

Coupling contactor relay, 2 NO + 2 NC, 24 V DC, 0.85 ... 1.85\* US, with integrated diode, Size S00, screw terminal



Product brand name	SIRIUS
Product designation	Coupling relay for switching auxiliary circuits
Product type designation	3RH2

General technical data	
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 ... +50 °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	24 V
<b>Operating range factor control supply voltage rated value of magnet coil at DC</b>	
• initial value	0.85
• Full-scale value	1.85
<b>Design of the surge suppressor</b>	with diode
<b>Closing power of magnet coil at DC</b>	1.6 W
<b>Holding power of magnet coil at DC</b>	1.6 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> <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
<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>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 10 mm</li> <li>— upwards 10 mm</li> <li>— downwards 10 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 10 mm</li> <li>— upwards 10 mm</li> <li>— at the side 6 mm</li> <li>— downwards 10 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 10 mm</li> <li>— upwards 10 mm</li> <li>— downwards 10 mm</li> <li>— at the side 6 mm</li> </ul> </li> </ul>	

### 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>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14), 2x 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; 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
-------------------------

General Product Approval	EMC
--------------------------	-----



[KC](#)



Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	Marine / Shipping
---------------------------------------	---------------------------	-------------------	-------------------

[Type Examination Certificate](#)



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping
-------------------



other
-------

[Confirmation](#)



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=3RH2122-1VB40>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2122-1VB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-1VB40>

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

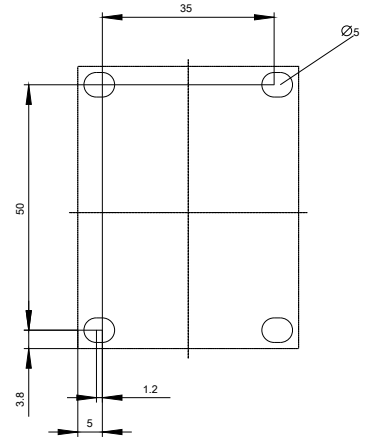
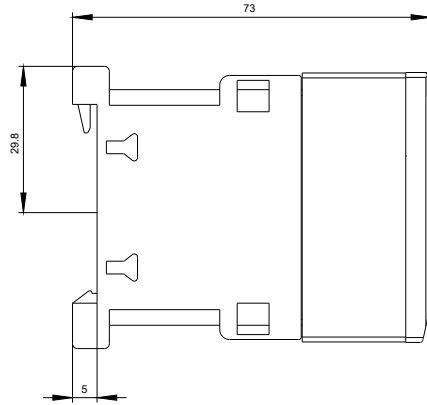
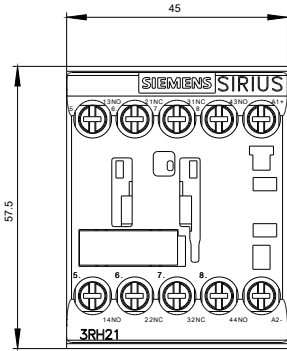
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RH2122-1VB40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2122-1VB40&lang=en)

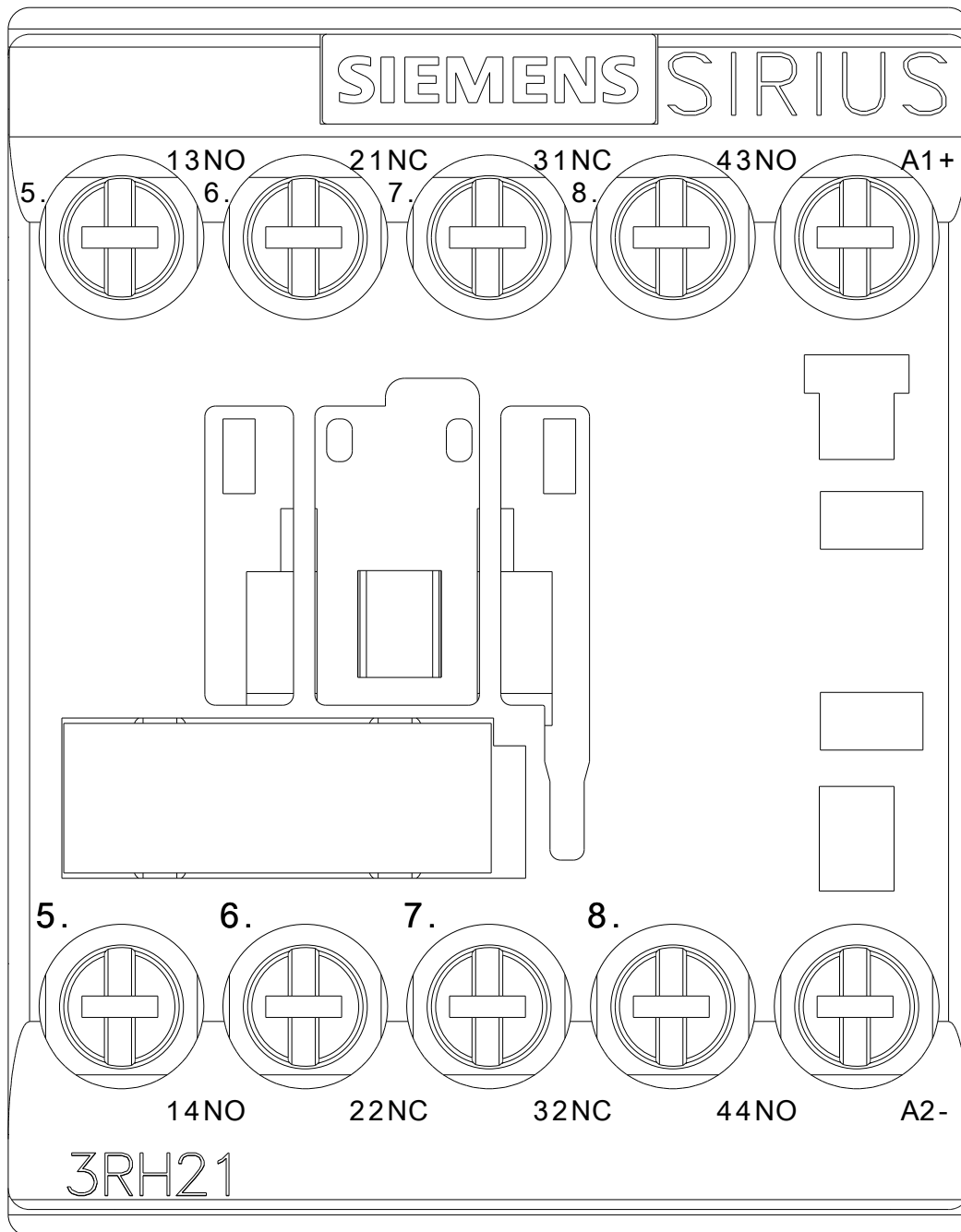
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

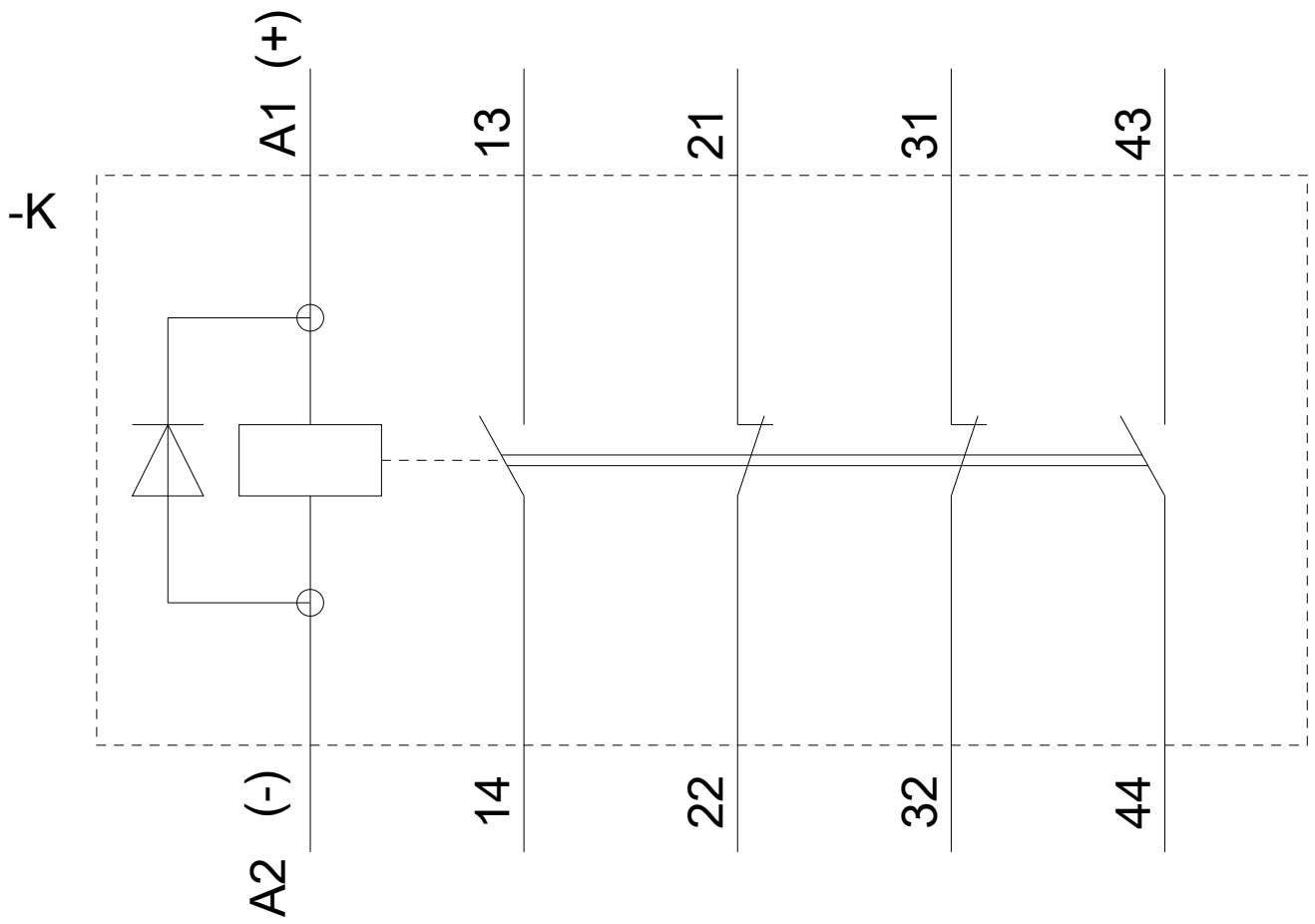
<https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-1VB40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2122-1VB40&objecttype=14&gridview=view1>







last modified:

11/19/2019