



contactor relay, 4 NO, 230 V AC, 50/60 Hz, screw terminal, frame size S00

|  |                                       |
|--|---------------------------------------|
| product brand name   | SIRIUS                                |
| product designation  | Auxiliary contactor                   |
| product type designation   | 3RH2                                  |
| General technical data   |                                       |
| size of contactor  | S00                                   |
| product extension auxiliary switch   | Yes                                   |
| power loss [W] for rated value of the current without load current share typical   | 1.43 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 <ul style="list-style-type: none"><li>at AC</li></ul>  | 7,3g / 5 ms, 4,7g / 10 ms             |
| shock resistance with sine pulse <ul style="list-style-type: none"><li>at AC</li></ul>   | 11,4g / 5 ms, 7,3g / 10 ms            |
| mechanical service life (operating cycles) <ul style="list-style-type: none"><li>of contactor typical</li><li>of the contactor with added electronically optimized auxiliary switch block typical</li><li>of the contactor with added auxiliary switch block typical</li></ul> | 30 000 000<br>5 000 000<br>10 000 000 |
| reference code according to IEC 81346-2  | K                                     |
| Substance Prohibittance (Date)   | 10/01/2009                            |
| Weight   | 0.233 kg                              |
| Ambient conditions   |                                       |
| installation altitude at height above sea level maximum  | 2 000 m                               |
| ambient temperature <ul style="list-style-type: none"><li>during operation</li><li>during storage</li></ul>  | -25 ... +60 °C<br>-55 ... +80 °C      |
| relative humidity minimum  | 10 %                                  |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum   | 95 %                                  |
| Environmental footprint  |                                       |
| Environmental Product Declaration (EPD)  | Yes                                   |
| global warming potential [CO2 eq] total  | 49.2 kg                               |
| global warming potential [CO2 eq] during manufacturing   | 1.15 kg                               |
| global warming potential [CO2 eq] during operation   | 48.2 kg                               |
| global warming potential [CO2 eq] after end of life  | -0.139 kg                             |
| Main circuit   |                                       |
| no-load switching frequency <ul style="list-style-type: none"><li>at AC</li><li>at DC</li></ul>  | 10 000 1/h<br>10 000 1/h              |

| Control circuit/ Control   |              |
|--|--------------|
| type of voltage of the control supply voltage                                  | AC           |
| control supply voltage at AC   |              |
| • at 50 Hz rated value   | 230 V        |
| • at 60 Hz rated value   | 230 V        |
| control supply voltage frequency   |              |
| • 1 rated value  | 50 Hz        |
| • 2 rated value  | 60 Hz        |
| operating range factor control supply voltage rated value of magnet coil at AC |              |
| • at 50 Hz   | 0.8 ... 1.1  |
| • at 60 Hz   | 0.85 ... 1.1 |
| apparent pick-up power of magnet coil at AC                                    | 37 VA        |
| inductive power factor with closing power of the coil                          | 0.8          |
| apparent holding power of magnet coil at AC                                    | 5.7 VA       |
| inductive power factor with the holding power of the coil                      | 0.25         |
| closing delay  |              |
| • at AC  | 8 ... 33 ms  |
| opening delay  |              |
| • at AC  | 4 ... 15 ms  |
| arcing time  | 10 ... 15 ms |
| Auxiliary circuit  |              |
| number of NC contacts for auxiliary contacts                                   | 0            |
| • instantaneous contact  | 0            |
| number of NO contacts for auxiliary contacts                                   | 4            |
| • instantaneous contact  | 4            |
| identification number and letter for switching elements                        | 40 E         |
| operational current at AC-12 maximum   | 10 A         |
| operational current at AC-15   |              |
| • 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          |
| operational current at 1 current path at DC-12                                 |              |
| • 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       |
| operational current with 2 current paths in series at DC-12                    |              |
| • 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       |
| operational current with 3 current paths in series at DC-12                    |              |
| • 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        |
| operating frequency at DC-12 maximum   | 1 000 1/h    |
| operational current at 1 current path at DC-13                                 |              |
| • 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        |
| operational current with 2 current paths in series at DC-13                    |              |

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|--|---|
| <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>  | 10 A<br>3.5 A<br>1.3 A<br>0.9 A<br>0.2 A<br>0.1 A   |
| <b>operational 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>   | 10 A<br>4.7 A<br>3 A<br>1.2 A<br>0.5 A<br>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  | gG: 10 A (690 V, 1 kA)  |
| <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<br>10 mm<br>10 mm<br>0 mm<br><br>10 mm<br>10 mm<br>6 mm<br>10 mm<br><br>10 mm<br>10 mm<br>10 mm<br>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<br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)<br>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<br>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 %<br>73 %  |

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| B10 value with high demand rate according to SN 31920         | 1 000 000; With 0.3 x Ie                         |
| failure rate [FIT] with low demand rate according to SN 31920 | 100 FIT  |
| ISO 13849   |  |
| device type according to ISO 13849-1                          | 3  |
| overdimensioning according to ISO 13849-2 necessary           | Yes  |
| IEC 61508   |  |
| safety device type according to IEC 61508-2                   | Type A   |
| Electrical Safety   |  |
| protection class IP on the front according to IEC 60529       | IP20   |
| touch protection on the front according to IEC 60529          | finger-safe, for vertical contact from the front |
| Approvals Certificates  |  |
| General Product Approval                                      |  |



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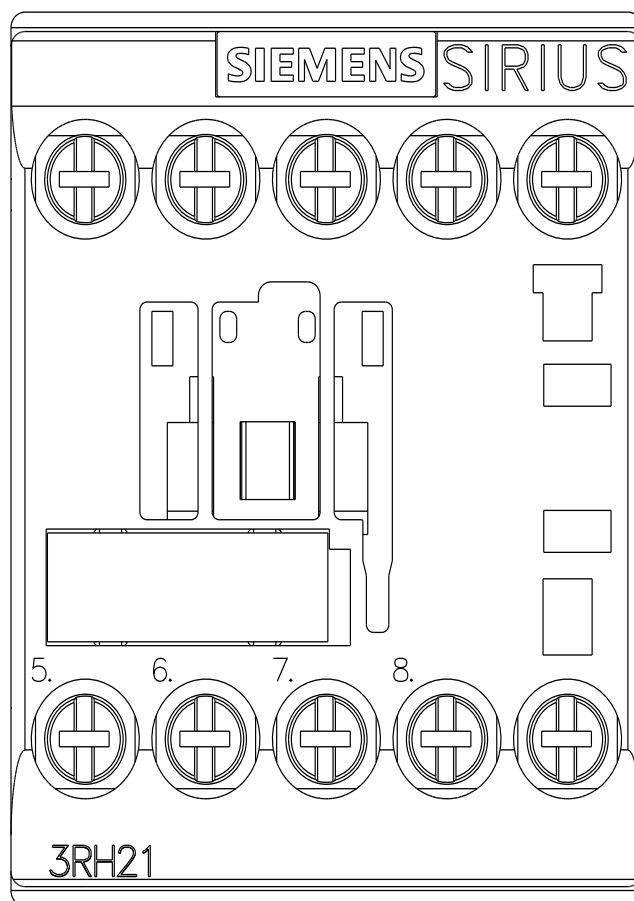
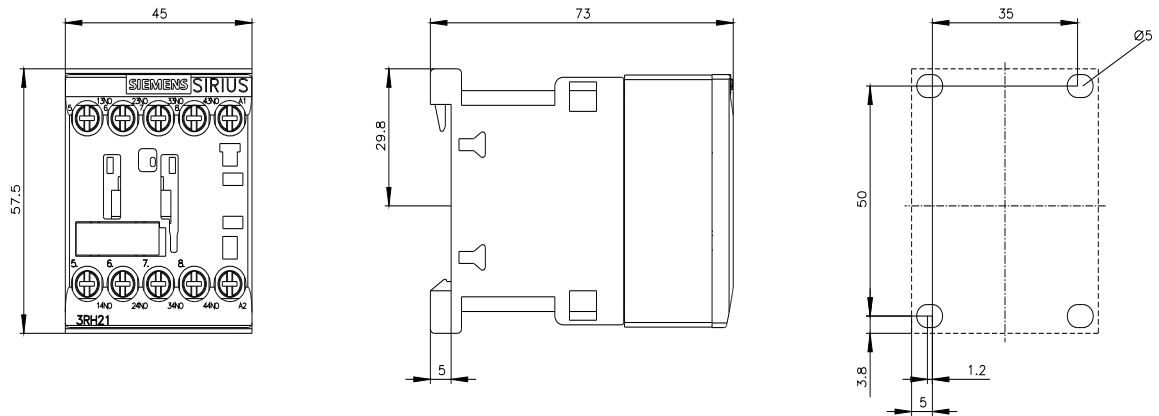


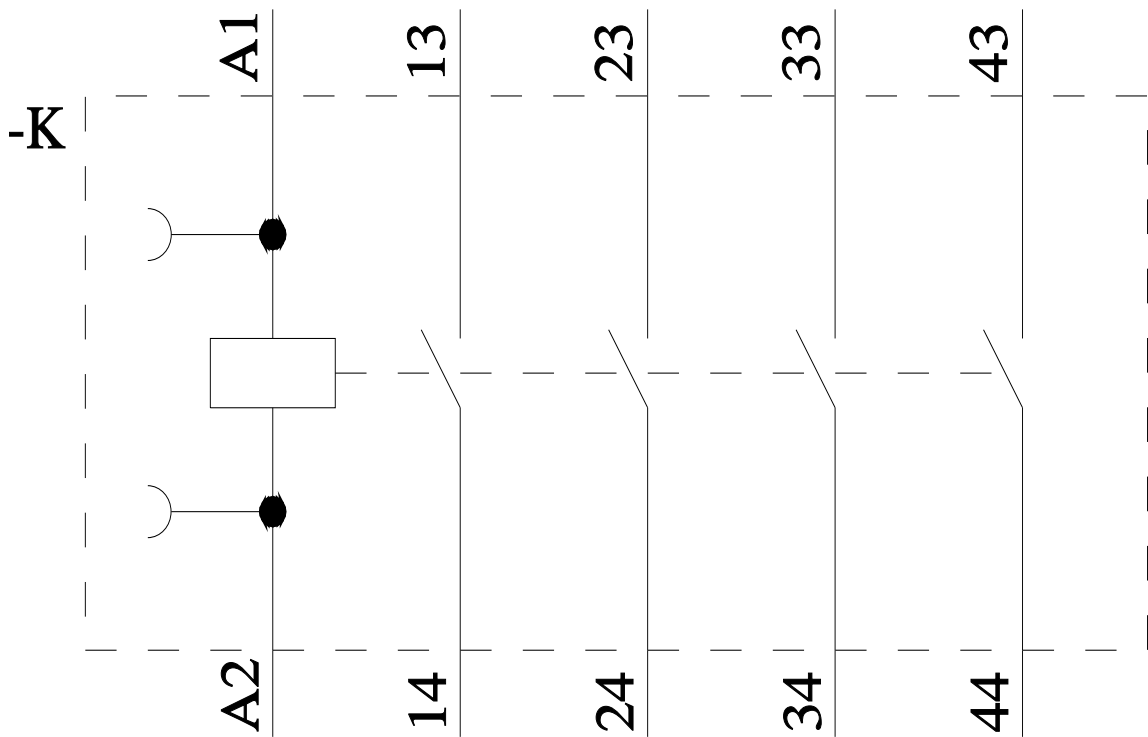
| EMV | Functional Safety                            | Test Certificates                        |  | Maritime application |  |
|-----|--|--|--|----------------------|--|
|     | <a href="#">Type Examination Certificate</a> | <a href="#">Special Test Certificate</a> | <a href="#">Type Test Certificates/Test Report</a> |                      |  |

| Maritime application |  |  |  |  | other                         |
|----------------------|--|--|--|--|-------------------------------|
|                      |  |  |  |  | <a href="#">Miscellaneous</a> |

| other | Railway                      | Environment                              |  |
|-------|------------------------------|--|--|
|       | <a href="#">Confirmation</a> | <a href="#">Special Test Certificate</a> |  |

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|---|--|--|--|
| Further information   |  |  |  |
| Information on the packaging<br><a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a>   |  |  |  |
| Information for data generation and storage<br><a href="https://support.industry.siemens.com/cs/ww/en/view/109995012">https://support.industry.siemens.com/cs/ww/en/view/109995012</a>  |  |  |  |
| Information- and Downloadcenter (Catalogs, Brochures,...)<br><a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a>  |  |  |  |
| Industry Mall (Online ordering system)<br><a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2140-1AP00">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2140-1AP00</a>   |  |  |  |
| Cax online generator<br><a href="http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RH2140-1AP00">http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RH2140-1AP00</a>   |  |  |  |
| Service&Support (Manuals, Certificates, Characteristics, FAQs,...)<br><a href="https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-1AP00">https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-1AP00</a>   |  |  |  |
| Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)<br><a href="http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2140-1AP00&amp;lang=en">http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2140-1AP00&amp;lang=en</a>  |  |  |  |
| Characteristic: Tripping characteristics, I²t, Let-through current<br><a href="https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-1AP00/char">https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-1AP00/char</a>   |  |  |  |
| Further characteristics (e.g. electrical endurance, switching frequency)<br><a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&amp;mlfb=3RH2140-1AP00&amp;objecttype=14&amp;gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&amp;mlfb=3RH2140-1AP00&amp;objecttype=14&amp;gridview=view1</a> |  |  |  |





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