## **SIEMENS**

Data sheet 3RQ1200-2EB00



force-guided coupling relay in industrial enclosure 1 NO contact / 1 NC contact (24 V) 24 V DC SIL 3 / PL e spring-loaded terminal (push-in)

product brand name	SIRIUS
product designation	force-guided coupling relay
design of the product	fail-safe up to SIL 3/PL e
product type designation	3RQ1
General technical data	
product feature protective coating on printed-circuit board	No
consumed active power	0.9 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
shock resistance	
• according to IEC 60068-2-27	11g / 15 ms
vibration resistance	
• according to IEC 60068-2-6	10 55 Hz: 0.35 mm
operating frequency maximum	360 1/h
switching behavior	monostable
mechanical service life (operating cycles) typical	10 000 000
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
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5
Weight	0.166 kg
Product Function	
suitability for operation device connector 3ZY12	Yes
Control circuit/ Control	
control supply voltage at DC rated value	24 V
operating range factor control supply voltage rated value at DC	
• initial value	0.8
full-scale value	1.2
ON-delay time	
<ul> <li>at AC maximum</li> </ul>	15 ms
at DC maximum	15 ms
OFF-delay time maximum	35 ms
Switching Function	
design of the switching function	NO contact
Mechanical data	

product component plus in cocket	No
product component plug-in socket	
design of the relay operating mechanism  Short-circuit protection	poled
design of the fuse link for short-circuit protection of the auxiliary switch required	NO: fuse gL/gG: 6 A; NC: fuse gL/gG: 4 A
Auxiliary circuit	
material of switching contacts	AgNi + Au flash
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	1
number of CO contacts for auxiliary contacts	0
type of voltage	DC
Inputs/ Outputs	
output current minimum	1 mA
·	1 III/A
ampacity of the output relay at AC-15  • at 250 V at 50/60 Hz	2 A
	۷۸
ampacity of the output relay at DC-13  • at 24 V	2 A
• at 24 V • at 125 V	2 A 0.2 A
• at 125 V	0.1 A
	U.1 A
Electromagnetic compatibility  EMC emitted interference according to IEC 60947-1	ambience 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 61000 4.5	2 kV (line to ground)
due to conductor-earth surge according to IEC 61000-4-5     due to conductor conductor surge according to IEC	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
Display	
product component LED	Yes
Safety related data	
product function	
positively driven operation according to IEC 60947-5-1	Yes
•	Yes
positively driven operation according to IEC 60947-5-1	Yes
positively driven operation according to IEC 60947-5-1     suitability for use	
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on	No
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF	No Yes
positively driven operation according to IEC 60947-5-1      suitability for use	No Yes safe shutdown
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary	No Yes safe shutdown Yes
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1	No Yes safe shutdown Yes
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061	No Yes safe shutdown Yes
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)	No Yes safe shutdown Yes 0
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061	No Yes safe shutdown Yes 0
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061  ISO 13849	No Yes safe shutdown Yes 0
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061  ISO 13849  performance level (PL) according to ISO 13849-1	No Yes safe shutdown Yes 0 SIL 3
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061  ISO 13849  performance level (PL) according to ISO 13849-1  category according to ISO 13849-1	No Yes safe shutdown Yes 0 SIL 3 PL e
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061  ISO 13849  performance level (PL) according to ISO 13849-1  category according to ISO 13849-1  device type according to ISO 13849-1	No Yes safe shutdown Yes 0 SIL 3 PL e 4 1
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061  ISO 13849  performance level (PL) according to ISO 13849-1  category according to ISO 13849-1  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary	No Yes safe shutdown Yes 0 SIL 3 PL e 4 1
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061  ISO 13849  performance level (PL) according to ISO 13849-1  category according to ISO 13849-1  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061  ISO 13849  performance level (PL) according to ISO 13849-1  category according to ISO 13849-1  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  Safety Integrity Level (SIL) according to IEC 61508	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No
positively driven operation according to IEC 60947-5-1 suitability for use     safety-related switching on     safety-related switching OFF safe state test wear-related service life necessary stop category according to IEC 60204-1 IEC 62061 Safety Integrity Level (SIL)     according to IEC 62061 ISO 13849 performance level (PL) according to ISO 13849-1 category according to ISO 13849-1 device type according to ISO 13849-1 overdimensioning according to ISO 13849-2 necessary IEC 61508 Safety Integrity Level (SIL) according to IEC 61508 safety device type according to IEC 61508-2	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No  SIL 3  Type A
positively driven operation according to IEC 60947-5-1  suitability for use	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No  SIL 3  Type A 5E-10 1/h
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061  ISO 13849  performance level (PL) according to ISO 13849-1  category according to ISO 13849-1  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  Safety Integrity Level (SIL) according to IEC 61508  safety device type according to IEC 61508-2  PFHD with high demand rate according to IEC 61508  PFDavg with low demand rate according to IEC 61508	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No  SIL 3  Type A 5E-10 1/h 8E-7
positively driven operation according to IEC 60947-5-1  suitability for use     safety-related switching on     safety-related switching OFF  safe state  test wear-related service life necessary  stop category according to IEC 60204-1  IEC 62061  Safety Integrity Level (SIL)     according to IEC 62061  ISO 13849  performance level (PL) according to ISO 13849-1  category according to ISO 13849-1  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  Safety Integrity Level (SIL) according to IEC 61508  safety device type according to IEC 61508-2  PFHD with high demand rate according to IEC 61508  Safe failure fraction (SFF)	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No  SIL 3  Type A 5E-10 1/h 8E-7 99 %
positively driven operation according to IEC 60947-5-1  suitability for use	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No  SIL 3  Type A 5E-10 1/h 8E-7 99 % 1
positively driven operation according to IEC 60947-5-1  suitability for use	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No  SIL 3  Type A 5E-10 1/h 8E-7 99 % 1
positively driven operation according to IEC 60947-5-1     suitability for use	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No  SIL 3  Type A 5E-10 1/h 8E-7 99 % 1 20 a
positively driven operation according to IEC 60947-5-1  suitability for use	No Yes safe shutdown Yes 0  SIL 3  PL e 4 1 No  SIL 3  Type A 5E-10 1/h 8E-7 99 % 1 20 a

type of connectable conductor cross-sections	
• solid	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
for AWG cables solid	20 12
connectable conductor cross-section	
• solid	0.5 4 mm²
<ul> <li>finely stranded with core end processing maximum</li> </ul>	2.5 mm <sup>2</sup>
finely stranded without core end processing minimum	0.5 mm <sup>2</sup>
AWG number as coded connectable conductor cross section	
• solid	12 20
stranded	12 20
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
lastelling method	screw and snap-on mounting onto 35 min birt rail
height	100 mm
height	100 mm
height width	100 mm 17.5 mm
height width depth	100 mm 17.5 mm
height width depth Ambient conditions	100 mm 17.5 mm 120 mm
height width depth Ambient conditions installation altitude at height above sea level maximum	100 mm 17.5 mm 120 mm
height width depth Ambient conditions installation altitude at height above sea level maximum ambient temperature	100 mm 17.5 mm 120 mm
height width depth  Ambient conditions installation altitude at height above sea level maximum ambient temperature  • during operation	100 mm 17.5 mm 120 mm 2 000 m -25 +60 °C
height width depth  Ambient conditions installation altitude at height above sea level maximum ambient temperature  • during operation • during storage	100 mm 17.5 mm 120 mm 2 000 m -25 +60 °C -40 +80 °C

## General Product Approval













EMV Maritime application other Environment







Confirmation

Environmental Confirmations

## Further information

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=3RQ1200-2EB00

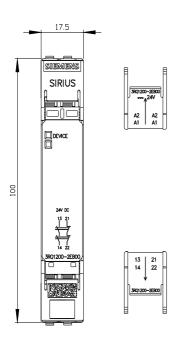
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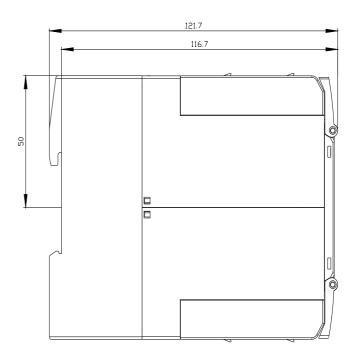
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RQ1200-2EB00

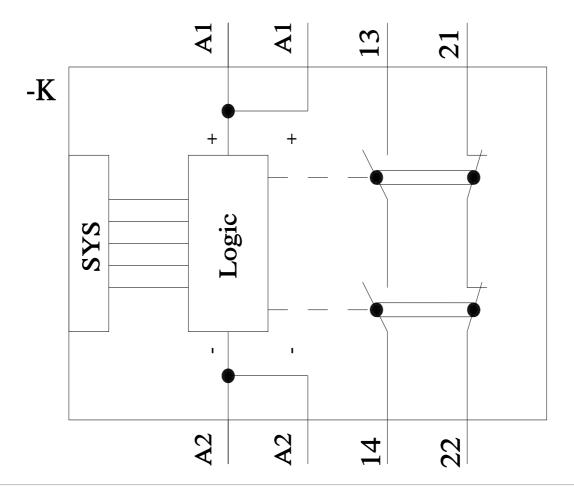
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RQ1200-2EB00

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RQ1200-2EB00&lang=en







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