

contactor relay, latched, 4 NO, 240 V AC, 50/60 Hz, screw terminal, frame size S00



|   |                              |
|---|------------------------------|
| product brand name  | SIRIUS                       |
| product designation   | Auxiliary contactor          |
| product type designation  | 3RH2                         |
| <b>General technical data</b>   |                              |
| 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   |                              |
| • at AC   | 7,3 g / 5 ms, 4,7 g / 10 ms  |
| shock resistance with sine pulse  |                              |
| • at AC   | 11,4 g / 5 ms, 7,3 g / 10 ms |
| mechanical service life (operating cycles)  |                              |
| • of contactor typical  | 5 000 000                    |
| • of the contactor with added electronically optimized auxiliary switch block typical | 5 000 000                    |
| • of the contactor with added auxiliary switch block typical                          | 5 000 000                    |
| reference code according to IEC 81346-2   | K                            |
| Substance Prohibition (day/month/year)  | 10/01/2009                   |
| Net Weight  | 0.45 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>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   | AC                           |
| control supply voltage at AC  |                              |
| • at 50 Hz rated value  | 240 V                        |
| • at 60 Hz rated value  | 240 V                        |

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|---|--------------|
| <b>control supply voltage frequency</b>   |              |
| • 1 rated value   | 50 Hz        |
| • 2 rated value   | 60 Hz        |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> |              |
| • at 50 Hz  | 0.8 ... 1.1  |
| • at 60 Hz  | 0.85 ... 1.1 |
| <b>apparent pick-up power of magnet coil at AC</b>                                    | 37 VA        |
| <b>inductive power factor with closing power of the coil</b>                          | 0.8          |
| <b>apparent holding power of magnet coil at AC</b>                                    | 5.7 VA       |
| <b>inductive power factor with the holding power of the coil</b>                      | 0.25         |
| <b>closing delay</b>  |              |
| • at AC   | 8 ... 33 ms  |
| <b>opening delay</b>  |              |
| • at AC   | 4 ... 15 ms  |
| <b>arcing time</b>  | 10 ... 15 ms |
| <b>Auxiliary circuit</b>  |              |
| <b>number of NC contacts for auxiliary contacts</b>                                   | 0            |
| • instantaneous contact   | 0            |
| <b>number of NO contacts for auxiliary contacts</b>                                   | 4            |
| • instantaneous contact   | 4            |
| <b>identification number and letter for switching elements</b>                        | 40 E         |
| <b>operational current at AC-12 maximum</b>   | 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 60 V rated value   | 6 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 60 V rated value   | 2 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         |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <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>   | 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>  | 90 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 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup><br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<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; with 3RH29<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> </ul>  | 40 %  |

|  |  |
|--|--|
| • with high demand rate according to SN 31920                        | 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**

|  |           |
|--|-----------|
| <b>Environmental Product Declaration</b>                   |           |
| • global warming potential [CO2 eq] / during manufacturing | 1.93 kg   |
| • global warming potential [CO2 eq] / during operation     | 48.8 kg   |
| • global warming potential [CO2 eq] / after end of life    | -0.242 kg |
| • global warming potential [CO2 eq] / total                | 50.5 kg   |

**Environment      General Product Approval**

[Environmental Con-  
firmations](#)



**General Product Approval      EMV      Functional Safety**



[Type Examination Certificate](#)

**Test Certificates      Maritime application**

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



**Maritime application      other**



[Confirmation](#)

[Miscellaneous](#)



**Railway**

[Special Test Certificate](#)

**Further information**

- Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>
- Information for data generation and storage  
<https://support.industry.siemens.com/cs/ww/en/view/109995012>
- 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=3RH2440-1AU00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2440-1AU00>

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

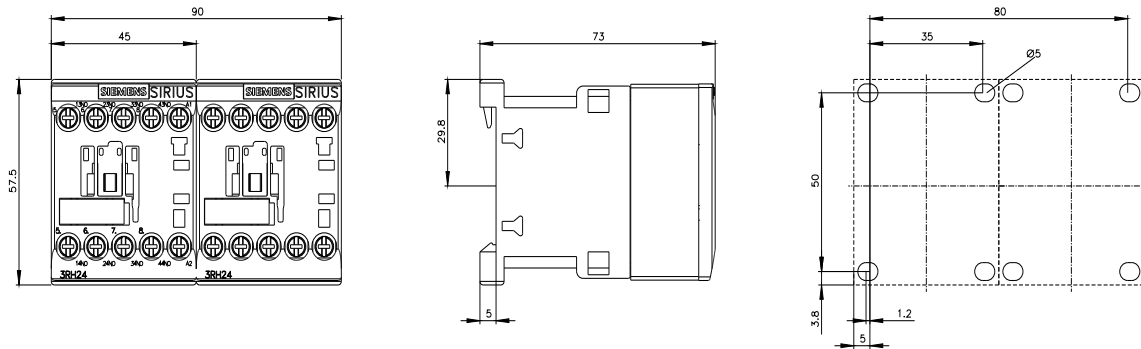
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RH2440-1AU00&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2440-1AU00&lang=en)

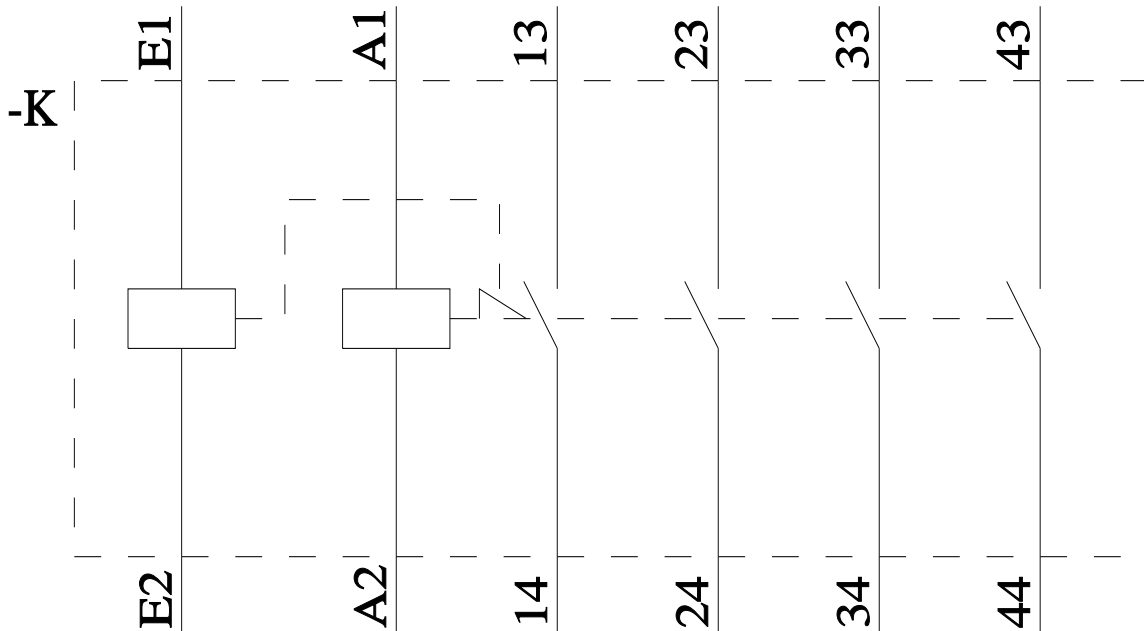
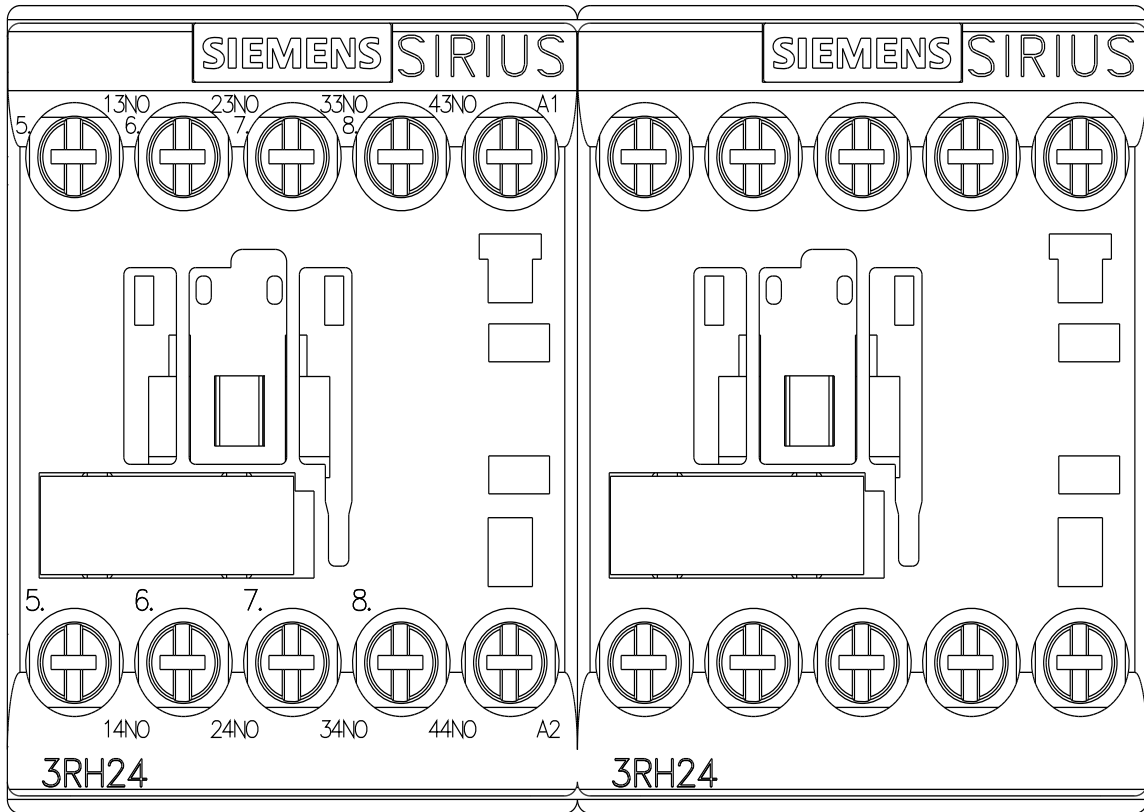
Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2440-1AU00>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





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