

Contactor relay for railway 2 NO + 2 NC, DC 24-34V, 0,7...1,25\*US, with integrated varistor Size S00, Spring-type terminal suitable for PLC outputs



Figure similar

Product brand name	SIRIUS
Product designation	Contactor relay for railway applications
Product type designation	3RH2
<b>General technical data</b>	
Size of contactor	S00
Product extension	Yes
• Auxiliary switch	
Insulation voltage	690 V
• with degree of pollution 3 rated value	
Surge voltage resistance rated value	6 kV
Protection class IP	IP20
• on the front	
• of the terminal	IP20
Shock resistance at rectangular impulse	10g / 5 ms, 5g / 10 ms
• at DC	
Shock resistance with sine pulse	15g / 5 ms, 8g / 10 ms
• at DC	

<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• of contactor typical</li> </ul>	30 000 000
<ul style="list-style-type: none"> <li>• of the contactor with added electronics-compatible auxiliary switch block typical</li> </ul>	5 000 000
<ul style="list-style-type: none"> <li>• of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000

### Ambient conditions

<b>Installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	2 000 m
<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-40 ... +70 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-55 ... +80 °C

### Main circuit

<b>No-load switching frequency</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	1 500 1/h

### Control circuit/ Control

<b>Type of voltage of the control supply voltage</b>	DC
<b>Control supply voltage at DC</b>	
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	24 ... 34 V
<b>Design of the surge suppressor</b>	Varistor
<b>Closing power of magnet coil at DC</b>	4 W
<b>Holding power of magnet coil at DC</b>	0.7 W
<b>Closing delay</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	30 ... 70 ms
<b>Opening delay</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	25 ... 45 ms
<b>Arcing time</b>	10 ... 15 ms
<b>Residual current of the electronics for control with signal &lt;0&gt;</b>	
<ul style="list-style-type: none"> <li>• at DC at 24 V maximum permissible</li> </ul>	10 mA

### Auxiliary circuit

<b>Number of NC contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	2
<ul style="list-style-type: none"> <li>— instantaneous contact</li> </ul>	2
<b>Number of NO contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	2
<ul style="list-style-type: none"> <li>— instantaneous contact</li> </ul>	2
<b>Identification number and letter for switching elements</b>	22 E
<b>Operating current at AC-12</b>	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	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>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 220 V rated value</li> <li>• at 440 V rated value</li> <li>• at 600 V rated value</li> </ul>	<p>10 A</p> <p>4.7 A</p> <p>3 A</p> <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>	
<ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary circuit up to 230 V</li> </ul>	C characteristic: 6 A; 0.4 kA
<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
---	-------------

### Short-circuit protection

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

### 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; standing, on horizontal mounting surface
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail
<ul style="list-style-type: none"> <li>• Side-by-side mounting</li> </ul>	Yes
<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>• for grounded parts <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>	<p>6 mm</p> <p>6 mm</p>

### Connections/Terminals

<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for auxiliary and control current circuit</li> </ul>	spring-loaded terminals
<b>Connectable conductor cross-section for auxiliary contacts</b>	
<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>	<p>0.5 ... 4 mm<sup>2</sup></p> <p>0.5 ... 2.5 mm<sup>2</sup></p> <p>0.5 ... 2.5 mm<sup>2</sup></p>
<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>
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	20 ... 12

### 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
<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>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
<b>Protection against electrical shock</b>	finger-safe

### Certificates/approvals

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
--------------------------	---------------------------------------	---------------------------	-------------------



[Type Examination](#)



[Type Test Certificates/Test Report](#)

### Marine / Shipping



Marine / Shipping	other	Railway
-------------------	-------	---------



[Confirmation](#)



[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=3RH2122-2XB40-0LA2>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2122-2XB40-0LA2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2XB40-0LA2>

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

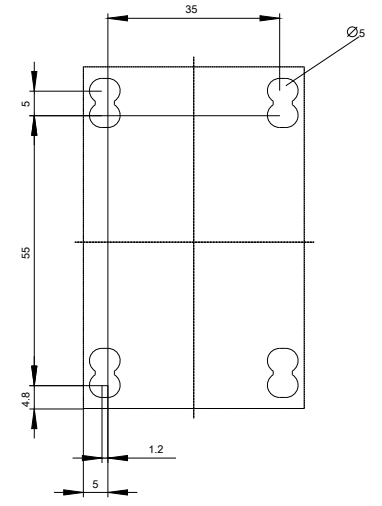
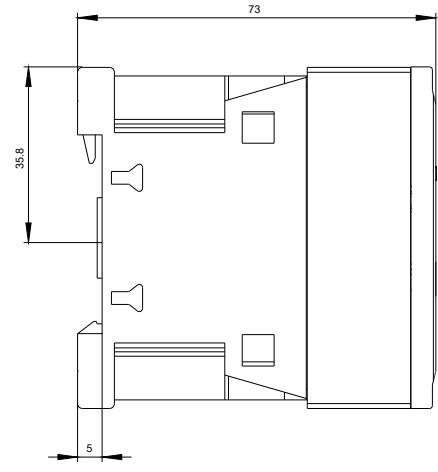
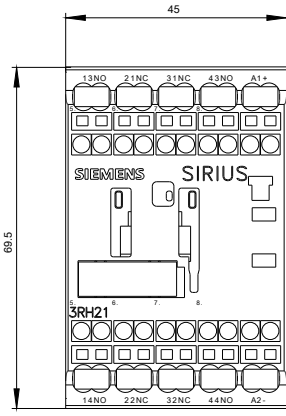
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RH2122-2XB40-0LA2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2122-2XB40-0LA2&lang=en)

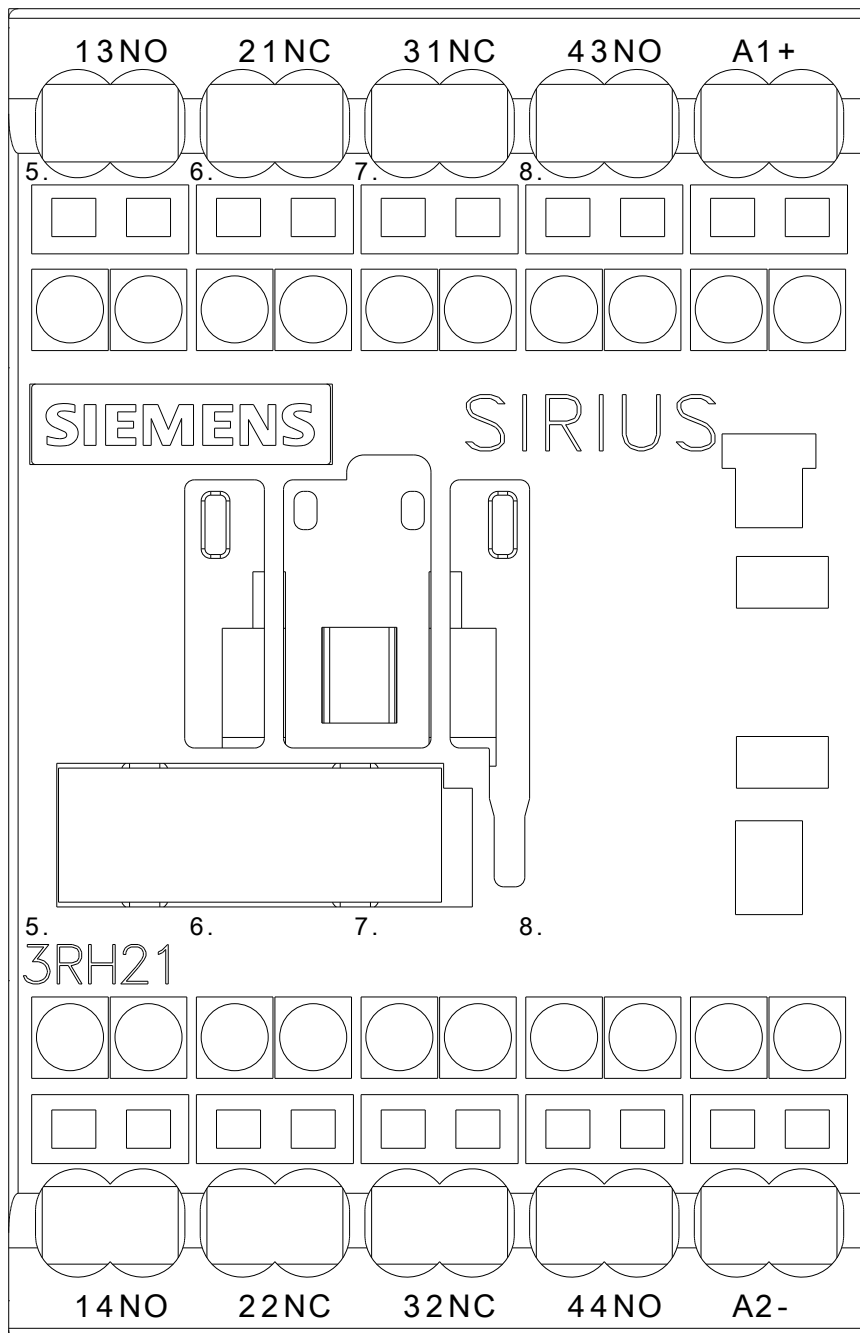
**Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2XB40-0LA2/char>

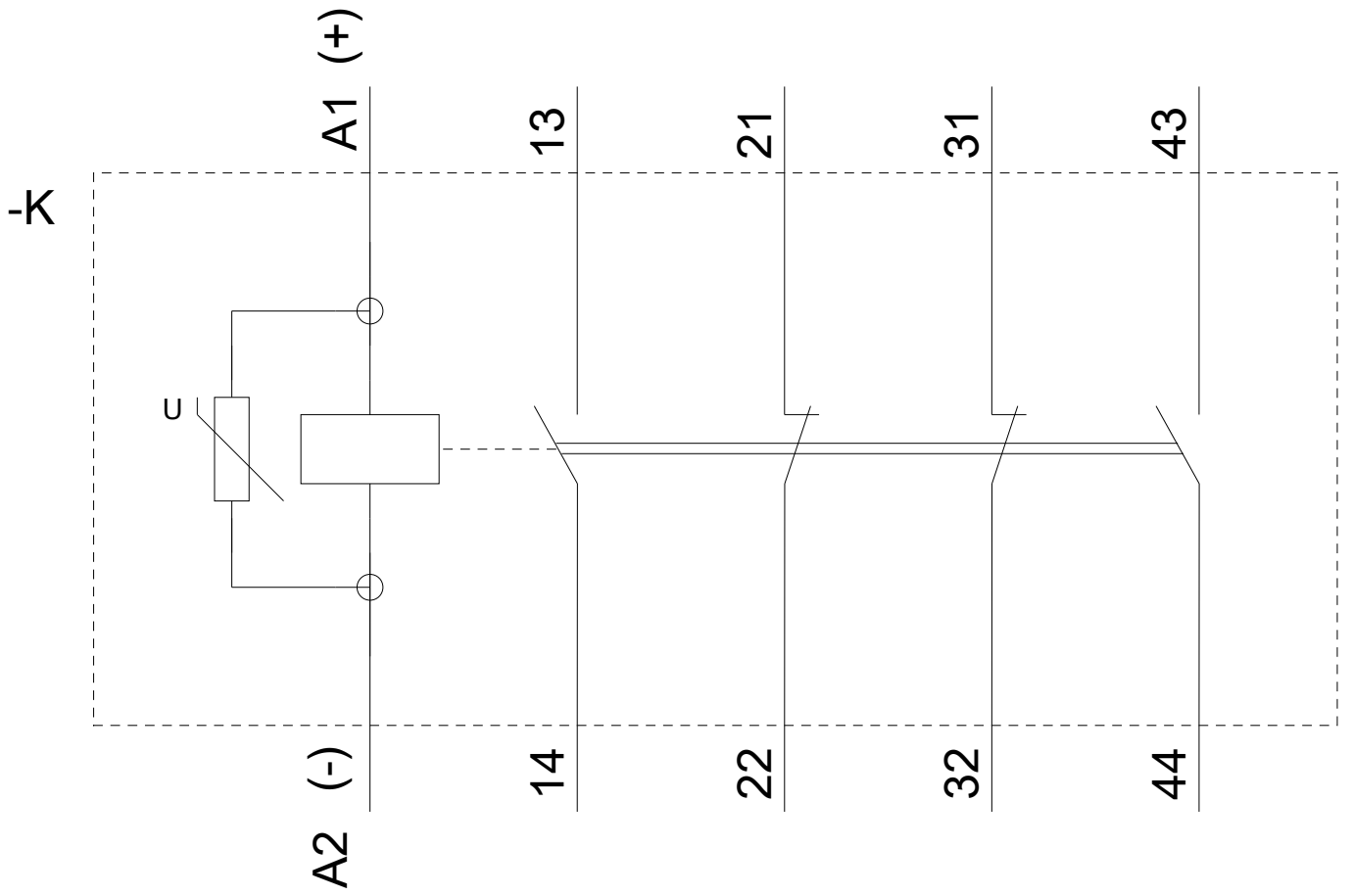
**Further characteristics (e.g. electrical endurance, switching frequency)**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2122-2XB40-0LA2&objecttype=14&gridview=view1>









last modified:

03/20/2018