

Aux. rail contactor 3NO +1NC 72-125V DC, 0.7...1.25\*US, with integrated varistor size S00, spring-type terminals suitable for PLC outputs



Figure similar

Product brand name	SIRIUS
Product designation	Contactur relay for railway applications
Product type designation	3RH2

General technical data	
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>	
• 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

### Ambient conditions

<b>Installation altitude at height above sea level</b>	
• maximum	2 000 m
<b>Ambient temperature</b>	
• during operation	-40 ... +70 °C
• during storage	-55 ... +80 °C

### Main circuit

<b>No-load switching frequency</b>	
• at DC	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>	
• rated value	72 ... 125 V
<b>Design of the surge suppressor</b>	Varistor
<b>Closing power of magnet coil at DC</b>	4.5 W
<b>Holding power of magnet coil at DC</b>	0.75 W
<b>Closing delay</b>	
• at DC	30 ... 70 ms
<b>Opening delay</b>	
• at DC	25 ... 45 ms
<b>Arcing time</b>	10 ... 15 ms
<b>Residual current of the electronics for control with signal &lt;0&gt;</b>	
• at DC at 24 V maximum permissible	10 mA

### Auxiliary circuit

<b>Number of NC contacts</b>	
• for auxiliary contacts	1
— instantaneous contact	1
<b>Number of NO contacts</b>	
• for auxiliary contacts	3
— instantaneous contact	3
<b>Identification number and letter for switching elements</b>	31 E
<b>Operating current at AC-12</b>	
• maximum	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
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### 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	Marine / Shipping
 <p>CCC</p>  <p>CSA</p>  <p>EAC</p>	<p><a href="#">Type Examination</a></p>	 <p>EG-Konf.</p>	 <p>ABS</p>

Marine / Shipping					
 <p>BUREAU VERITAS</p>	 <p>GL</p>	 <p>LRS</p>	 <p>PRS</p>	 <p>RMRS</p>	 <p>DNV-GL</p> <p>DNVGL.COM/IAF</p>

other
<p><a href="#">Confirmation</a></p>  <p>VDE</p>

## 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=3RH2131-2XF40-0LA2>

### Cax online generator

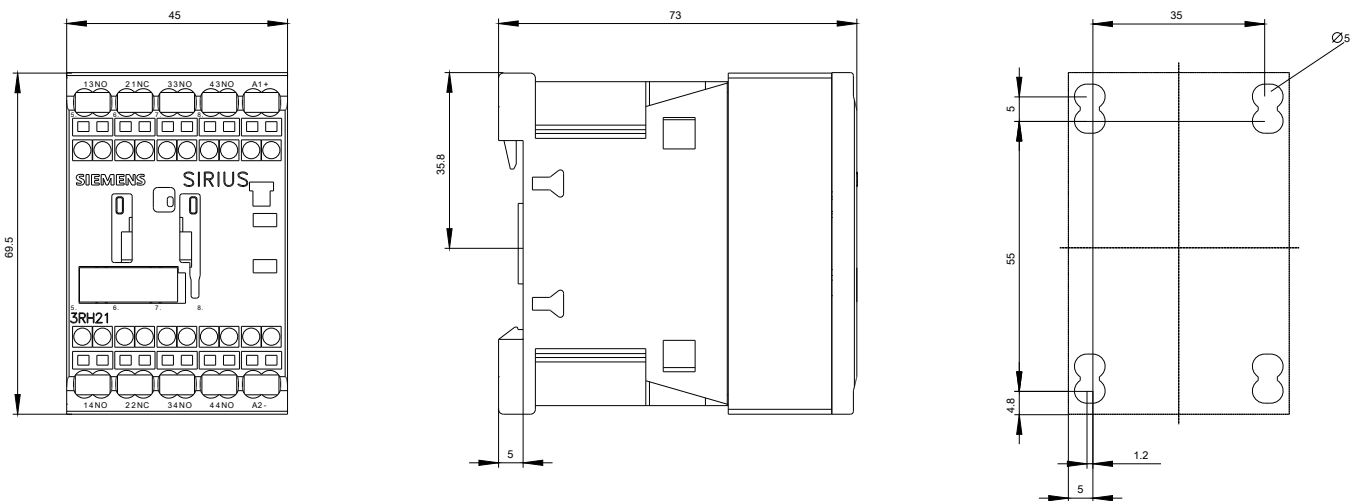
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2131-2XF40-0LA2>

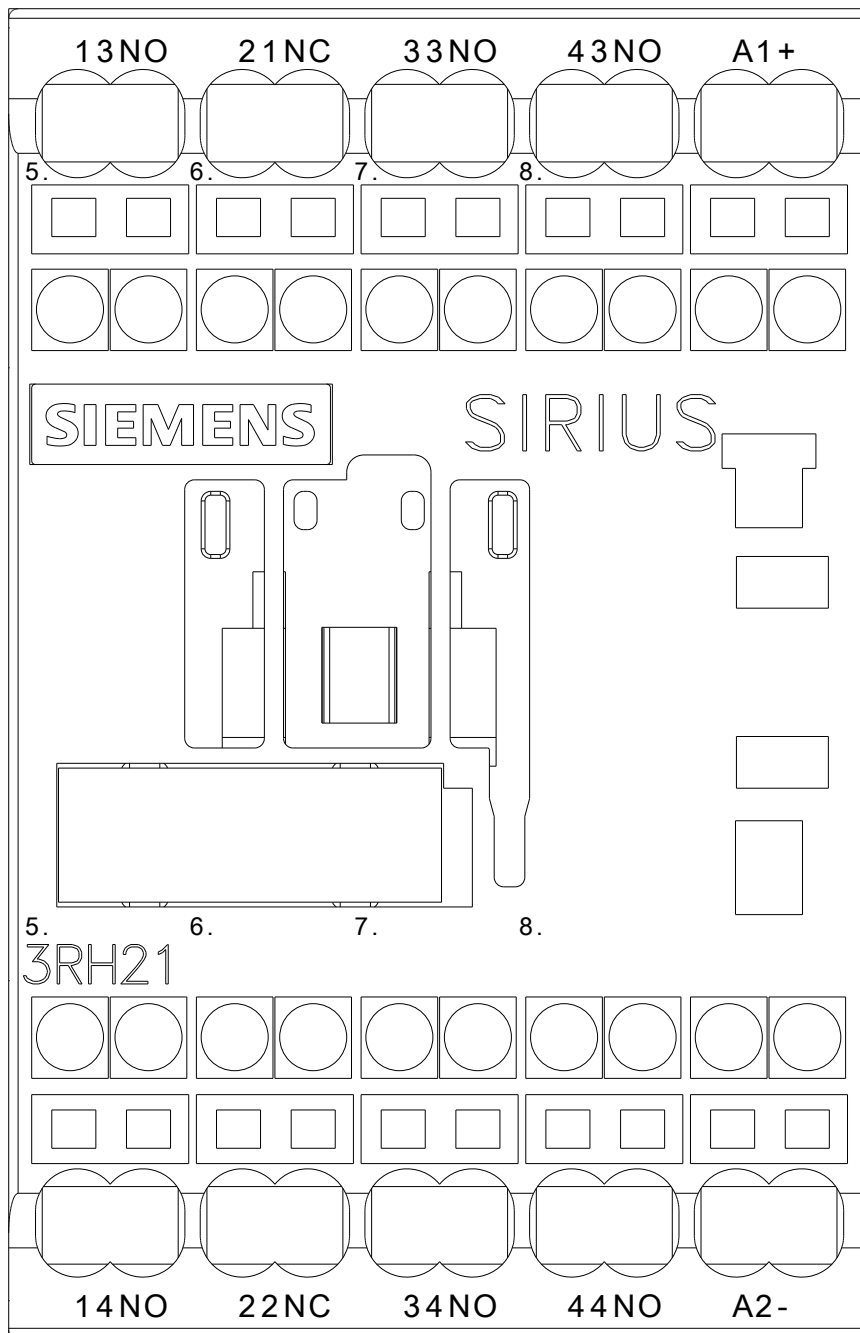
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

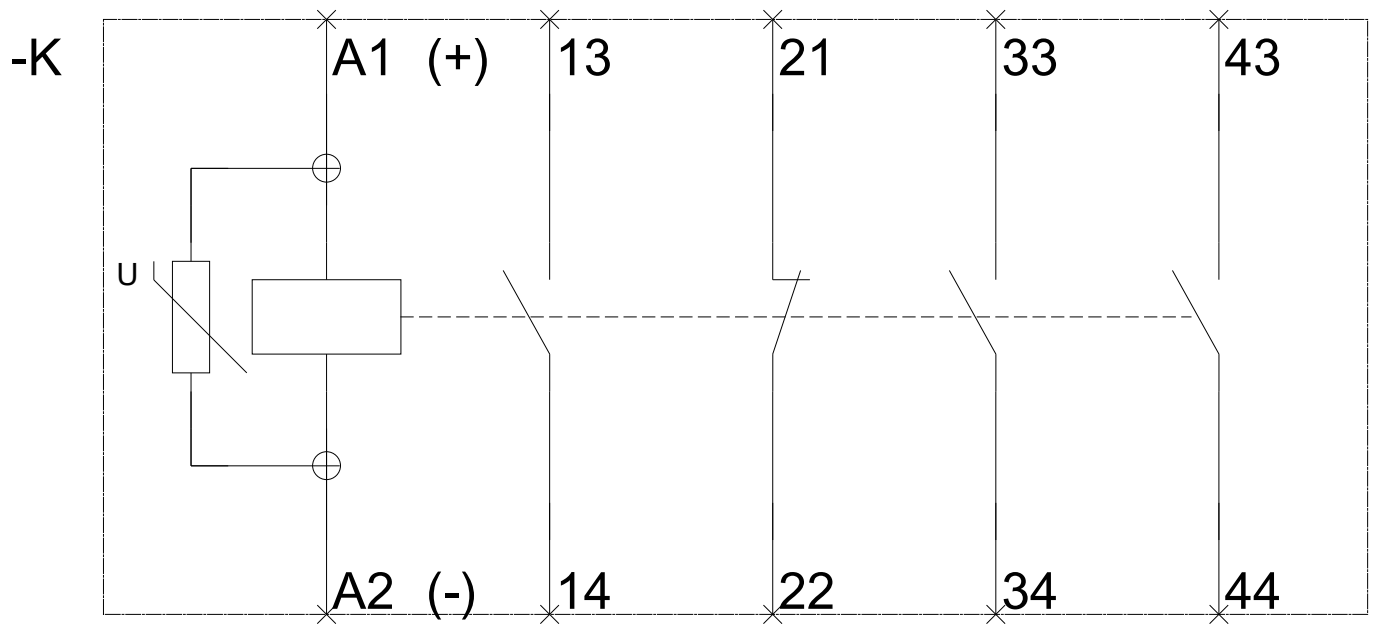
<https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-2XF40-0LA2>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RH2131-2XF40-0LA2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2131-2XF40-0LA2&lang=en)







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