

CONTACTOR RELAY, 3NO+1NC, DC 24V, SIZE S00, SCREW  
TERMINAL



product brandname	SIRIUS
Product designation	contactor relay
Product type designation	3RH2
<b>General technical data</b>	
Size of contactor	S00
Product extension	Yes
<ul style="list-style-type: none"> <li>Auxiliary switch</li> </ul>	
Insulation voltage	690 V
<ul style="list-style-type: none"> <li>with degree of pollution 3 rated value</li> </ul>	
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>	
Shock resistance	
<ul style="list-style-type: none"> <li>at rectangular impulse</li> <li>— at DC</li> </ul>	10g / 5 ms, 5g / 10 ms
<ul style="list-style-type: none"> <li>with sine pulse</li> <li>— at DC</li> </ul>	15g / 5 ms, 8g / 10 ms
Mechanical service life (switching cycles)	

<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
<b>Equipment marking</b>	
<ul style="list-style-type: none"> <li>• acc. to DIN EN 61346-2</li> </ul>	K
<ul style="list-style-type: none"> <li>• acc. to DIN EN 81346-2</li> </ul>	K

### Ambient conditions

<b>Installation altitude at height above sea level maximum</b>	2 000 m
<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-25 ... +60 °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 AC</li> </ul>	10 000 1/h
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	10 000 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 V
<b>Operating range factor control supply voltage rated value of magnet coil at DC</b>	0.8 ... 1.1
<b>Closing power of magnet coil at DC</b>	4 W
<b>Holding power of magnet coil at DC</b>	4 W
<b>Closing delay</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	30 ... 100 ms
<b>Opening delay</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	7 ... 13 ms
<b>Arcing time</b>	10 ... 15 ms

### Auxiliary circuit

<b>Number of NC contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	1
<ul style="list-style-type: none"> <li>— instantaneous contact</li> </ul>	1
<b>Number of NO contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	3
<ul style="list-style-type: none"> <li>— instantaneous contact</li> </ul>	3
<b>Identification number and letter for switching elements</b>	31 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>	
<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
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail
<b>Height</b>	57.5 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>	screw-type terminals
<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> </ul> </li> <li>• at AWG conductors for auxiliary contacts</li> </ul>	<p>2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>), 2x 4 mm<sup>2</sup></p> <p>2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</p> <p>2x (20 ... 16), 2x (18 ... 14), 2x 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 Ie
<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>	40 % 73 %
<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

<b>General Product Approval</b>	<b>Functional Safety/Safety of Machinery</b>	<b>Declaration of Conformity</b>
 CCC	 CSA	 UL
 EAC		<a href="#">Baumusterbescheinigung</a>  EG-Konf.

<b>Test Certificates</b>	<b>Shipping Approval</b>
<a href="#">Typprüfbescheinigung/Werkszeugnis</a>	 ABS
<a href="#">spezielle Prüfbescheinigung</a>	 BUREAU VERITAS
<a href="#">n</a>	 GL
<a href="#">sonstig</a>	

<b>Shipping Approval</b>	<b>other</b>
 LRS	<a href="#">Umweltbestätigung</a>
 PRS	<a href="#">Bestätigungen</a>
 RINA	
 RMRS	

<b>other</b>
 VDE

### 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=3RH2131-1BB40>

**Cax online generator**

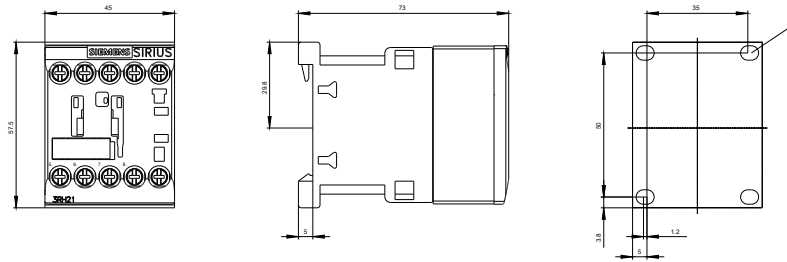
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2131-1BB40>

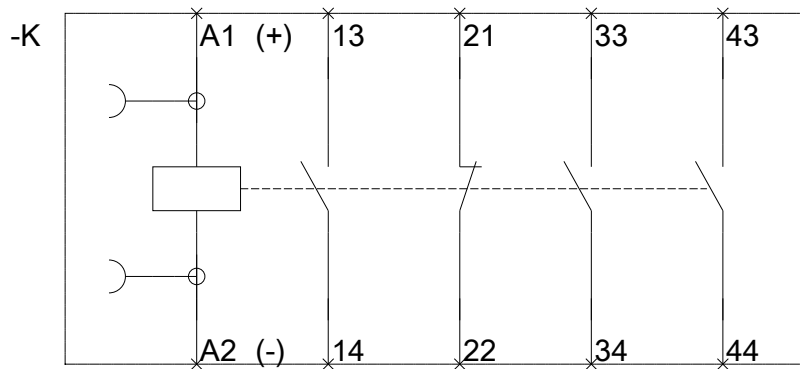
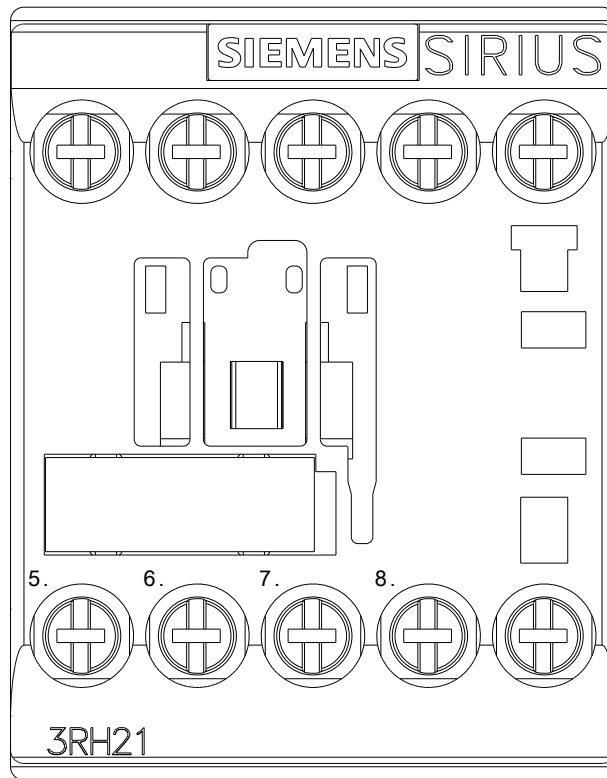
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-1BB40>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RH2131-1BB40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2131-1BB40&lang=en)





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