



Coupling relay in industrial enclosure 3 hard gold-plated changeover contacts Wide voltage range 24 V to 240 V AC/DC Screw terminals

|   |  |
|---|--|
| <b>product brand name</b>   | SIRIUS                                 |
| <b>product designation</b>  | Coupling relay in industrial enclosure |
| <b>product type designation</b>   | 3RQ2                                   |
| <b>General technical data</b>   |  |
| <b>consumed active power</b>  | 5 W                                    |
| insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value | 300 V                                  |
| <b>degree of pollution</b>  | 3                                      |
| <b>surge voltage resistance rated value</b>   | 4 kV                                   |
| <b>maximum permissible voltage for safe isolation</b>   |  |
| • between auxiliary and auxiliary circuit   | 300 V                                  |
| • between control and auxiliary circuit according to IEC 60947-1  | 300 V                                  |
| <b>protection class IP</b>  | IP20                                   |
| <b>shock resistance</b>   |  |
| • according to IEC 60068-2-27   | 11g / 15 ms                            |
| • for railway applications according to EN 61373  | Category 1, Class B                    |
| <b>vibration resistance</b>   |  |
| • according to IEC 60068-2-6  | 10 ... 55 Hz: 0.35 mm                  |
| • for railway applications according to EN 61373  | Category 1, Class B                    |
| <b>switching behavior</b>   | monostable                             |
| mechanical service life (switching cycles) typical  | 10 000 000                             |
| electrical endurance (switching cycles) at AC-15 at 230 V typical   | 100 000                                |
| <b>thermal current of the switching element with contacts maximum</b>   | 5 A                                    |
| <b>reference code according to IEC 81346-2</b>  | K                                      |
| <b>Substance Prohibitance (Date)</b>  | 05/31/2018                             |
| <b>Control circuit/ Control</b>   |  |
| <b>control supply voltage 1 at AC</b>   |  |
| • at 50 Hz  | 24 ... 240 V                           |
| • at 60 Hz  | 24 ... 240 V                           |
| <b>control supply voltage 1</b>   |  |
| • at DC   | 24 ... 240 V                           |
| <b>operating range factor control supply voltage rated value at DC</b>  |  |
| • initial value   | 0.7                                    |
| • full-scale value  | 1.1                                    |
| <b>operating range factor control supply voltage rated value at AC at 50 Hz</b>                               |  |
| • initial value   | 0.7                                    |

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|---|--|
| <ul style="list-style-type: none"> <li>• full-scale value</li> </ul>  | 1.1  |
| <b>operating range factor control supply voltage rated value at AC at 60 Hz</b>                                 |  |
| <ul style="list-style-type: none"> <li>• initial value</li> </ul>   | 0.7  |
| <ul style="list-style-type: none"> <li>• full-scale value</li> </ul>  | 1.1  |
| <b>ON-delay time</b>  |  |
| <ul style="list-style-type: none"> <li>• at AC maximum</li> </ul>   | 10 ms  |
| <ul style="list-style-type: none"> <li>• at DC maximum</li> </ul>   | 10 ms  |
| <b>OFF-delay time</b>   | 100 ms   |
| <b>design of the relay operating mechanism</b>  | poled  |
| <b>product component plug-in socket</b>   | No   |
| <b>Short-circuit protection</b>   |  |
| design of the fuse link for short-circuit protection of the auxiliary switch required                           | fuse gL/gG: 6 A  |
| <b>Auxiliary circuit</b>  |  |
| <b>material of switching contacts</b>   | AgNi + Au  |
| <b>number of NC contacts for auxiliary contacts</b>   | 0  |
| <b>number of NO contacts for auxiliary contacts</b>   | 0  |
| number of CO contacts for auxiliary contacts  | 3  |
| <b>contact reliability of auxiliary contacts</b>  | one incorrect switching per 100 million (11 V, 2 mA)                 |
| <b>type of voltage</b>  | AC/DC  |
| <b>ampacity of the output relay at AC-15</b>  |  |
| <ul style="list-style-type: none"> <li>• at 24 V at 50/60 Hz</li> </ul>   | 3 A  |
| <ul style="list-style-type: none"> <li>• at 110 V at 50/60 Hz</li> </ul>  | 3 A  |
| <ul style="list-style-type: none"> <li>• at 250 V at 50/60 Hz</li> </ul>  | 3 A  |
| <b>ampacity of the output relay at DC-13</b>  |  |
| <ul style="list-style-type: none"> <li>• at 24 V</li> </ul>   | 1 A  |
| <ul style="list-style-type: none"> <li>• at 125 V</li> </ul>  | 0.2 A  |
| <ul style="list-style-type: none"> <li>• at 250 V</li> </ul>  | 0.1 A  |
| <b>Electromagnetic compatibility</b>  |  |
| EMC emitted interference according to IEC 60947-1   | ambience A (industrial sector)                                       |
| EMC immunity according to IEC 60947-1   | corresponds to degree of severity 3                                  |
| <b>conducted interference</b>   |  |
| <ul style="list-style-type: none"> <li>• due to burst according to IEC 61000-4-4</li> </ul>                     | 2 kV   |
| <ul style="list-style-type: none"> <li>• due to conductor-earth surge according to IEC 61000-4-5</li> </ul>     | 2 kV (line to ground)  |
| <ul style="list-style-type: none"> <li>• due to conductor-conductor surge according to IEC 61000-4-5</li> </ul> | 1 kV (line to line)  |
| <b>field-based interference according to IEC 61000-4-3</b>  | 10 V/m   |
| <b>electrostatic discharge according to IEC 61000-4-2</b>   | 4 kV contact discharging, 8 kV air discharging                       |
| <b>Safety related data</b>  |  |
| <b>electromagnetic compatibility</b>  | IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4                          |
| <b>Connections/ Terminals</b>   |  |
| <b>product component removable terminal for auxiliary and control circuit</b>                                   | Yes  |
| <b>type of electrical connection</b>  | screw-type terminals   |
| <b>type of connectable conductor cross-sections</b>   |  |
| <ul style="list-style-type: none"> <li>• solid</li> </ul>   | 1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>                    | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )   |
| <ul style="list-style-type: none"> <li>• at AWG cables solid</li> </ul>   | 1x (20 ... 12), 2x (20 ... 14)                                       |
| <b>connectable conductor cross-section</b>  |  |
| <ul style="list-style-type: none"> <li>• solid</li> </ul>   | 0.5 ... 4 mm <sup>2</sup>  |
| <ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>                    | 4 mm <sup>2</sup>  |
| <ul style="list-style-type: none"> <li>• finely stranded without core end processing</li> </ul>                 | 0.5 mm <sup>2</sup>  |
| <b>AWG number as coded connectable conductor cross section</b>  |  |
| <ul style="list-style-type: none"> <li>• solid</li> </ul>   | 12 ... 20  |
| <ul style="list-style-type: none"> <li>• stranded</li> </ul>  | 12 ... 20  |
| tightening torque with screw-type terminals   | 0.6 ... 0.8 N·m  |
| stripped length of the cable for auxiliary and control contacts   | 10 mm  |

| Installation/ mounting/ dimensions |  |
|------------------------------------|--|
| mounting position                  | any  |
| fastening method                   | screw and snap-on mounting onto 35 mm standard mounting rail |
| height                             | 100 mm   |
| width                              | 22.5 mm  |
| depth                              | 90 mm  |

| Ambient conditions                                      |                |
|---|----------------|
| installation altitude at height above sea level maximum | 2 000 m        |
| ambient temperature                                     |                |
| • during operation                                      | -40 ... +60 °C |
| • during storage  | -40 ... +80 °C |
| • during transport                                      | -40 ... +80 °C |
| relative humidity during operation                      | 10 ... 95 %    |

| Certificates/ approvals  |     |
|--------------------------|-----|
| General Product Approval | EMC |



[Confirmation](#)



| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|
|---------------------------|-------------------|-------------------|



[Type Test Certificates/Test Report](#)



| other | Railway |
|-------|---------|
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[Confirmation](#)

[Confirmation](#)

### Further information

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=3RQ2000-1CW01>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RQ2000-1CW01>

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

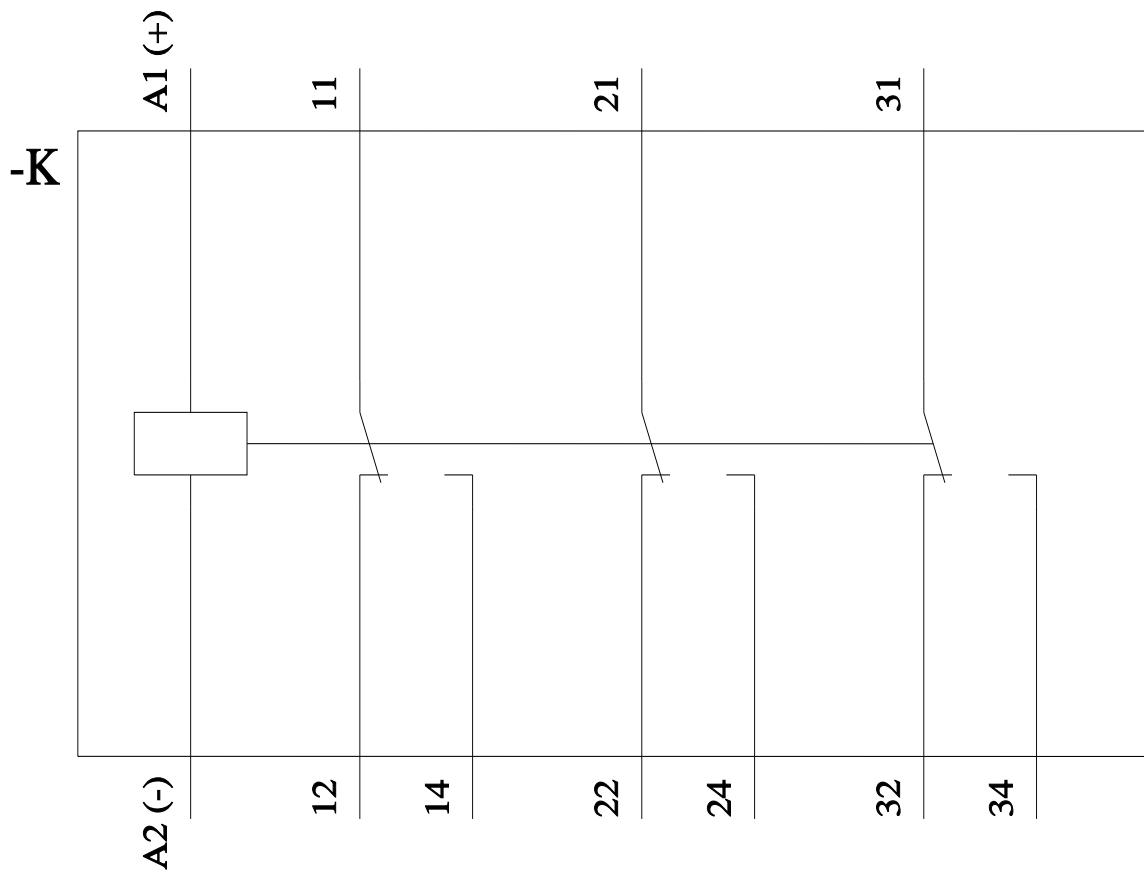
<https://support.industry.siemens.com/cs/ww/en/ps/3RQ2000-1CW01>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RQ2000-1CW01&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RQ2000-1CW01&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RQ2000-1CW01/manual>



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