



Coupling relay in industrial enclosure 1 changeover contact Wide voltage range 24 V to 240 V AC/DC Screw terminals

|                                                                                                                                                                                                                         |                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| product brand name                                                                                                                                                                                                      | SIRIUS                                                                                                                                                                             |
| product designation                                                                                                                                                                                                     | Coupling relay in industrial enclosure                                                                                                                                             |
| product type designation                                                                                                                                                                                                | 3RQ2                                                                                                                                                                               |
| <b>General technical data</b>                                                                                                                                                                                           |                                                                                                                                                                                    |
| product feature protective coating on printed-circuit board                                                                                                                                                             | No                                                                                                                                                                                 |
| consumed active power                                                                                                                                                                                                   | 1.5 W                                                                                                                                                                              |
| insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value                                                                                                           | 300 V                                                                                                                                                                              |
| degree of pollution                                                                                                                                                                                                     | 3                                                                                                                                                                                  |
| surge voltage resistance rated value                                                                                                                                                                                    | 4 kV                                                                                                                                                                               |
| maximum permissible voltage for protective separation <ul style="list-style-type: none"> <li>between auxiliary and auxiliary circuit</li> <li>between control and auxiliary circuit according to IEC 60947-1</li> </ul> | 300 V<br>300 V                                                                                                                                                                     |
| shock resistance <ul style="list-style-type: none"> <li>according to IEC 60068-2-27</li> <li>for railway applications according to EN 61373</li> </ul>                                                                  | 11 g / 15 ms<br>Category 1, Class B                                                                                                                                                |
| vibration resistance <ul style="list-style-type: none"> <li>according to IEC 60068-2-6</li> <li>for railway applications according to EN 61373</li> </ul>                                                               | 10 ... 55 Hz: 0.35 mm<br>Category 1, Class B                                                                                                                                       |
| switching behavior                                                                                                                                                                                                      | monostable                                                                                                                                                                         |
| mechanical service life (operating cycles) typical                                                                                                                                                                      | 10 000 000                                                                                                                                                                         |
| electrical endurance (operating cycles) at AC-15 at 230 V typical                                                                                                                                                       | 100 000                                                                                                                                                                            |
| thermal current of the switching element with contacts maximum                                                                                                                                                          | 5 A                                                                                                                                                                                |
| reference code according to IEC 81346-2                                                                                                                                                                                 | K                                                                                                                                                                                  |
| Substance Prohibitance (day/month/year)                                                                                                                                                                                 | 05/31/2018                                                                                                                                                                         |
| SVHC substance name                                                                                                                                                                                                     | Lead CAS-No. 7439-92-1<br>Lead monoxide (lead oxide) CAS-No. 1317-36-8<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5<br>Melamine CAS-No. 108-78-1 |
| Net Weight                                                                                                                                                                                                              | 0.152 kg                                                                                                                                                                           |
| <b>Control circuit/ Control</b>                                                                                                                                                                                         |                                                                                                                                                                                    |
| control supply voltage at AC <ul style="list-style-type: none"> <li>at 50 Hz rated value</li> <li>at 50 Hz</li> <li>at 60 Hz rated value</li> <li>at 60 Hz</li> </ul>                                                   | 24 ... 240 V<br>24 ... 240 V<br>24 ... 240 V<br>24 ... 240 V                                                                                                                       |
| control supply voltage at DC rated value                                                                                                                                                                                | 24 ... 240 V                                                                                                                                                                       |
| control supply voltage 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                                                                                |
| • full-scale value                                                                    | 1.1                                                                                |
| <b>operating range factor control supply voltage rated value at AC at 60 Hz</b>       |                                                                                    |
| • initial value                                                                       | 0.7                                                                                |
| • full-scale value                                                                    | 1.1                                                                                |
| <b>ON-delay time</b>                                                                  |                                                                                    |
| • at AC maximum                                                                       | 10 ms                                                                              |
| • at DC maximum                                                                       | 10 ms                                                                              |
| <b>OFF-delay time maximum</b>                                                         | 100 ms                                                                             |
| <b>Switching Function</b>                                                             |                                                                                    |
| <b>design of the switching function</b>                                               | CO contact                                                                         |
| <b>Mechanical data</b>                                                                |                                                                                    |
| <b>product component plug-in socket</b>                                               | No                                                                                 |
| <b>design of the relay operating mechanism</b>                                        | poled                                                                              |
| <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>                                                 | AgSnO2                                                                             |
| <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                                          | 1                                                                                  |
| <b>contact reliability of auxiliary contacts</b>                                      | one incorrect switching operation of 100 million switching operations (17 V, 5 mA) |
| <b>type of voltage</b>                                                                | AC/DC                                                                              |
| <b>ampacity of the output relay at AC-15</b>                                          |                                                                                    |
| • at 24 V at 50/60 Hz                                                                 | 3 A                                                                                |
| • at 110 V at 50/60 Hz                                                                | 3 A                                                                                |
| • at 250 V at 50/60 Hz                                                                | 3 A                                                                                |
| <b>ampacity of the output relay at DC-13</b>                                          |                                                                                    |
| • at 24 V                                                                             | 1 A                                                                                |
| • at 125 V                                                                            | 0.2 A                                                                              |
| • at 250 V                                                                            | 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>                                                         |                                                                                    |
| • due to burst according to IEC 61000-4-4                                             | 2 kV                                                                               |
| • due to conductor-earth surge according to IEC 61000-4-5                             | 2 kV (line to ground)                                                              |
| • due to conductor-conductor surge according to IEC 61000-4-5                         | 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>Display</b>                                                                        |                                                                                    |
| <b>product component LED</b>                                                          | Yes                                                                                |
| <b>Connections/ Terminals</b>                                                         |                                                                                    |
| <b>product component removable terminal for auxiliary and control circuit</b>         | Yes                                                                                |
| <b>type of electrical connection</b>                                                  | screw terminal                                                                     |
| <b>type of connectable conductor cross-sections</b>                                   |                                                                                    |
| • solid                                                                               | 1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)                                           |
| • finely stranded with core end processing                                            | 1x (0.5 ... 4 mm²), 2x (0.5 ... 1.5 mm²)                                           |
| • for AWG cables solid                                                                | 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 maximum</li> </ul>    | 4 mm <sup>2</sup>         |
| <ul style="list-style-type: none"> <li>• finely stranded without core end processing minimum</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

|                          |                                                |
|--------------------------|------------------------------------------------|
| <b>mounting position</b> | any                                            |
| <b>fastening method</b>  | screw and snap-on mounting onto 35 mm DIN rail |
| <b>height</b>            | 100 mm                                         |
| <b>width</b>             | 22.5 mm                                        |
| <b>depth</b>             | 90 mm                                          |

#### Ambient conditions

|                                                                      |                |
|----------------------------------------------------------------------|----------------|
| installation altitude at height above sea level maximum              | 2 000 m        |
| <b>ambient temperature</b>                                           |                |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul> | -40 ... +60 °C |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>   | -40 ... +80 °C |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul> | -40 ... +80 °C |
| relative humidity during operation                                   | 10 ... 95 %    |

#### Approvals Certificates

|                    |                                 |
|--------------------|---------------------------------|
| <b>Environment</b> | <b>General Product Approval</b> |
|--------------------|---------------------------------|

[Environmental Conformations](#)



|            |                          |                             |
|------------|--------------------------|-----------------------------|
| <b>EMV</b> | <b>Test Certificates</b> | <b>Maritime application</b> |
|------------|--------------------------|-----------------------------|



[Type Test Certificates/Test Report](#)



|                             |              |                |
|-----------------------------|--------------|----------------|
| <b>Maritime application</b> | <b>other</b> | <b>Railway</b> |
|-----------------------------|--------------|----------------|



[Confirmation](#)



[Confirmation](#)

#### 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=3RQ2000-1AW00>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RQ2000-1AW00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RQ2000-1AW00>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RQ2000-1AW00&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RQ2000-1AW00&lang=en)



