

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



|                                            |                        |
|--------------------------------------------|------------------------|
| Product brand name                         | SIRIUS                 |
| Product designation                        | contactor relay        |
| Product type designation                   | 3RH2                   |
| General technical data                     |                        |
| Size of contactor                          | S00                    |
| Product extension                          |                        |
| • Auxiliary switch                         | Yes                    |
| Insulation voltage                         |                        |
| • with degree of pollution 3 rated value   | 690 V                  |
| Degree of pollution                        | 3                      |
| Surge voltage resistance rated value       | 6 kV                   |
| Protection class IP                        |                        |
| • on the front                             | IP20                   |
| 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 (switching cycles) |                        |
| • of contactor typical                     | 30 000 000             |

|                                                                                                                                                                                                             |                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <ul style="list-style-type: none"> <li>• of the contactor with added electronics-compatible auxiliary switch block typical</li> <li>• of the contactor with added auxiliary switch block typical</li> </ul> | 5 000 000<br><br>10 000 000      |
| <b>Equipment marking</b>                                                                                                                                                                                    |                                  |
| <ul style="list-style-type: none"> <li>• acc. to DIN EN 61346-2</li> <li>• acc. to DIN EN 81346-2</li> </ul>                                                                                                | K<br>K                           |
| <b>Ambient conditions</b>                                                                                                                                                                                   |                                  |
| <b>Ambient temperature</b>                                                                                                                                                                                  |                                  |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>                                                                                                              | -25 ... +60 °C<br>-55 ... +80 °C |
| <b>Main circuit</b>                                                                                                                                                                                         |                                  |
| <b>No-load switching frequency</b>                                                                                                                                                                          |                                  |
| <ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>                                                                                                                                  | 10 000 1/h<br>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>                                                                                                                                                                         |                                  |
| <ul style="list-style-type: none"> <li>• rated value</li> </ul>                                                                                                                                             | 24 V                             |
| <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                     |
| <b>Auxiliary circuit</b>                                                                                                                                                                                    |                                  |
| <b>Number of NC contacts</b>                                                                                                                                                                                |                                  |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>— instantaneous contact</li> </ul>                                                                                                 | 1<br>1                           |
| <b>Number of NO contacts</b>                                                                                                                                                                                |                                  |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>— instantaneous contact</li> </ul>                                                                                                 | 3<br>3                           |
| <b>Identification number and letter for switching elements</b>                                                                                                                                              | 31 E                             |
| Operating current at AC-12 maximum                                                                                                                                                                          | 10 A                             |
| <b>Operating current at AC-15</b>                                                                                                                                                                           |                                  |
| <ul style="list-style-type: none"> <li>• at 230 V rated value</li> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>                                    | 10 A<br>3 A<br>2 A<br>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>                             | 1.2 A<br>0.5 A<br>0.26 A                        |
| <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>• 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> | 6 mm<br><br>6 mm                                                                                                                     |

#### 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 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 |

#### 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 %<br>73 %             |

|                                                                                |         |
|--------------------------------------------------------------------------------|---------|
| <b>Failure rate [FIT]</b><br>• with low demand rate acc. to SN 31920           | 100 FIT |
| <b>Product function</b><br>• positively driven operation acc. to IEC 60947-5-1 | Yes     |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b>      | 20 y    |

#### Certificates/approvals

| General Product Approval                                                                 |                                                                                          |                                                                                         | Functional Safety/Safety of Machinery                                                    | Declaration of Conformity                                                                       |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br>CCC | <br>CSA | <br>UL | <br>EAC | <br>EG-Konf. |

[Type Examination](#)

| Test Certificates                                  |                                          |                               | Marine / Shipping                                                                        |                                                                                                       |                                                                                           |
|----------------------------------------------------|------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Special Test Certificate</a> | <a href="#">Miscellaneous</a> | <br>ABS | <br>BUREAU VERITAS | <br>GL |

| Marine / Shipping                                                                          |                                                                                            |                                                                                             |                                                                                             |                                                                                                 | other                                       |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------|
| <br>LRS | <br>PRS | <br>RINA | <br>RMRS | <br>DNV GL | <a href="#">Environmental Confirmations</a> |

| other                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------|
| <a href="#">Confirmation</a><br><br>VDE |

#### Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

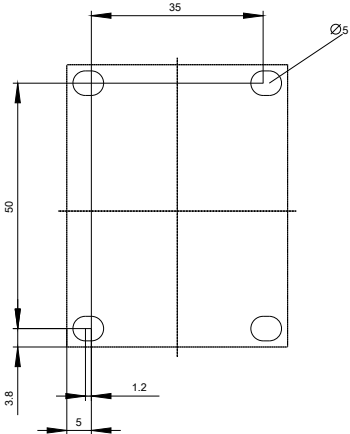
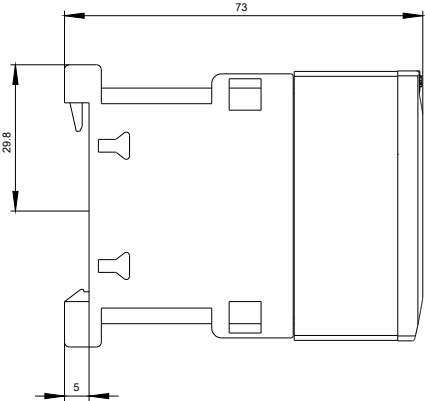
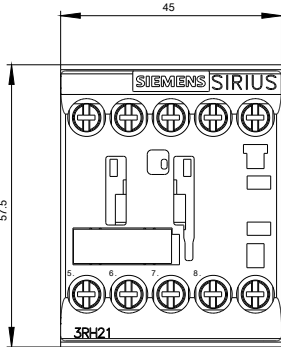
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2131-1BB40>

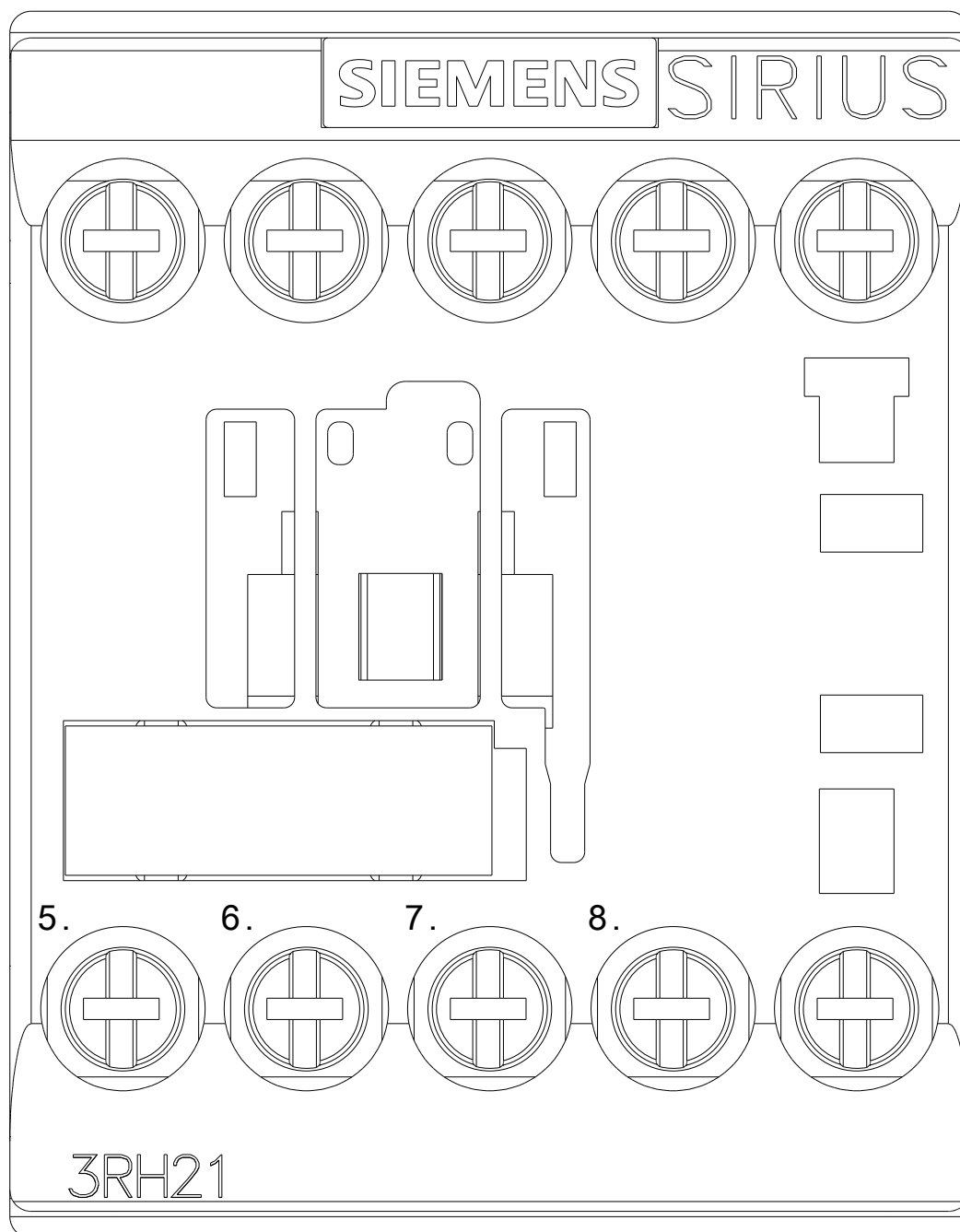
**Cax online generator**

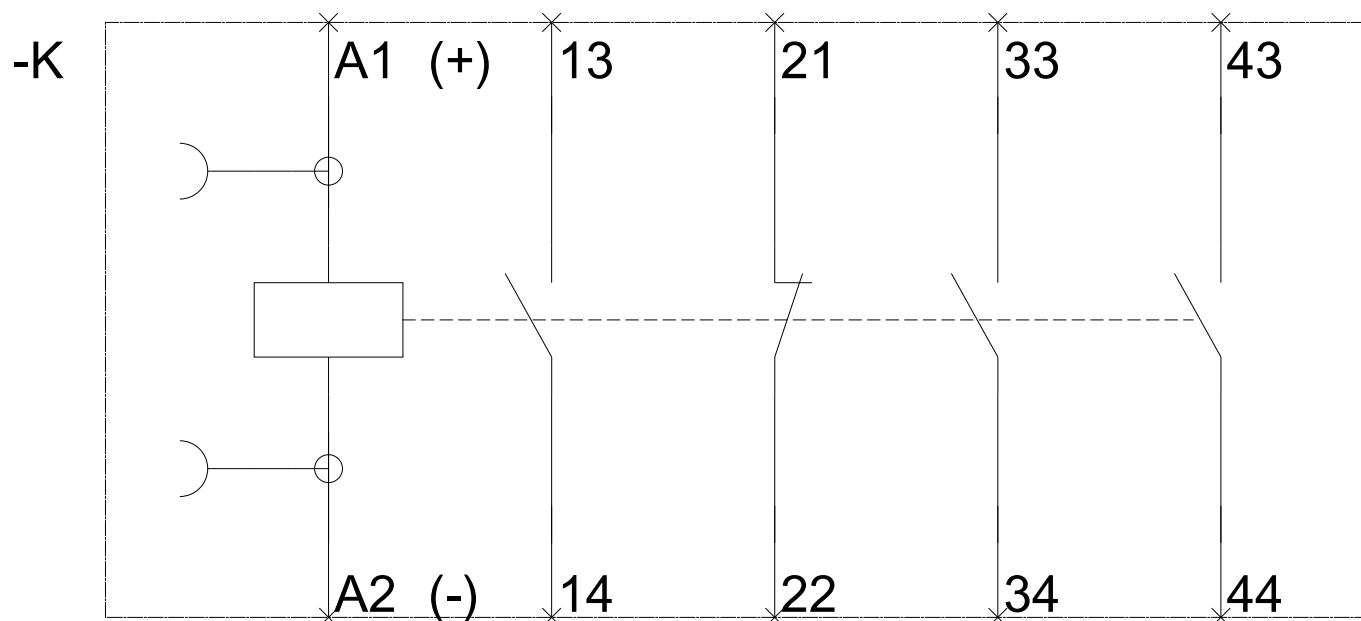
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2131-1BB40>

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

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







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