SIEMENS

Data sheet 3RQ2000-2BW00



Coupling relay in industrial enclosure 2 changeover contacts Wide voltage range 24 V to 240 V AC/DC Spring-type terminals

product type designation product type designation General technical data consumed active power insulation voltage for overvoltage category III according to IEC 60064 with degree of pollution surge voltage resistance rated value maximum permissible voltage for safe isolation • between control and auxiliary circuit • between control and auxiliary circuit according to IEC 60947-1 protection class IP shock resistance • according to IEC 60068-2-27 • for railway applications according to EN 61373 vibration resistance • according to IEC 60068-2-6 • for railway applications according to EN 61373 switching behavior mechanical service life (switching cycles) typical mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Kubstance Prohibitance (Date) control supply voltage 1 at AC • at 50 Hz • at 10 C • initial value • full-scale value • initial value	product brand name	SIRIUS
General technical data consumed active power insulation voltage for overvoltage category III according to IEC 60064 with degree of pollution 3 rated value degree of pollution surge voltage resistance rated value ### Avivation permissible voltage for safe isolation between auxiliary and auxiliary circuit between control and auxiliary circuit between control and auxiliary circuit according to IEC 60947-1 ### IP20 ### IP2	product designation	Coupling relay in industrial enclosure
consumed active power insulation voltage for overvoltage category III according to IEC 80664 with degree of pollution 3 rated value degree of pollution surge voltage resistance rated value 4 kV maximum permissible voltage for safe isolation • between auxiliary and auxiliary circuit • between control and auxiliary circuit according to IEC 80947-1 protection class IP shock resistance • according to IEC 60068-2-27 • for railway applications according to EN 61373 vibration resistance • according to IEC 60068-2-6 • for railway applications according to EN 61373 switching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Substance Prohibitance (Date) • at 50 Hz • at 50 Hz • at 50 Hz • at DC operating range factor control supply voltage rated value at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz protection in the substance of the supply voltage rated value at AC at 50 Hz protection in the substance of the supply voltage rated value at AC at 50 Hz protection in the substance of the supply voltage rated value at AC at 50 Hz protection in the substance of the supply voltage rated value at CC protection in the substance of the supply voltage rated value at AC at 50 Hz protection in the substance of the supply voltage rated value at CC protection in the substance of the supply voltage rated value at CC protection in the substance of the supply voltage rated value at CC protection in the substance of the supply voltage rated value at CC protection in the substance of the supply voltage rated value at CC protection in the substance of the supply voltage rated value at CC protection in the substance of the supplementation in the substance of the substance	product type designation	3RQ2
insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value degree of pollution 3 a surge voltage resistance rated value 4 kV maximum permissible voltage for safe isolation • between auxiliary circuit 300 V • between control and auxiliary circuit according to IEC 60947-1 protection class IP IP20 shock resistance • according to IEC 60947-2 IP20 shock resistance • according to IEC 60068-2-27 11g / 15 ms	General technical data	
IEC 60664 with degree of pollution 3 rated value degree of pollution 3 3 3 3 3 3 3 3 3	consumed active power	4.5 W
surge voltage resistance rated value maximum permissible voltage for safe isolation • between auxiliary and auxiliary circuit according to IEC 60947-1 protection class IP shock resistance • according to IEC 60068-2-27 • for railway applications according to EN 61373 vibration resistance • according to IEC 60068-2-6 • for railway applications according to EN 61373 vibration resistance • according to IEC 60068-2-6 • for railway applications according to EN 61373 category 1, Class B vitching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 K Substance Prohibitance (Date) control supply voltage 1 at AC • at 50 Hz • at 80 Hz control supply voltage 1 • at DC • initial value • full-scale value 0.7 • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz perating range factor control supply voltage rated value at AC at 50 Hz operating range factor control supply voltage rated value at AC at 50 Hz operating range factor control supply voltage rated value at AC at 50 Hz		300 V
maximum permissible voltage for safe isolation • between auxiliary and auxiliary circuit • between control and auxiliary circuit according to IEC 60947-1 protection class IP shock resistance • according to IEC 60068-2-27 • for railway applications according to EN 61373 vibration resistance • according to IEC 60068-2-6 • according to IEC 60068-2-6 • for railway applications according to EN 61373 category 1, Class B vibration resistance • according to IEC 60068-2-6 • for railway applications according to EN 61373 switching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Substance Prohibitance (Date) control supply voltage 1 at AC • at 50 Hz • at 60 Hz • at 60 Hz • at 50 Hz • at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz operating range factor control supply voltage rated value at AC at 50 Hz operating range factor control supply voltage rated value at AC at 50 Hz operating range factor control supply voltage rated value at AC at 50 Hz operating range factor control supply voltage rated value at AC at 50 Hz	degree of pollution	3
between auxiliary and auxiliary circuit between control and auxiliary circuit according to IEC 60947-1 protection class IP shock resistance according to IEC 60068-2-27 for railway applications according to EN 61373 vibration resistance according to IEC 60068-2-6 for railway applications according to EN 61373 vibration resistance according to IEC 60068-2-6 for railway applications according to EN 61373 switching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Ksubstance Prohibitance (Date) Control supply voltage 1 at AC at 50 Hz at 60 Hz initial value initial value initial value full-scale value operating range factor control supply voltage rated value at DC initial value operating range factor control supply voltage rated value at AC at 50 Hz set to the suit according to IEC supply voltage rated value at AC at 50 Hz according to IEC according to IEC supply voltage rated value at AC at 50 Hz according to IEC according to IEC supply voltage rated value at AC at 50 Hz according to IEC according to IEC according to IEC supply voltage rated value at AC at 50 Hz	surge voltage resistance rated value	4 kV
between control and auxiliary circuit according to IEC 60947-1 protection class IP shock resistance according to IEC 60068-2-27 for railway applications according to EN 61373 category 1, Class B vibration resistance according to IEC 60068-2-6 for railway applications according to EN 61373 category 1, Class B vibration resistance according to IEC 60068-2-6 for railway applications according to EN 61373 category 1, Class B switching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Substance Prohibitance (Date) Control circuit/ Control control supply voltage 1 at AC at 50 Hz at 60 Hz at 60 Hz at 60 Hz category 1, Class B monostable mono	maximum permissible voltage for safe isolation	
IPC 60947-1	 between auxiliary and auxiliary circuit 	300 V
shock resistance according to IEC 60068-2-27 for railway applications according to EN 61373 category 1, Class B vibration resistance according to IEC 60068-2-6 for railway applications according to EN 61373 switching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Substance Prohibitance (Date) control supply voltage 1 at AC at 50 Hz at DC operating range factor control supply voltage rated value at DC intill-scale value operating range factor control supply voltage rated value at AC at 50 Hz of for railway applications according to EN 61373 Category 1, Class B 10 55 Hz: 0.35 mm category 1, Class B 10 55 Hz: 0.35 mm category 1, Class B 10 000 000 10 000 000 10 000 000 10 000 10 000 00	,	300 V
according to IEC 60068-2-27 for railway applications according to EN 61373 Category 1, Class B vibration resistance according to IEC 60068-2-6 for railway applications according to EN 61373 switching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Substance Prohibitance (Date) Control circuit/ Control control supply voltage 1 at AC at 50 Hz at DC operating range factor control supply voltage rated value at DC initial value operating range factor control supply voltage rated value at AC at 50 Hz of the factor of the supply voltage rated value at AC at 50 Hz 110 55 Hz: 0.35 mm Category 1, Class B	protection class IP	IP20
• for railway applications according to EN 61373 vibration resistance • according to IEC 60068-2-6 • for railway applications according to EN 61373 Category 1, Class B • for railway applications according to EN 61373 Category 1, Class B • for railway applications according to EN 61373 Category 1, Class B • for railway applications according to EN 61373 Category 1, Class B • for railway applications according to EN 61373 Category 1, Class B • for railway applications according to EN 61373 Category 1, Class B **Category 100000 **Category 100000 **Class B **Category 100000 **Cl	shock resistance	
vibration resistance • according to IEC 60068-2-6 • for railway applications according to EN 61373 switching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Substance Prohibitance (Date) Control circuit/ Control control supply voltage 1 at AC • at 50 Hz • at 60 Hz • at DC operating range factor control supply voltage rated value at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz operating range factor control supply voltage rated value at AC at 50 Hz	according to IEC 60068-2-27	11g / 15 ms
according to IEC 60068-2-6 for railway applications according to EN 61373 Switching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Substance Prohibitance (Date) Control circuit/ Control control supply voltage 1 at AC	for railway applications according to EN 61373	Category 1, Class B
• for railway applications according to EN 61373 switching behavior mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Substance Prohibitance (Date) Control circuit/ Control control supply voltage 1 at AC • at 50 Hz • at 60 Hz control supply voltage 1 • at DC operating range factor control supply voltage rated value at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz control supply voltage rated value at AC at 50 Hz Control supply voltage rated value at AC at 50 Hz Control supply voltage rated value at AC at 50 Hz Category 1, Class B monostable nonostable nonostabeta	vibration resistance	
switching behavior monostable mechanical service life (switching cycles) typical 10 000 000 electrical endurance (switching cycles) at AC-15 at 230 V typical 5 A control current of the switching element with contacts maximum 7 Feference code according to IEC 81346-2 K Substance Prohibitance (Date) 05/31/2018 Control circuit/ Control Control supply voltage 1 at AC 4 240 V 24 240 V e at 60 Hz 24 240 V control supply voltage 1 e at DC 24 240 V operating range factor control supply voltage rated value at DC initial value 0.7 initial value 1.1 operating range factor control supply voltage rated value at AC at 50 Hz	 according to IEC 60068-2-6 	10 55 Hz: 0.35 mm
mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 K Substance Prohibitance (Date) Control circuit/ Control control supply voltage 1 at AC • at 50 Hz • at 60 Hz control supply voltage 1 • at DC operating range factor control supply voltage rated value at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz 100 000 100	for railway applications according to EN 61373	Category 1, Class B
electrical endurance (switching cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Substance Prohibitance (Date) Control circuit/ Control control supply voltage 1 at AC • at 50 Hz • at 60 Hz control supply voltage 1 • at DC operating range factor control supply voltage rated value at AC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz operating range factor control supply voltage rated value at AC at 50 Hz	switching behavior	monostable
thermal current of the switching element with contacts maximum 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 2 24 240 V • at 60 Hz 2 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	mechanical service life (switching cycles) typical	10 000 000
reference code according to IEC 81346-2 Substance Prohibitance (Date) Control circuit/ Control control supply voltage 1 at AC • at 50 Hz • at 60 Hz control supply voltage 1 • at DC operating range factor control supply voltage rated value at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz control supply voltage rated value at AC at 50 Hz K 05/31/2018 24 240 V 24 240 V 24 240 V 0.7 • initial value 1.1	typical	100 000
Substance Prohibitance (Date) Control circuit/ Control control supply voltage 1 at AC • at 50 Hz • at 60 Hz control supply voltage 1 • at DC operating range factor control supply voltage rated value at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz 05/31/2018 24 240 V 24 240 V 24 240 V 0.7 1.1		5 A
Control circuit/ Control control supply voltage 1 at AC • at 50 Hz • at 60 Hz control supply voltage 1 • at DC operating range factor control supply voltage rated value at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz	reference code according to IEC 81346-2	K
control supply voltage 1 at AC • at 50 Hz • at 60 Hz control supply voltage 1 • at DC operating range factor control supply voltage rated value at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz 24 240 V 0.7 1.1	Substance Prohibitance (Date)	05/31/2018
 at 50 Hz at 60 Hz 24 240 V control supply voltage 1 at DC operating range factor control supply voltage rated value at DC initial value full-scale value operating range factor control supply voltage rated value at AC at 50 Hz 	Control circuit/ Control	
at 60 Hz control supply voltage 1 at DC operating range factor control supply voltage rated value at DC initial value of full-scale value operating range factor control supply voltage rated value at AC at 50 Hz 24 240 V 0.7 1.1	control supply voltage 1 at AC	
control supply voltage 1 • at DC operating range factor control supply voltage rated value at DC • initial value • full-scale value operating range factor control supply voltage rated value at AC at 50 Hz 24 240 V 0.7 1.1	• at 50 Hz	24 240 V
 at DC operating range factor control supply voltage rated value at DC initial value full-scale value operating range factor control supply voltage rated value at AC at 50 Hz 	• at 60 Hz	24 240 V
operating range factor control supply voltage rated value at DC o initial value operating range factor control supply voltage rated value at AC at 50 Hz operating range factor control supply voltage rated value at AC at 50 Hz	control supply voltage 1	
value at DC	• at DC	24 240 V
• full-scale value operating range factor control supply voltage rated value at AC at 50 Hz		
operating range factor control supply voltage rated value at AC at 50 Hz	• initial value	0.7
value at AC at 50 Hz	full-scale value	1.1
• initial value		
- initial value	• 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	40
• 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	fund all (aC). C A
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	4.0
• at 24 V	1 A
• at 125 V	0.2 A
• at 250 V	0.1 A
Electromagnetic compatibility	ambiance A (industrial sector)
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	2 kV
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 	2 kV (line to ground)
61000-4-5	
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	spring-loaded terminal (push-in)
type of connectable conductor cross-sections	
• solid	0.5 4 mm ²
finely stranded with core end processing	0.5 2.5 mm ²
at AWG cables solid	20 12
connectable conductor cross-section	
• solid	0.5 4 mm²
	0.5 4 mm²
• finely stranded with core end processing	2.5 mm²
finely stranded with core end processingfinely stranded without core end processing	
finely stranded with core end processing finely stranded without core end processing AWG number as coded connectable conductor cross	2.5 mm²
finely stranded with core end processingfinely stranded without core end processing	2.5 mm²
finely stranded with core end processing finely stranded without core end processing AWG number as coded connectable conductor cross section	2.5 mm ² 0.5 mm ² 12 20
 finely stranded with core end processing finely stranded without core end processing AWG number as coded connectable conductor cross section solid 	2.5 mm ² 0.5 mm ²

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







Marine / Shipping

other

Railway



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=3RQ2000-2BW00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RQ2000-2BW00

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

https://support.industry.siemens.com/cs/ww/en/ps/3RQ2000-2BW00

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RQ2000-2BW00&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3RQ2000-2BW00/manual

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