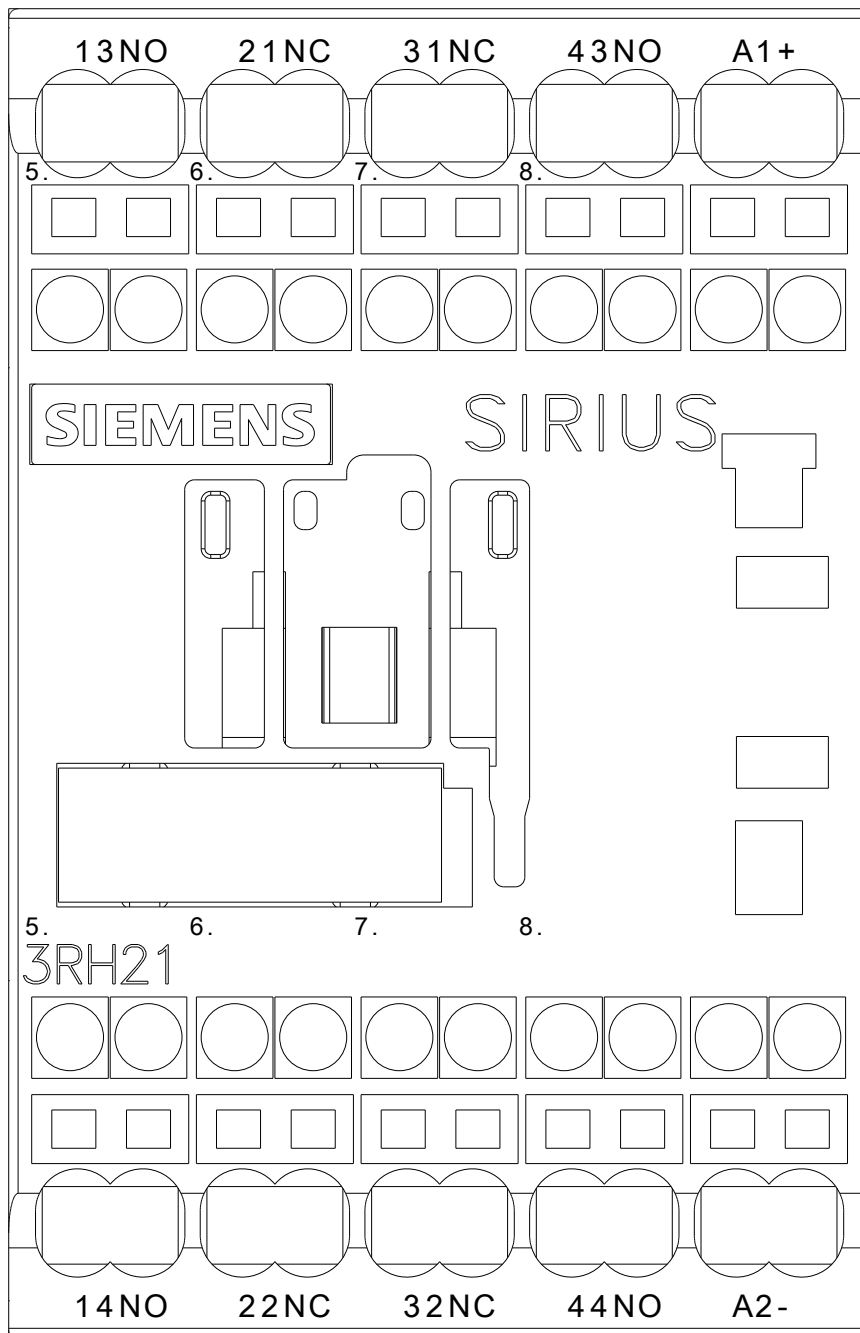
**Characteristic: Tripping characteristics, I<sup>t</sup>, Let-through current**

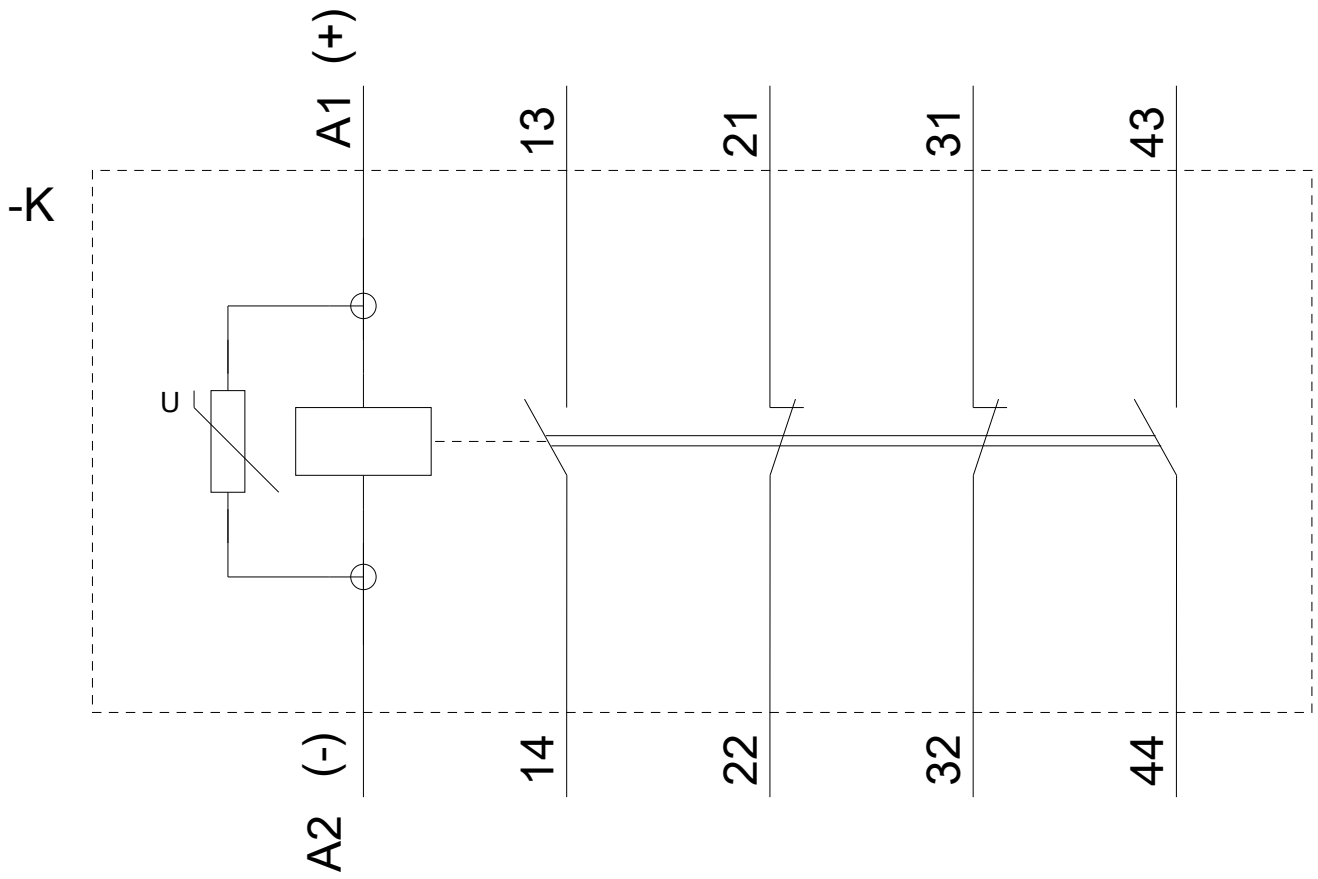
<https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2LF40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2122-2LF40&objecttype=14&gridview=view1>







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11/19/2019