SIEMENS

Data sheet 3RQ2000-1BW00

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	
product feature protective coating on printed-circuit board	No
consumed active power	4.5 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	
● between auxiliary and auxiliary circuit	300 V
● between control and auxiliary circuit according to IEC 60947-1	300 V
protection class IP	IP20
shock resistance	
● **according to IEC 60068-2-27**	11g / 15 ms
● for railway applications according to EN 61373	Category 1, Class B
vibration resistance	
● **according to IEC 60068-2-6**	10 ... 55 Hz: 0.35 mm
● for railway applications according to EN 61373	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 (Date)	05/31/2018
Control circuit/ Control	
control supply voltage 1 at AC	
● at 50 Hz	24 ... 240 V
● at 60 Hz	24 ... 240 V
control supply voltage 1	
● at DC	24 ... 240 V
operating range factor control supply voltage rated value at DC	
● initial value	0.7
● full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
● initial value	0.7

● full-scale value	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
● initial value	0.7
● full-scale value	1.1
ON-delay time	
● at AC maximum	10 ms
● at DC maximum	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 for short-circuit protection of the auxiliary switch required	fuse gL/gG: 6 A
Auxiliary circuit	
material of switching contacts	AgSnO2
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	2
contact reliability of auxiliary contacts	one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
type of voltage	AC/DC
ampacity of the output relay at AC-15	
● 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
ampacity of the output relay at DC-13	
● at 24 V	1 A
● at 125 V	0.2 A
● at 250 V	0.1 A
Electromagnetic compatibility	
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
conducted interference	
● 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)
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according 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 component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw-type terminals
type of connectable conductor cross-sections	
● 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)
connectable conductor cross-section	
● solid	0.5 ... 4 mm²
● finely stranded with core end processing	4 mm²
● finely stranded without core end processing	0.5 mm²
AWG number as coded connectable conductor cross section	
● solid	12 ... 20
● stranded	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 DIN 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

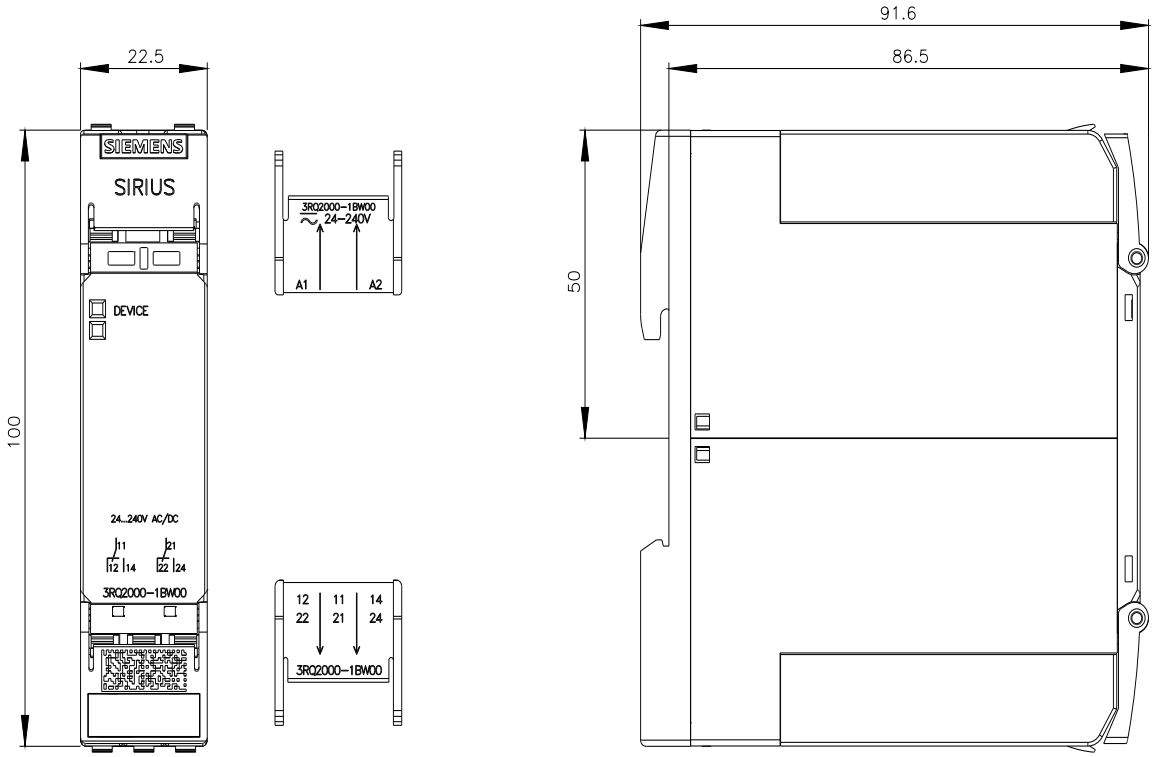
General Product Approval					EMC
CSA	Confirmation	CCC	UL	EAC	RCM

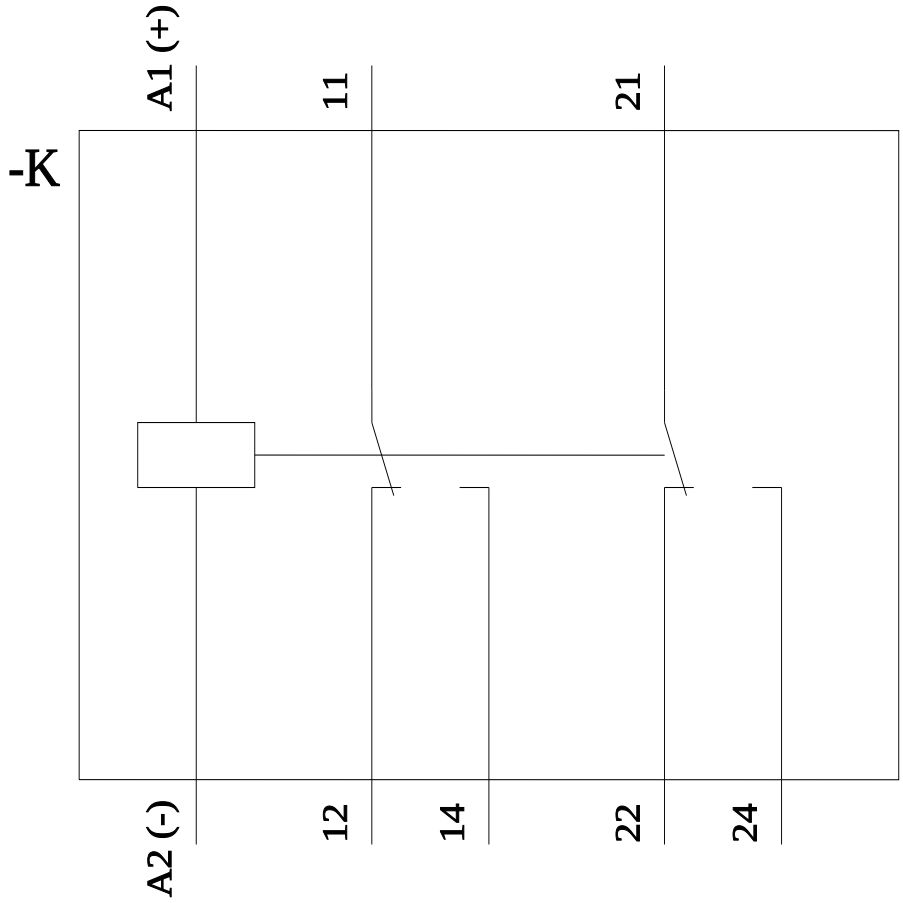
Declaration of Conformity	Test Certificates	Marine / Shipping		
EG-Konf.	Type Test Certific-ates/Test Report	LRS	RINA	RMRS

Marine / Shipping	other	Railway
DNV·GL	Confirmation	Confirmation

Further information

Siemens has decided to exit the Russian market (see here).
https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business
Siemens is working on the renewal of the current EAC certificates.
Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).
Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875
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=3RQ2000-1BW00
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
Characteristic: Derating
https://support.industry.siemens.com/cs/ww/en/ps/3RQ2000-1BW00/manual





last modified: 6/30/2023