## **SIEMENS**

Data sheet 3RQ1000-1HW00



Positively driven coupling relay in industrial enclosure 2 NO contacts / 2 NC contacts 24 V to 240 V AC/DC SIL 2 / PL c Screw terminals

product brand name	SIRIUS
product designation	force-guided coupling relay
design of the product	fail-safe up to SIL 2/PL c
product type designation	3RQ1
General technical data	
consumed active power	2.3 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
protection class IP	IP20
shock resistance	
<ul><li>according to IEC 60068-2-27</li></ul>	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
Product Function	
suitability for operation device connector 3ZY12	No
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	0.85
full-scale value	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
initial value	0.85
full-scale value	1.1

# ALD C maximum 50 ms   # All C m		
## ADC maximum   ## Some	ON-delay time	
OFF-delay time	at AC maximum	50 ms
product component plugh is socket  No  Obesign of the tase link for short-circuit protection of the auxiliary fuse gL/gC: 6 A section of the face in the section of the auxiliary obesign of the tase link for short-circuit protection of the auxiliary fuse gL/gC: 6 A section should be auxiliary contacts  material of avoicining contacts  number of NO contacts for auxiliary contacts  2 number of NO contacts for auxiliary contacts  2 number of NO contacts for auxiliary contacts  2 number of NO contacts for auxiliary contacts  3 pype of voltage  AC/DC  magnacity of the output relay at AC-15  * #1250 V #15090 Hz  * #12	at DC maximum	50 ms
product component plugin socket  Short-circuit protection  design of the fase ink for short-circuit protection of the auxiliary design of the fase ink for short-circuit protection of the auxiliary auxiliary circuit material of switching contacts number of NC contacts for auxiliary contacts 2 number of NC contacts for auxiliary contacts 2 number of NC contacts for auxiliary contacts 3 yes of votage AC/DC ampacity of the output relay at AC-15 * at 250 V at 5080 Hz * at 125 V * at 125 V * at 125 V * at 250 V at 5080 Hz * at 125 V * at 250 V * at 2	OFF-delay time	60 ms
Short-directly protection design of the face in fix of anot-crount protection of the auxiliary switch required Auxiliary circuit material of switching contacts number of NC contacts for auxiliary contacts 2 number of NC contacts for auxiliary contacts 2 number of CO contacts for auxiliary contacts 2 number of CO contacts for auxiliary contacts 3 2 number of CO contacts for auxiliary contacts 4 2 number of CO contacts for auxiliary contacts 5 2 number of CO contacts for auxiliary contacts 7 2 1.5 A 2.6 CPC  ampacity of the output relay at AC-15 2 2.1 A 3.1 A		No
design of the late link for short-circuit protection of the auxiliary which required which required which required which required with contacts for auxiliary contacts anumber of NC contacts for auxiliary contacts 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		
Ag8n02 + Au flash material of switching contacts material of switching contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts 2 number of CO contacts for auxiliary contacts 3 2 number of CO contacts for auxiliary contacts 4 2 number of CO contacts for auxiliary contacts 5 2 number of CO contacts for auxiliary contacts 5 15 A 3 3 4 7 10 A 11 A 12 A 12 A 13 A 14 A 15 A 16 A 17 A 18		fuse at /aG: 6 A
material of switching contacts number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts 2 number of NC contacts for auxiliary contacts 2 number of NC contacts for auxiliary contacts 2 number of NC contacts for auxiliary contacts 3 number of NC contacts for auxiliary contacts 4 number of CO contacts for auxiliary contacts 5 number of NC contacts for auxiliary contacts 5 number of NC contacts for auxiliary contacts 7 number of NC contacts for auxiliary contacts 7 number of NC contacts 7 number of N		1430 grigo. 0 /1
material of switching contacts number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts 2 number of NC contacts for auxiliary contacts 2 number of NC contacts for auxiliary contacts 2 number of NC contacts for auxiliary contacts 3 number of NC contacts for auxiliary contacts 4 number of CO contacts for auxiliary contacts 5 number of NC contacts for auxiliary contacts 5 number of NC contacts for auxiliary contacts 7 number of NC contacts for auxiliary contacts 7 number of NC contacts 7 number of N	Auxiliary circuit	
number of NC contacts for auxillary contacts 2 number of OC contacts for auxillary contacts 2 number of OC contacts for auxillary contacts 3 Nype of voltage ACIDC 3 anapacity of the output relay at AC-15 at 250 V at 50/60 Pt at 250 V at 250	-	AgSnO2 + Au flash
number of NO contacts for auxillary contacts  number of CO contacts for auxillary contacts  pype of voltage  ampacity of the output relay at AC-15  all 26 V 50 500 Ft 2  ampacity of the output relay at DC-13  ampacity of the output relay at DC-13  and 26 V 1  and 26 V 2  and 26 V 2  and 27 V 1  and 28 V 2  at 25 V 0.2 A 0.1 A  and 27 V 1  Bectromagnetic compatibility  EMC emitted interference according to IEC 60047-1  EMC immunity according to IEC 60047-1  conducted interference according to IEC 61000-4-5  due to burst according to IEC 61000-4-5  due to conductor-earth surge according to IEC 61000-4-5  due to conductor-earth surge according to IEC 61000-4-5  due to conductor-earth surge according to IEC 61000-4-5  field-based interference according to IEC 61000-4-2  Alf V (line to line)  field-based interference according to IEC 61000-4-2  Safety rindled data  Safety integrity Level (ISL) according to IEC 61000-4-2  Safety integrity Level (ISL) according to IEC 61000-4-2  Bill, Claim Limit (subsystem) according to IEC 61008  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  b will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  b will low demand rate according to IEC 61508  a will low demand rate according to IEC 61508  b will low demand rate according to IEC 61508  b will low demand rate according to IEC 61508  c ond a vitanded will core end processing  a first practical conn		
Number of CO contacts for auxiliary contacts		2
type of voltage		
ampacity of the output relay at AC-15  • at 250 V at 50/00 Pt2  • at 254 V  • at 250 V  •	·	
ampacity of the output relay at DC-13  at 250 V 0.2 A  at 125 V 0.2 A  at 125 V 0.2 A  at 125 V 0.1 A  Electromagnetic compatibility  EMC emitted inferference according to IEC 60947-1 ambience A (industrial sector)  Conducted interference  due to burst according to IEC 60947-1 2V V (line to ground)  due to conductor-cendudor surge according to IEC 4000-4-3  due to conductor-cendudor surge according to IEC 61000-4-5  due to conductor-cendudor surge according to IEC 61000-4-3  due to conductor-cendudor surge according to IEC 61000-4-3  due to conductor-cendudor surge according to IEC 61000-4-3  field-based interference according to IEC 61000-4-3  field-based interference according to IEC 61000-4-2  field-based interference according to IEC 61508  Safety Integrity Level (SIL) according to IEC 61508  2  Safety Integrity Level (SIL) according to IEC 61508  2  Sill Claim Limit (subsystem) according to IEC 61508  with high demand rate according to IEC 61508  with high demand rate according to IEC 61508  with light demand rate according to IEC 61508  electromagnetic compatibility  IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4  field-based interference according to IEC 61508  field-based interference according to IEC 61508  field part of the field part of the field part of IEC 61508  field part of the field part of IEC 61508  field part of IEC 61000-6-2 / IEC 61000-6-2 / IEC 61000-6-4  field part of IEC 61000-6-2 / IE		Noise
ampacity of the output relay at DC-13  at 24 V  at 125 V  at 250 V  contact dischargened according to IEC 60947-1  EMC emitted interference according to IEC 60947-1  EMC emitted interference according to IEC 60947-1  EMC emitted interference according to IEC 61004-4  anbience A (industrial sector)  EMC emitted interference according to IEC 610004-5  acute to burst according to IEC 610004-4  acute to conductor-conductor surge according to IEC 610004-5  acute to conductor-conductor surge according to IEC 610004-3  acute to conductor-conductor surge according to IEC 610004-3  acute to conductor conductor conductor conductor according to IEC 610004-2  Sately integrity Level (SIL) according to IEC 61508  acute to conductor conductor co		15Δ
at 125 V at 125 V at 125 V at 125 V but 125 V at 125 V at 125 V at 125 V but 125 V at 125 V but		1.0 A
e at 125 V 0.1 A 0		1 A
e at 250 V    Electromagnetic compatibility   ambience A (industrial sector)		
Electromagnetic compatibility  EMC emitted interference according to IEC 60947-1  conducted interference  • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-3 • due to conductor-conductor surge according to IEC 61000-4-3 • field-based interference according to IEC 61000-4-3 • delectrostatic discharge according to IEC 61000-4-3  stelevorteatic discharge according to IEC 61000-4-3  Sately integrity Level (ELI) according to IEC 61000-4-2  Sately integrity Level (ELI) according to IEC 61000  Sately integrity Level (ELI) according to IEC 61000  Sately integrity Level (ELI) according to IEC 61008  Sate		
EMC emitted interference according to IEC 60947-1 corresponds to degree of severity 3  conducted interference  • due to burst according to IEC 61000-4-4  • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-3  • delectrostatic discharge according to IEC 61000-4-2  • tV (line to line)  10 V/M  • electrostatic discharge according to IEC 61000-4-2  • tV (contact discharging, 8 kV air discharging Safety related data  Safety related data  Safety related data  Safety related very (PL) according to IEC 61508  • SIL Claim Limit (subsystem) according to IEC 61508  • With high demand rate according to IEC 61508  • with high demand rate according to IEC 61508  • with low demand rate according to IEC 61508  • with low demand rate according to IEC 61508  • lectromagnetic compatibility    IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4    Connections/ Terminals   Termi		U.I A
EMC immunity according to IEC 60947-1  conducted interference  due to bust according to IEC 61000-4-4  due to conductor-conductor surge according to IEC 61000-4-5  field-based interference according to IEC 61000-4-3  field-based interference according to IEC 61000-4-3  all V/m  electrostatic discharge according to IEC 61000-4-3  Safety Integrity Level (SIL) according to IEC 61000-4-2  A KY Contact discharging, 8 KY air discharging  Safety Integrity Level (SIL) according to IEC 61000-4-2  Safety Integrity Level (SIL) according to IEC 61000-4-2  Safety Integrity Level (SIL) according to IEC 61508  Sale L claim Limit (subsystem) according to IEC 61508  Sale With limit (subsystem) according to IEC 61508  with high demand rate according to IEC 61508  with high demand rate according to IEC 61508  with low demand rate according to IEC 61508  with low demand rate according to IEC 61508  electromagnetic compatibility  IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4  Connections / Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  wire length at DC maximum  2 0000 m  type of connectable conductor cross-section  solid  infely stranded with core end processing in finely stranded with core		
conducted interference  • due to burst according to IEC 61000-4-4  • due to conductor-arth surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  field-based interference according to IEC 61000-4-3  field-based interference according to IEC 61000-4-3  field-based interference according to IEC 61000-4-2  field-based interference according to IEC 61508  Safety Integrity Level (SIL) according to IEC 61508  Safety Integrity Level (SIL) according to IEC 61508  Sil. Claim Limit (subsystem) according to IEC 61508  with low demand rate according to IEC 61508  lectromagnetic compatibility  IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  ype of electrical connection  wire length at DC maximum  1 yeo on matchile conductor cross-sections  solid  finely stranded with core end processing  for AWG cables solid  1 x (0.5 4 mm²), 2x (0.5 2.5 mm²)  1 x (0.5 4 mm²), 2x (0.5 1.5 mm²)  1 x (0.5 4 mm²  for AWG cables solid  1 x (0.5 4 mm²  5 mply stranded with core end processing  5 on a With core end processing  6 on a With core end processing  7 on a With core end processing  8 on a With core end processing  9 on maximum position  1 conductor position  1 con		
• due to burst according to IEC 61000-4-4     • due to conductor-earth surge according to IEC 61000-4-5     • due to conductor-conductor surge according to IEC 61000-4-5     field-based interference according to IEC 61000-4-3     lelectrostatic discharge according to IEC 61000-4-3     alectrostatic discharge according to IEC 61000-4-2     safety related data     Safety Integrity Level (SIL) according to IEC 61508     2     SLI. Claim Limit (subsystem) according to EN 62061     performance level (PL) according to IEC 61508     • with high demand rate according to IEC 61508     • with high demand rate according to IEC 61508     • with high demand rate according to IEC 61508     • with high demand rate according to IEC 61508     • with low demand rate according to IEC 61508     • wit	·	corresponds to degree of severity 3
• due to conductor-conductor surge according to IEC 61000-4-5     • due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 A kW contact discharging, 8 kV air discharging  Safety Integrity Level (SIL) according to IEC 61000-8 Safety Integrity Level (SIL) according to EIC 61508 SIL Claim Limit (subsystem) according to EN 62061 performance level (PL) according to EN 62061 with high demand rate according to IEC 61508 with low demand rate according to IEC 61508 with low demand rate according to IEC 61508 electromagnetic compatibility IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4  Connections' Terminals product component removable terminal for auxiliary and control circuit type of electrical connection wire length at DC maximum 2 0000  type of connectable conductor cross-section solid finely stranded with core end processing finely stranded without core end processing AWG number as coded connectable conductor cross-section solid sifting stranded without core end processing AWG number as coded connectable conductor cross-section solid sifting stranded with core end processing AWG number as coded connectable conductor cross-section solid sifting stranded with core end processing AWG number as coded connectable conductor cross-section solid sitraged length of the cable for auxiliary and control contacts Installation/ mounting/ dimensions mounting position fastening method  screw and snap-on mounting onto 35 mm DIN rail		
due to conductor-conductor surge according to IEC 61000-4-3 field-based interference according to IEC 61000-4-2 left protected and surface according to IEC 61000-4-2 Safety rolated data Safety Integrity Level (SIL) according to IEC 61508 Safety Integrity Level (SIL) according to IEC 61508 Safety Integrity Level (SIL) according to IEC 61508 Safety Integrity Level (SIL) according to EN 62061 2 performance level (PL) according to EN 62061 2 with high demand rate according to IEC 61508 6E-7 1/h with high demand rate according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0 electromagnetic compatibility IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4 Connections/ Torminals product component removable terminal for auxiliary and control circuit 1ype of electrical connection wire length at DC maximum 2 000 m 1ype of connectable conductor cross-section  • solid • finely stranded with core end processing • for AWG cables solid connectable conductor cross-section • solid • finely stranded with core end processing • solid • finely stranded with core end processing • finely stranded with core end processing • solid • stranded  • stranded • stranded • stranded  • stranded	-	
field-based interference according to IEC 61004-43 electrostatic discharge according to IEC 61000-4-2 4 kV contact discharging, 8 kV air discharging  Safety related data  Safety Integrity Level (SIL) according to IEC 61508 2 performance level (PL) according to EN 62061 2 performance level (PL) according to EN 62061 3 with high demand rate according to IEC 61508 4 with low demand rate according to IEC 61508 5 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 6 with low demand rate according to IEC 61508 7 with low demand rate according to IEC 61508 7 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate according to IEC 61508 8 with low demand rate acc		2 kV (line to ground)
electrostatic discharge according to IEC 61000-4-2  Safety related data  Safety Integrity Level (SIL) according to IEC 61508  SIL Claim Limit (subsystem) according to EN 62061  performance level (PL) according to EN ISO 13849-1  e with high demand rate according to IEC 61508  with low demand rate according to IEC 61508  electromagnetic compatibility  iec 60947-1 / IEC 61000-6-2 / IEC 61000-6-4  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  screw-type terminals  e solid  finely stranded with core end processing  finely stranded without core end processing  finely stranded without core end processing  solid  solid  finely stranded without core end processing  finely stranded without core end processing  finely stranded without core end processing  solid  solid  solid  solid  finely stranded without core end processing  finely stranded without core end processing  solid		1 kV (line to line)
Safety Integrity Level (SIL) according to IEC 61508 2  SIL Claim Limit (subsystem) according to EN 62061 2 performance level (PL) according to EN ISO 13849-1 c  PFHD  • with high demand rate according to IEC 61508 6E-7 1/h • with low demand rate according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0 electromagnetic compatibility IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection screw-type terminals  • solid 1x (0.5 4 mm²), 2x (0.5 2.5 mm²) • finely stranded with core end processing 1x (20 12), 2x (20 14)  • finely stranded with core end processing 4 mm² • finely stranded with core end processing 9. finely stranded without core end processing 0.5 mm²  AWG number as coded connectable conductor cross section • solid 0.5 4 mm² • finely stranded with core end processing 12 20 tightening torque with screw-type terminals 10.6 0.8 N/m  stripped length of the cable for auxiliary and control contacts 10.8 mm DIN rail	field-based interference according to IEC 61000-4-3	10 V/m
Safety Integrity Level (SIL) according to IEC 61508 2  SIL Claim Limit (subsystem) according to EN 62061 2 performance level (PL) according to EN 150 13849-1 c  PFHD  • with high demand rate according to IEC 61508 6E-7 1/lh • with low demand rate according to IEC 61508 0.004 1/lh hardware fault tolerance according to IEC 61508 0.004 1/lh hardware fault tolerance according to IEC 61508 0.004 1/lh Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection screw-type terminals  wire length at DC maximum 2 000 m  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)  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 tip capte 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	electrostatic discharge according to IEC 61000-4-2	4 kV contact discharging, 8 kV air discharging
SIL Claim Limit (subsystem) according to EN 62061 2 performance level (PL) according to EN ISO 13849-1 c PFHD  • with high demand rate according to IEC 61508 6E-7 1/h • with low demand rate according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware fault tolerance according to IEC 61508 0.0004 1/h hardware	Safety related data	
performance level (PL) according to EN ISO 13849-1  PFHD  • with high demand rate according to IEC 61508 • with low demand rate according to IEC 61508 • with low demand rate according to IEC 61508 • with low demand rate according to IEC 61508 • lectromagnetic compatibility  IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4  Connections / Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  wire length at DC maximum  2 000 m  type of connectable conductor cross-sections • solid • finely stranded with core end processing • for AWG cables solid  connectable conductor cross-section • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • finely stranded with core end processing • solid • finely stranded with core end processing • solid • stranded • s	Safety Integrity Level (SIL) according to IEC 61508	2
PFHD  • with low demand rate according to IEC 61508 • with low demand rate according to IEC 61508 • with low demand rate according to IEC 61508 hardware fault tolerance according to IEC 61508 electromagnetic compatibility  IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  wire length at DC maximum  2 000 m  type of connectable conductor cross-sections • solid  1x (0.5 4 mm²), 2x (0.5 2.5 mm²) • for AWG cables solid  1x (20 12), 2x (20 14)  connectable conductor cross-section • solid • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded without core end processing • solid • finely stranded without core end processing • solid • solid • stranded • strand	SIL Claim Limit (subsystem) according to EN 62061	2
with high demand rate according to IEC 61508     with low demand rate according to IEC 61508     with low demand rate according to IEC 61508     led connections from Image of IEC 61508     electromagnetic compatibility      product component removable terminal for auxiliary and control circuit  type of electrical connection  wire length at DC maximum  1 yes on a connectable conductor cross-sections  solid  finely stranded with core end processing  finely stranded without core end processing  finely stranded without core end processing  sociid  solid  finely stranded without core end processing  sociid  solid  12 20  stranded  stranded  to cone conectable conductor cross section  solid  stranded  finely stranded without core end processing  sociid  solid  stranded  finely stranded without core end processing  sociid  solid  12 20  stranded  tightening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position  fastening method	performance level (PL) according to EN ISO 13849-1	С
with low demand rate according to IEC 61508     hardware fault tolerance according to IEC 61508     electromagnetic compatibility	PFHD	
hardware fault tolerance according to IEC 61508 electromagnetic compatibility  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  wire length at DC maximum  2 000 m  type of connectable conductor cross-sections  • solid  finely stranded with core end processing  • finely stranded with core end processing  • finely stranded with core end processing  • solid  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded with core end processing  • solid  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • solid  • solid  12 20  • stranded  itghtening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position  any fastening method	<ul> <li>with high demand rate according to IEC 61508</li> </ul>	6E-7 1/h
electromagnetic compatibility  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  wire length at DC maximum  2 000 m  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • for AWG cables solid  connectable conductor cross-section  • solid  • finely stranded with core end processing  • for length stranded with core end processing  • finely stranded with core end processing  • finely stranded with core end processing  • solid  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • solid  • stranded  • stranded  12 20  tightening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position  fastening method	with low demand rate according to IEC 61508	0.004 1/h
product component removable terminal for auxiliary and control circuit  type of electrical connection  wire length at DC maximum  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • for AWG cables solid  connectable conductor cross-section  • solid  • solid  connectable conductor cross-section  • solid  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • solid  • solid  • stranded  12 20  tightening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position  fastening method  screw and snap-on mounting onto 35 mm DIN rail	hardware fault tolerance according to IEC 61508	0
product component removable terminal for auxiliary and control circuit  type of electrical connection  wire length at DC maximum  2 000 m  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • for AWG cables solid  connectable conductor cross-section  • solid  • solid  connectable conductor cross-section  • solid  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • solid  • stranded  • stranded  • stranded  12 20  tightening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  mounting position  fastening method  Yes  screw and snap-on mounting onto 35 mm DIN rail	electromagnetic compatibility	IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4
type of electrical connection  wire length at DC maximum  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • solid  connectable conductor cross-section  • solid  type of conductor cross-section  • finely stranded with core end processing  • solid  connectable conductor cross-section  • solid  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • solid  • solid  • stranded  • stranded  • stranded  • stranded  12 20  tightening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  mounting position  fastening method  screw and snap-on mounting onto 35 mm DIN rail	Connections/ Terminals	
wire length at DC maximum  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • for AWG cables solid  tx (0.5 4 mm²), 2x (0.5 2.5 mm²)  1x (0.5 4 mm²), 2x (0.5 1.5 mm²)  1x (20 12), 2x (20 14)  connectable conductor cross-section  • solid  • finely stranded with core end processing  • finely stranded without core end processing  4 mm²  • finely stranded without core end processing  AWG number as coded connectable conductor cross section  • solid  • solid  • solid  • stranded  12 20  tightening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position  fastening method  2 0.00 mm²		Yes
type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • for AWG cables solid  connectable conductor cross-section  • solid  • finely stranded with core end processing  • solid  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • solid  • solid  • solid  • solid  • solid  • stranded  • stranded  • stranded  • stranded  installation/ mounting/ dimensions  mounting position  fastening method  screw and snap-on mounting onto 35 mm DIN rail	type of electrical connection	screw-type terminals
solid     finely stranded with core end processing     for AWG cables solid         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         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • solid         • solid         • solid         • stranded without core end processing         • solid         • stranded         • stranded         • stranded         • stranded         12 20         • stranded to cable for auxiliary and control contacts  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position         any  fastening method  1x (0.5 4 mm²), 2x (0.5 1.5 mm²)  1x (0.5 4 mm²)  1x (0.5 1.5 mm²)  1x (0.5 1 mm²)  1x (	wire length at DC maximum	2 000 m
solid     finely stranded with core end processing     for AWG cables solid         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         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • solid         • solid         • solid         • stranded without core end processing         • solid         • stranded         • stranded         • stranded         • stranded         12 20         • stranded to cable for auxiliary and control contacts  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position         any  fastening method  1x (0.5 4 mm²), 2x (0.5 1.5 mm²)  1x (0.5 4 mm²)  1x (0.5 1.5 mm²)  1x (0.5 1 mm²)  1x (	type of connectable conductor cross-sections	
<ul> <li>finely stranded with core end processing</li> <li>for AWG cables solid</li> <li>1x (20 12), 2x (20 14)</li> </ul> connectable conductor cross-section <ul> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>o.5 4 mm²</li> </ul> AWG number as coded connectable conductor cross section <ul> <li>solid</li> <li>stranded</li> <li>tz 20</li> <li>stranded</li> <li>tightening torque with screw-type terminals</li> <li>stripped length of the cable for auxiliary and control contacts</li> <li>Installation/ mounting/ dimensions</li> </ul> mounting position <ul> <li>any</li> <li>fastening method</li> <li>screw and snap-on mounting onto 35 mm DIN rail</li> </ul>		1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
connectable conductor cross-section  • solid  • finely stranded with core end processing  • finely stranded without core end processing  AWG number as coded connectable conductor cross section  • solid  • stranded  • stranded  12 20  • stranded  12 20  tightening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position  fastening method  0.5 4 mm²  4 mm²  0.5 mm²  0.5 mm²  12 20  12 20  10 mm	• finely stranded with core end processing	1x (0.5 4 mm²), 2x (0.5 1.5 mm²)
connectable conductor cross-section  • solid  • finely stranded with core end processing  • finely stranded without core end processing  AWG number as coded connectable conductor cross section  • solid  • stranded  • stranded  12 20  • stranded  12 20  tightening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position  fastening method  0.5 4 mm²  4 mm²  0.5 mm²  0.5 mm²  12 20  12 20  10 mm	• for AWG cables solid	1x (20 12), 2x (20 14)
solid     finely stranded with core end processing     finely stranded without core end processing     finely stranded without core end processing  AWG number as coded connectable conductor cross section     solid     solid     stranded     stranded     12 20  tightening torque with screw-type terminals     stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position     any fastening method  Screw and snap-on mounting onto 35 mm DIN rail	connectable conductor cross-section	
finely stranded without core end processing  AWG number as coded connectable conductor cross section     solid     solid     stranded     stranded     ightening torque with screw-type terminals     stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position     any fastening method     screw and snap-on mounting onto 35 mm DIN rail	• solid	0.5 4 mm²
finely stranded without core end processing  AWG number as coded connectable conductor cross section     solid     solid     stranded     stranded     ightening torque with screw-type terminals     stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position     any fastening method     screw and snap-on mounting onto 35 mm DIN rail		
AWG number as coded connectable conductor cross section  • solid • stranded 12 20  tightening torque with screw-type terminals stripped length of the cable for auxiliary and control contacts Installation/ mounting/ dimensions mounting position any fastening method are conductor cross 10 20 10 20 10 mm any		
section		
● stranded  tightening torque with screw-type terminals  stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position  fastening method  any  screw and snap-on mounting onto 35 mm DIN rail	section	
tightening torque with screw-type terminals stripped length of the cable for auxiliary and control contacts Installation/ mounting/ dimensions mounting position any fastening method acrew and snap-on mounting onto 35 mm DIN rail		
stripped length of the cable for auxiliary and control contacts  Installation/ mounting/ dimensions  mounting position  fastening method  any  screw and snap-on mounting onto 35 mm DIN rail		
Installation/ mounting/ dimensions  mounting position any fastening method screw and snap-on mounting onto 35 mm DIN rail		0.6 0.8 N·m
mounting position     any       fastening method     screw and snap-on mounting onto 35 mm DIN rail	,	10 mm
fastening method screw and snap-on mounting onto 35 mm DIN rail	Installation/ mounting/ dimensions	
·	mounting position	any
height 100 mm	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	
<ul> <li>during operation</li> </ul>	-25 +60 °C
during storage	-40 +80 °C
during transport	-40 +80 °C
relative humidity during operation	10 95 %
Certificates/ approvals	

## **General Product Approval**



Confirmation









**EMC** 

**Declaration of Conformity** 

Marine / Shipping

other

Railway









Confirmation

Confirmation

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=3RQ1000-1HW00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RQ1000-1HW00

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

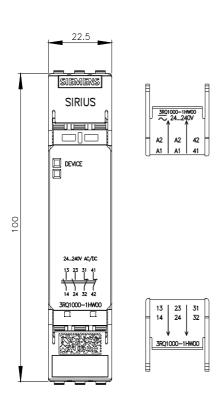
 $\underline{\text{https://support.industry.siemens.com/cs/ww/en/ps/3RQ1000-1HW00}}$ 

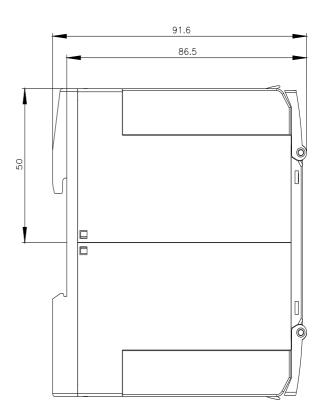
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

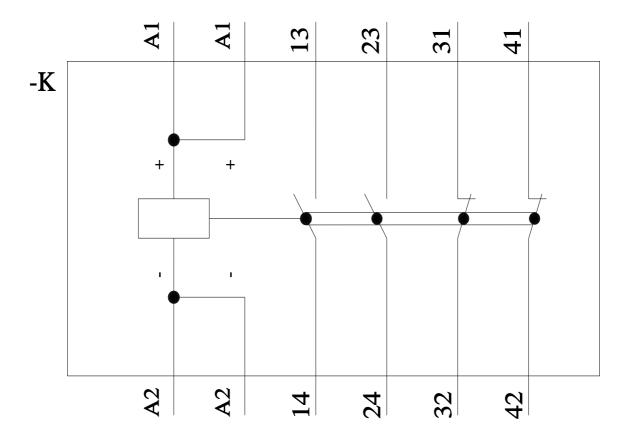
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RQ1000-1HW00&lang=en

**Characteristic: Derating** 

https://support.industry.siemens.com/cs/ww/en/ps/3RQ1000-1HW00/manual







last modified: 6/18/2023 🖸

