

Coupling relay in industrial enclosure 3 hard gold-plated 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	5 W
Insulation voltage <ul style="list-style-type: none"> • 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 safe isolation <ul style="list-style-type: none"> • between auxiliary and auxiliary circuit • between control and auxiliary circuit acc. to IEC 60947-1 	300 V 300 V
Protection class IP	IP20
Shock resistance <ul style="list-style-type: none"> • acc. to IEC 60068-2-27 • for railway applications acc. to DIN EN 61373 	11g / 15 ms Category 1, Class B

Vibration resistance	
<ul style="list-style-type: none"> • acc. to IEC 60068-2-6 • for railway applications acc. to DIN EN 61373 	10 ... 55 Hz: 0.35 mm Category 1, Class B
Switching behavior	monostable
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • typical 	10 000 000
Electrical endurance (switching cycles)	
<ul style="list-style-type: none"> • at AC-15 at 230 V typical 	100 000
Thermal current of the switching element with contacts maximum	5 A
Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	K
Reference code acc. to DIN EN 81346-2	K
Reference code acc. to DIN EN 61346-2	K

Control circuit/ Control

Control supply voltage 1 at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	24 ... 240 V 24 ... 240 V
Control supply voltage 1	
<ul style="list-style-type: none"> • at DC 	24 ... 240 V
Operating range factor control supply voltage rated value at DC	
<ul style="list-style-type: none"> • initial value • Full-scale value 	0.7 1.1
Operating range factor control supply voltage rated value at AC at 50 Hz	
<ul style="list-style-type: none"> • initial value • Full-scale value 	0.7 1.1
Operating range factor control supply voltage rated value at AC at 60 Hz	
<ul style="list-style-type: none"> • initial value • Full-scale value 	0.7 1.1
Switch-on delay time	
<ul style="list-style-type: none"> • at AC maximum • at DC maximum 	10 ms 10 ms
Off-delay time	100 ms
Design of the relay operating mechanism	poled
Product component Plug-in socket	No

Short-circuit protection

Design of the fuse link	
<ul style="list-style-type: none"> • for short-circuit protection of the auxiliary switch required 	fuse gL/gG: 6 A

Auxiliary circuit	
Material of switching contacts	AgNi + Au
Number of NC contacts for auxiliary contacts	0
Number of NO contacts for auxiliary contacts	0
Number of CO contacts	
<ul style="list-style-type: none"> for auxiliary contacts 	3
Contact reliability of auxiliary contacts	one incorrect switching per 100 million (11 V, 2 mA)
Type of voltage	AC/DC

Outputs	
Ampacity of the output relay at AC-15	
<ul style="list-style-type: none"> at 24 V at 50/60 Hz at 110 V at 50/60 Hz at 250 V at 50/60 Hz 	3 A 3 A 3 A
Ampacity of the output relay at DC-13	
<ul style="list-style-type: none"> at 24 V at 125 V at 250 V 	1 A 0.2 A 0.1 A

Electromagnetic compatibility	
EMC emitted interference	
<ul style="list-style-type: none"> acc. to IEC 60947-1 	ambience A (industrial sector)
EMI immunity	
<ul style="list-style-type: none"> acc. to IEC 60947-1 	corresponds to degree of severity 3
Conducted interference	
<ul style="list-style-type: none"> due to burst acc. to IEC 61000-4-4 due to conductor-earth surge acc. to IEC 61000-4-5 due to conductor-conductor surge acc. to IEC 61000-4-5 	2 kV 2 kV (line to ground) 1 kV (line to line)
Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
Electrostatic discharge acc. to IEC 61000-4-2	4 kV contact discharging, 8 kV air discharging

Safety related data	
Electromagnetic compatibility	IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4

Connections/ Terminals	
Product function	
<ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	Yes
Type of electrical connection	screw-type terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> solid finely stranded with core end processing at AWG conductors solid 	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 4 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (20 ... 12), 2x (20 ... 14)

Connectable conductor cross-section	
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • finely stranded without core end processing 	<p>0.5 ... 4 mm²</p> <p>4 mm²</p> <p>0.5 mm²</p>
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • solid • stranded 	<p>12 ... 20</p> <p>12 ... 20</p>
Tightening torque	
<ul style="list-style-type: none"> • with screw-type terminals 	0.6 ... 0.8 N·m
Wire stripping length of the cable	
<ul style="list-style-type: none"> • for auxiliary and control contacts 	10 mm

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	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	
<ul style="list-style-type: none"> • maximum 	2 000 m
Relative humidity	
<ul style="list-style-type: none"> • during operation 	10 ... 95 %

Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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Declaration of Conformity	Test Certificates	other	Railway
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[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Confirmation](#)

[Confirmation](#)

Further information

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

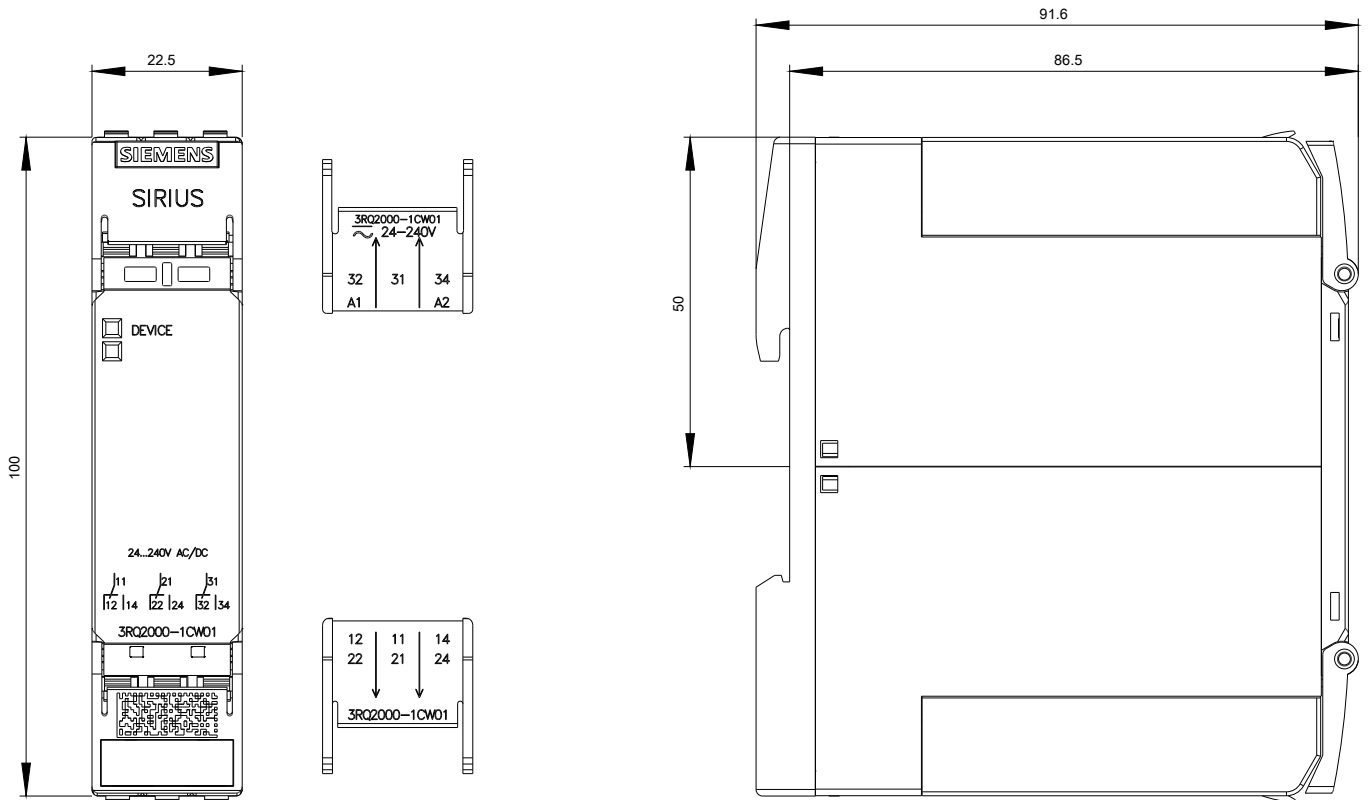
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RQ2000-1CW01>

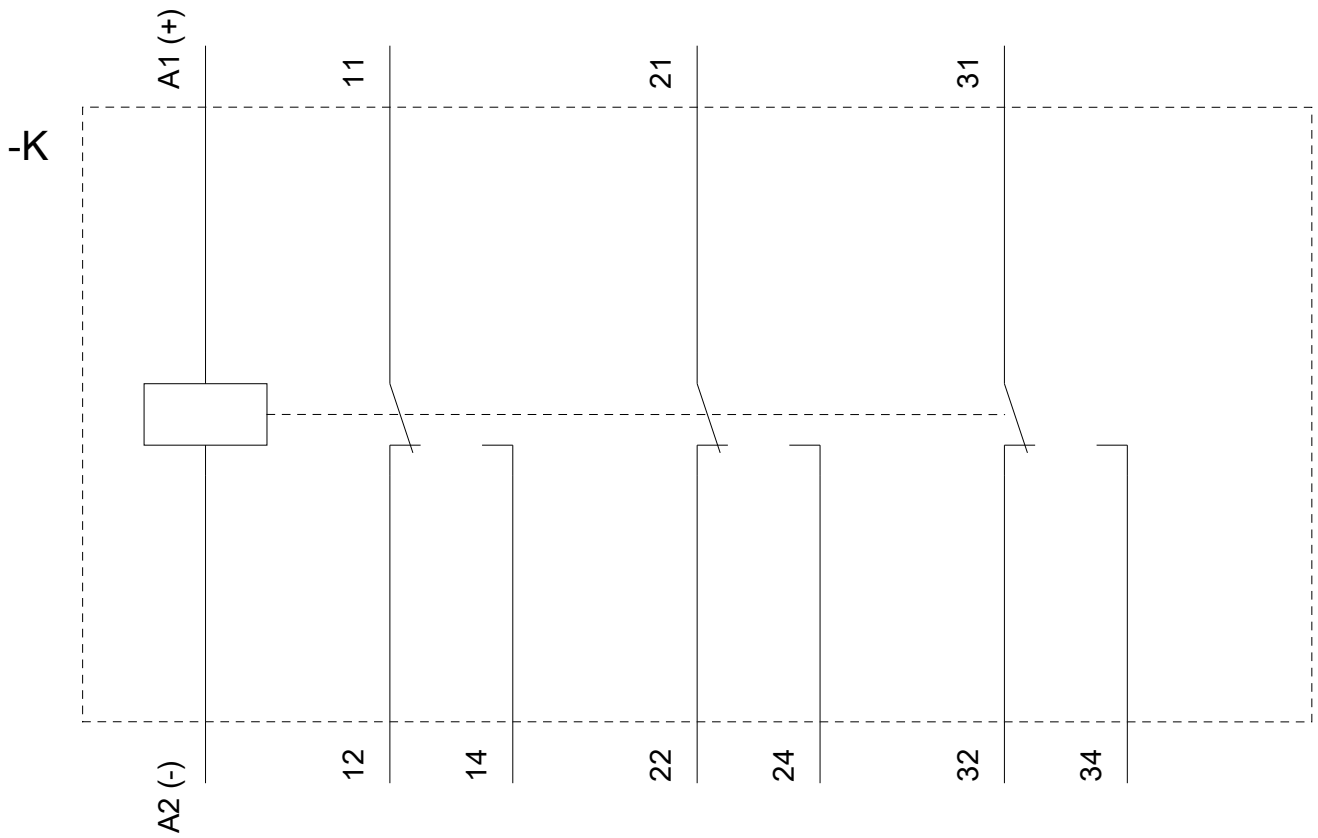
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<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





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