

Coupling relay in industrial enclosure 2 changeover contacts 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

General technical data	
Consumed active power	4.5 W
Insulation voltage	
<ul style="list-style-type: none"> <li>for overvoltage category III according to IEC 60664</li> </ul>	
— with degree of pollution 3 rated value	300 V
Degree of pollution	3
Surge voltage resistance rated value	4 kV
maximum permissible voltage for safe isolation	
<ul style="list-style-type: none"> <li>between auxiliary and auxiliary circuit</li> </ul>	300 V
<ul style="list-style-type: none"> <li>between control and auxiliary circuit acc. to IEC 60947-1</li> </ul>	300 V
Protection class IP	IP20
Shock resistance	
<ul style="list-style-type: none"> <li>acc. to IEC 60068-2-27</li> </ul>	11g / 15 ms
<ul style="list-style-type: none"> <li>for railway applications acc. to DIN EN 61373</li> </ul>	Category 1, Class B

<b>Vibration resistance</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-6</li> <li>• for railway applications acc. to DIN EN 61373</li> </ul>	10 ... 55 Hz: 0.35 mm Category 1, Class B
<b>Switching behavior</b>	monostable
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	10 000 000
<b>Electrical endurance (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• at AC-15 at 230 V typical</li> </ul>	100 000
<b>Thermal current of the switching element with contacts maximum</b>	5 A
<b>Reference code acc. to DIN EN 81346-2</b>	K

#### Control circuit/ Control

<b>Control supply voltage 1 at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	24 ... 240 V 24 ... 240 V
<b>Control supply voltage 1</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	24 ... 240 V
<b>Operating range factor control supply voltage rated value at DC</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• Full-scale value</li> </ul>	0.7 1.1
<b>Operating range factor control supply voltage rated value at AC at 50 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• Full-scale value</li> </ul>	0.7 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> <li>• Full-scale value</li> </ul>	0.7 1.1
<b>Switch-on delay time</b>	
<ul style="list-style-type: none"> <li>• at AC maximum</li> <li>• at DC maximum</li> </ul>	10 ms 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

#### 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: 6 A

#### Auxiliary circuit

<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
<b>Number of CO contacts</b>	
• for auxiliary contacts	2
<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

### Outputs

<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

### Electromagnetic compatibility

<b>EMC emitted interference</b>	
• acc. to IEC 60947-1	ambience A (industrial sector)
<b>EMI immunity</b>	
• acc. to IEC 60947-1	corresponds to degree of severity 3
<b>Conducted interference</b>	
• due to burst acc. to IEC 61000-4-4	2 kV
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV (line to ground)
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV (line to line)
<b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>	10 V/m
<b>Electrostatic discharge acc. to IEC 61000-4-2</b>	4 kV contact discharging, 8 kV air discharging

### Safety related data

<b>Electromagnetic compatibility</b>	IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4
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### Connections/ Terminals

<b>Product function</b>	
• removable terminal for auxiliary and control circuit	Yes
<b>Type of electrical connection</b>	screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
• solid	1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• finely stranded with core end processing	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
• at AWG conductors solid	1x (20 ... 12), 2x (20 ... 14)
<b>Connectable conductor cross-section</b>	
• solid	0.5 ... 4 mm <sup>2</sup>

<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>	<p>4 mm<sup>2</sup></p> <p>0.5 mm<sup>2</sup></p>
<b>AWG number as coded connectable conductor cross section</b> <ul style="list-style-type: none"> <li>solid</li> <li>stranded</li> </ul>	<p>12 ... 20</p> <p>12 ... 20</p>
<b>Tightening torque</b> <ul style="list-style-type: none"> <li>with screw-type terminals</li> </ul>	<p>0.6 ... 0.8 N·m</p>
<b>Wire stripping length of the cable</b> <ul style="list-style-type: none"> <li>for auxiliary and control contacts</li> </ul>	<p>10 mm</p>

### Installation/ mounting/ dimensions

<b>Mounting position</b>	any
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail
<b>Height</b>	100 mm
<b>Width</b>	22.5 mm
<b>Depth</b>	90 mm

### Ambient conditions

<b>Installation altitude at height above sea level</b> <ul style="list-style-type: none"> <li>maximum</li> </ul>	<p>2 000 m</p>
<b>Relative humidity</b> <ul style="list-style-type: none"> <li>during operation</li> </ul>	<p>10 ... 95 %</p>

### Certificates/ approvals

<b>General Product Approval</b>			<b>EMC</b>	<b>Declaration of Conformity</b>	
 CCC	 CSA	 UL		 RCM	 EG-Konf.

<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>other</b>	<b>Railway</b>
<a href="#">Miscellaneous</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Confirmation</a>	<a href="#">Confirmation</a>

### 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?mifb=3RQ2000-1BW00>

**Cax online generator**

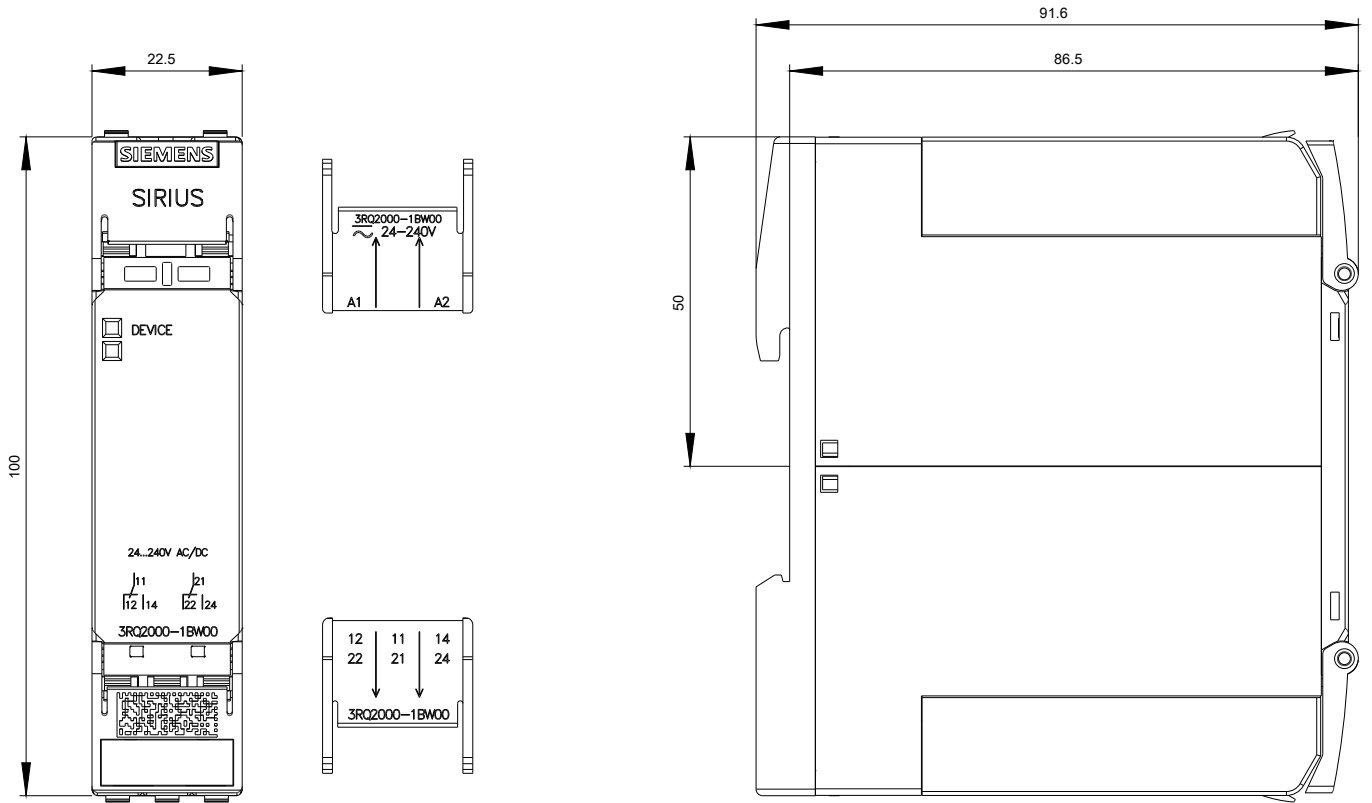
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RQ2000-1BW00>

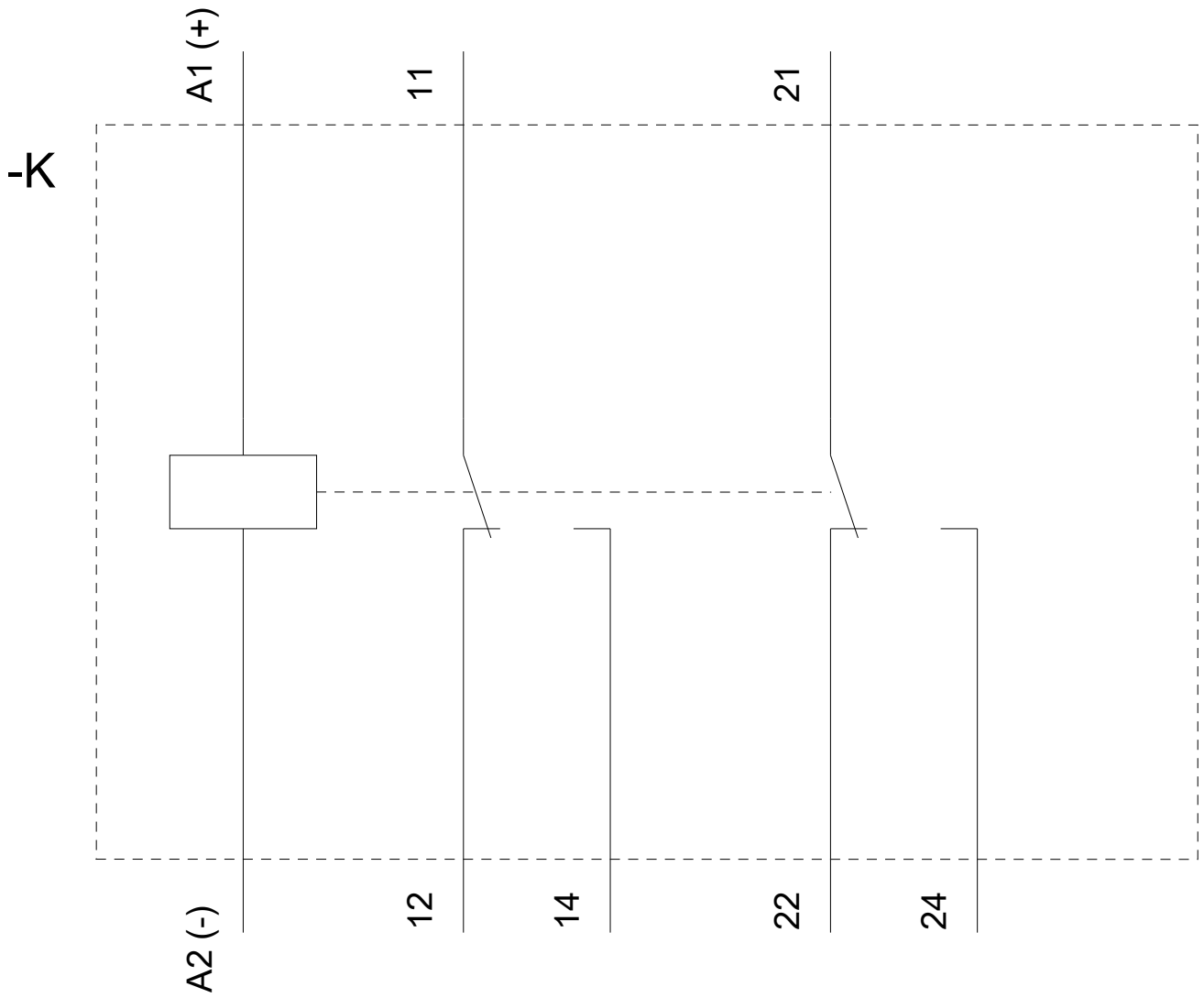
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RQ2000-1BW00>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RQ2000-1BW00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RQ2000-1BW00&lang=en)





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