



coupling contactor relay, 3 NO + 1 NC, 24 V DC, 0.7-1.25\* Us, screw terminal, frame size S00, suitable for PLC outputs, not expandable with auxiliary switch expandable

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 auxiliary switch	No
power loss [W] for rated value of the current without load current share typical	2.8 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 kV
shock resistance at rectangular impulse	
• at DC	10g / 5 ms, 5g / 10 ms
shock resistance with sine pulse	
• at DC	15g / 5 ms, 8g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	30 000 000
reference code according to IEC 81346-2	K
Substance Prohibitance (Date)	10/01/2009
Weight	0.297 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
<b>Environmental footprint</b>	
Environmental Product Declaration (EPD)	Yes
global warming potential [CO2 eq] total	133 kg
global warming potential [CO2 eq] during manufacturing	1.3 kg
global warming potential [CO2 eq] during operation	132 kg
global warming potential [CO2 eq] after end of life	-0.227 kg
<b>Main circuit</b>	
no-load switching frequency	
• at AC	10 000 1/h
• at DC	10 000 1/h
<b>Control circuit/ Control</b>	
type of voltage of the control supply voltage	DC
control supply voltage at DC rated value	24 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>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	25 ... 130 ms
<b>opening delay</b>	
• at DC	7 ... 20 ms
<b>arcing time</b>	10 ... 15 ms
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b>	1
• instantaneous contact	1
<b>number of NO contacts for auxiliary contacts</b>	3
• instantaneous contact	3
<b>identification number and letter for switching elements</b>	31 E
operational current at AC-12 maximum	10 A
<b>operational 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>operational 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>operational 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>operational 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>operational 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>operational 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>operational 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>	1.2 A 0.5 A 0.26 A
<b>operating frequency at DC-13 maximum</b>	1 000 1/h
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)
<b>UL/CSA ratings</b>	
<b>contact rating of auxiliary contacts according to UL</b>	A600 / Q600
<b>Short-circuit protection</b>	
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA
design of the fuse link for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A
<b>Installation/ mounting/ dimensions</b>	
<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>fastening method</b>	screw and snap-on mounting onto 35 mm DIN 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</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <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> <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 10 mm 6 mm
<b>Connections/ Terminals</b>	
type of electrical connection for auxiliary and control circuit	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>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul>	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (20 ... 16), 2x (18 ... 14), 2x 12
<b>Safety related data</b>	
<b>product function</b>	
<ul style="list-style-type: none"> <li>• positively driven operation according to IEC 60947-5-1</li> <li>• suitable for safety function</li> </ul>	Yes Yes
suitability for use safety-related switching OFF	Yes
<b>service life maximum</b>	20 a
<b>proportion of dangerous failures</b>	
<ul style="list-style-type: none"> <li>• with low demand rate according to SN 31920</li> <li>• with high demand rate according to SN 31920</li> </ul>	40 % 73 %
<b>B10 value with high demand rate according to SN 31920</b>	1 000 000; With 0.3 x I <sub>e</sub>
<b>failure rate [FIT] with low demand rate according to SN 31920</b>	100 FIT
<b>ISO 13849</b>	
<b>device type according to ISO 13849-1</b>	3
<b>overdimensioning according to ISO 13849-2 necessary</b>	Yes
<b>IEC 61508</b>	
<b>safety device type according to IEC 61508-2</b>	Type A
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front

## Approvals Certificates

### General Product Approval



[Confirmation](#)



[KC](#)

General Product Approval	EMV	Functional Safety	Test Certificates	Marine / Shipping
		<a href="#">Type Examination Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</a>

### Marine / Shipping

other	Railway	Dangerous goods	Environment		
<a href="#">Miscellaneous</a>	<a href="#">Confirmation</a>	<a href="#">Special Test Certificate</a>	<a href="#">Transport Information</a>		<a href="#">Environmental Confirmations</a>

### Further information

#### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

<https://www.siemens.com/ic10>

#### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2131-1HB40>

#### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2131-1HB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-1HB40>

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

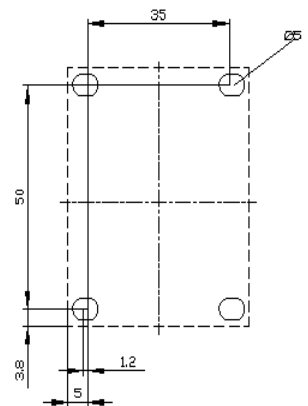
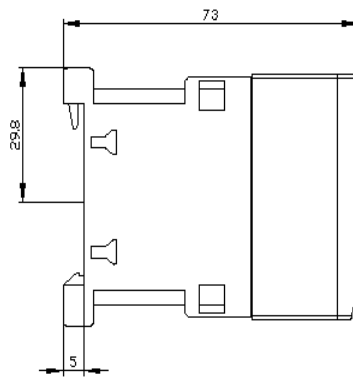
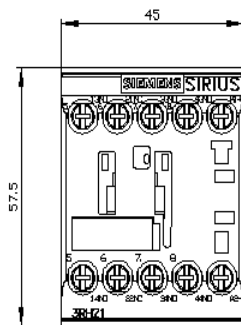
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RH2131-1HB40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2131-1HB40&lang=en)

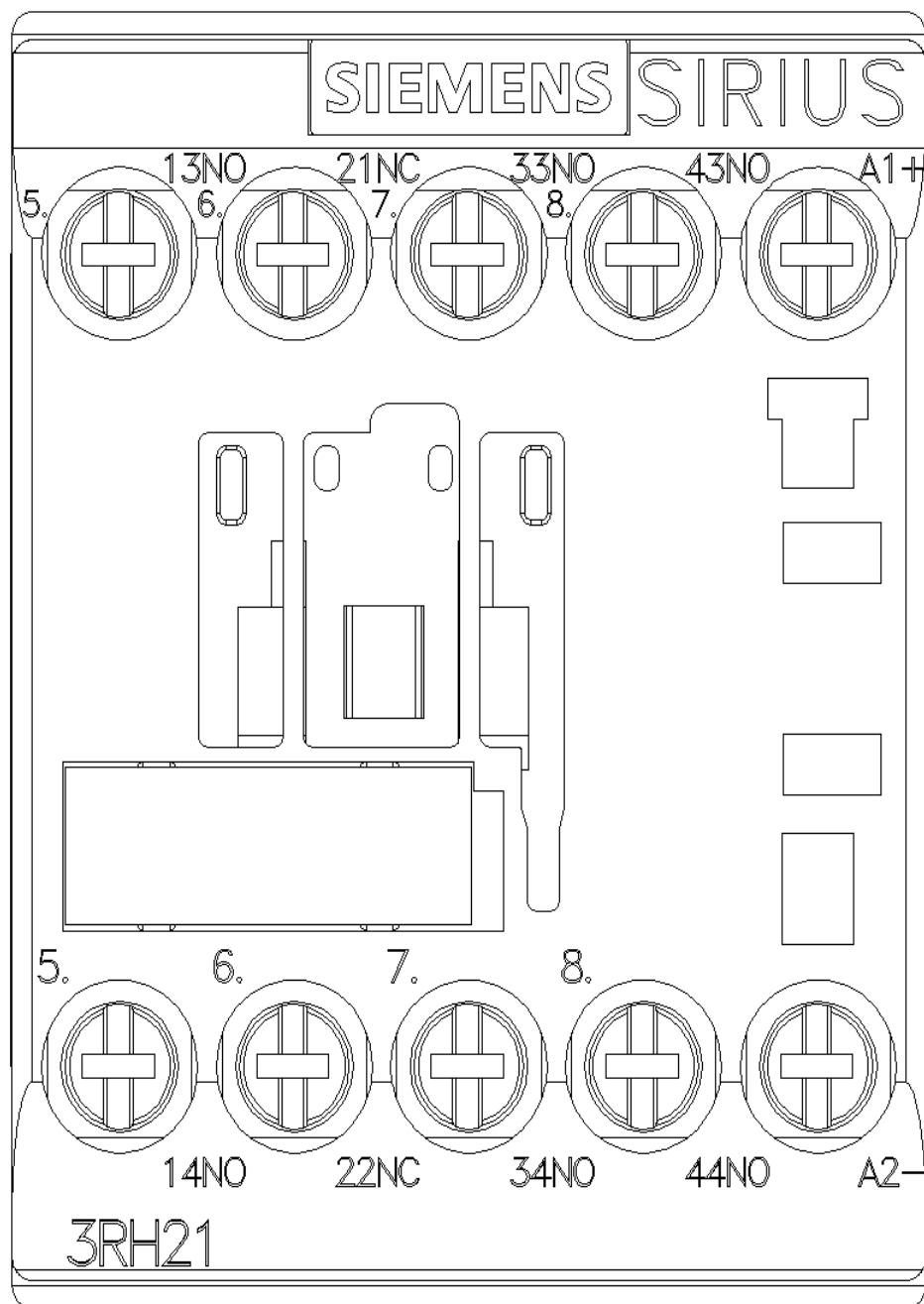
#### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

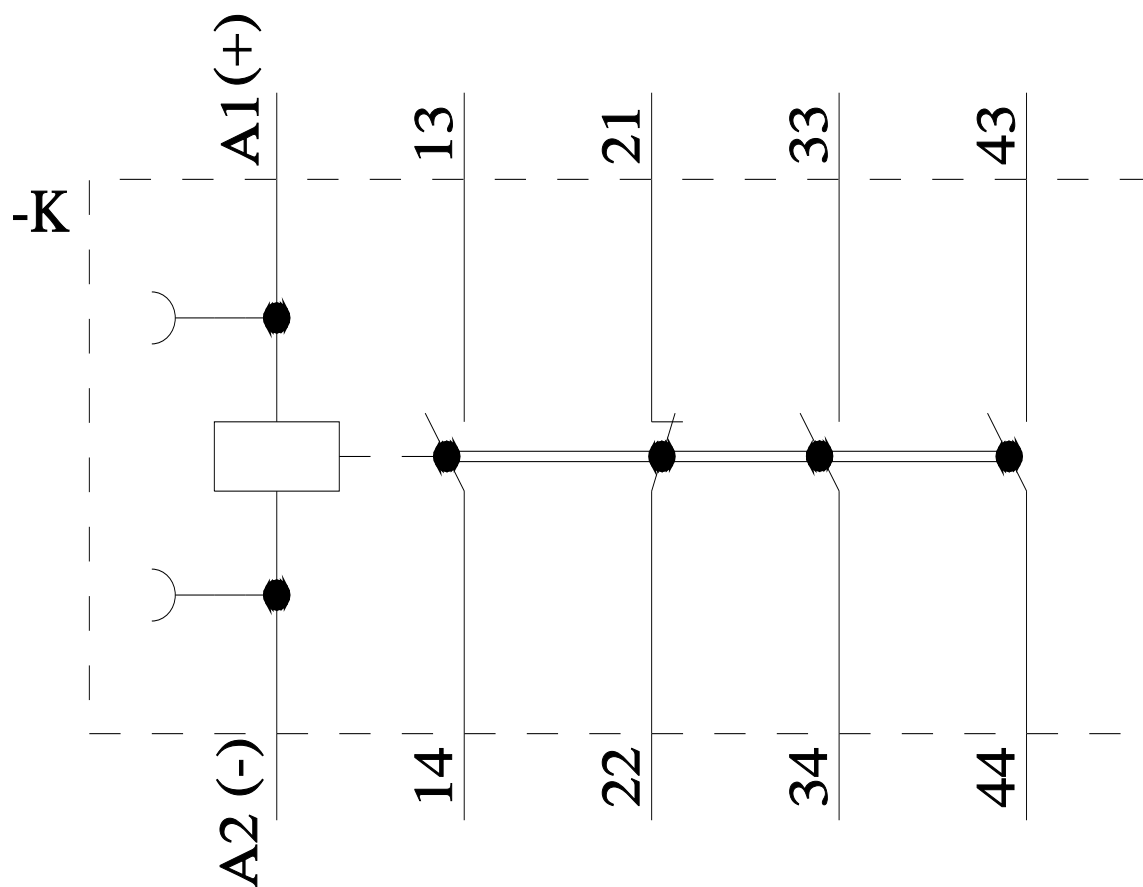
<https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-1HB40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2131-1HB40&objecttype=14&gridview=view1>







last modified:

1/28/2025 