SIEMENS

Data sheet

3RH2122-2BB40



contactor relay, 2 NO + 2 NC, 24 V DC, spring-loaded terminal, frame size S00

440 33	
product brand name	SIRIUS
product designation	Auxiliary contactor
product type designation	3RH2
General technical data	
size of contactor	S00
product extension auxiliary switch	Yes
power loss [W] for rated value of the current without load current share typical	4 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 kV
shock resistance at rectangular impulse	
• at DC	10g / 5 ms, 5g / 10 ms
shock resistance with sine pulse	
• at DC	15g / 5 ms, 8g / 10 ms
mechanical service life (operating cycles)	
 of contactor typical 	30 000 000
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	10 000 000
reference code according to IEC 81346-2	К
Substance Prohibitance (Date)	10/01/2009
Weight	0.295 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
 during operation 	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	133 kg
global warming potential [CO2 eq] during manufacturing	1.3 kg
global warming potential [CO2 eq] during operation	132 kg
global warming potential [CO2 eq] after end of life	-0.227 kg
Main circuit	
no-load switching frequency	
• at AC	10 000 1/h
• at DC	10 000 1/h

Control circuit/ Control					
type of voltage of the control supply voltage	DC				
control supply voltage at DC rated value	24 V				
operating range factor control supply voltage rated value of magnet coil at DC					
• initial value	0.8				
• full-scale value	1.1				
closing power of magnet coil at DC	4 W				
holding power of magnet coil at DC	4 W				
closing delay					
• at DC	30 100 ms				
opening delay					
• at DC	7 13 ms				
arcing time	10 15 ms				
Auxiliary circuit					
number of NC contacts for auxiliary contacts	2				
instantaneous contact	2				
number of NO contacts for auxiliary contacts	2				
instantaneous contact	2				
identification number and letter for switching elements	22 E				
operational current at AC-12 maximum	10 A				
operational current at AC-15					
• at 230 V rated value	10 A				
at 400 V rated value	3 A				
at 500 V rated value	2 A				
at 690 V rated value	1 A				
 operational current at 1 current path at DC-12 at 24 V rated value 	10 A				
at 24 V rated value at 110 V rated value	3 A				
at 110 v rated value at 220 V rated value	1A				
at 440 V rated value	0.3 A				
at 600 V rated value	0.15 A				
operational current with 2 current paths in series at DC-12					
• at 24 V rated value	10 A				
• at 60 V rated value	10 A				
• at 110 V rated value	4 A				
• at 220 V rated value	2 A				
• at 440 V rated value	1.3 A				
• at 600 V rated value	0.65 A				
operational current with 3 current paths in series at DC-12					
• at 24 V rated value	10 A				
• at 60 V rated value	10 A				
• at 110 V rated value	10 A				
• at 220 V rated value	3.6 A				
• at 440 V rated value	2.5 A				
at 600 V rated value	1.8 A				
operating frequency at DC-12 maximum	1 000 1/h				
operational current at 1 current path at DC-13					
at 24 V rated value	10 A				
at 110 V rated value	1A				
at 220 V rated value	0.3 A				
at 440 V rated value	0.14 A				
• at 600 V rated value	0.1 A				
 operational current with 2 current paths in series at DC-13 at 24 V rated value 	10 A				
at 24 V rated value at 60 V rated value	10 A 3.5 A				
at 50 V rated value at 110 V rated value	3.5 A 1.3 A				
at 110 v rated value at 220 V rated value	0.9 A				
at 220 v rated value at 440 V rated value	0.9 A 0.2 A				
at 600 V rated value	0.1 A				
operational current with 3 current paths in series at DC-13					
operational current with o current paths in series at DC-15					

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• at 110 V trade value 3 A • at 120 V trade value 123 A • at 140 V trade value 123 A • at 140 V trade value 123 A • at 140 V trade value 123 A • at 160 V trade value 100 th • at 160 V trade value 100 th • at 160 V trade value 100 th • at 160 V trade value 00 th • at 160 vat 10 th 00 th •	• at 24 V rated value	10 A
• at 220 Y trade value 0.2 A • at 600 Y rated value 0.28 A • at 600 Y rated value 0.28 A • operating frequency at D-13 maximum 1.000 th • contact stability of auxiliary contacts 1.1uby swiching per 100 million (17 V, 1 mA) ULCSA ratings • Contact rate of auxiliary contacts • A000 / 0800 Statication of the auxiliary contacts according to UL • A000 / 0800 • Characteristic: 10 A, 0.4 kA • design of the institute circuit protection of the auxiliary available convertical protection of the auxiliary contacts according to UL • Characteristic: 10 A, 0.4 kA • design of the institute circuit protection of the auxiliary available on vertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by a desced by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mounting surface: can be titled forward are backed by 4.22.5 on wertical mo		
• et 440 V reter value 0.5 A • operating frequency at DC-13 maximum 1.00 1/h • contact reliability of auxiliary contacts 1.1 hulp; solution per 100 million (17 V, 1 mA) • Contact rating of auxiliary contacts according to UL Abor / CR000 • Short-Criccal proceed for • Characteristic: 10 A, 0.4 kA • design of the ministre enclut protection of the auxiliary available regulated for short-circul protection • Characteristic: 10 A, 0.4 kA • design of the fue link for intor-circul protection of the auxiliary available regulated for short-circul protection of the auxiliary by -5.225 °m vertical mounting surface; can be blied forward and backward by -5.225 °m vertical mounting surface; can be blied forward and backward by -5.225 °m vertical mounting surface; can be blied forward and backward by -5.225 °m vertical mounting surface; can be blied forward and backward by -5.225 °m vertical mounting surface; can be blied forward and backward by -5.225 °m vertical mounting surface; can be blied forward and backward by -5.25 °m vertical mounting surface; can be blied forward and backward by -5.25 °m vertical mounting surface; can be blied forward and the according to B. • endprint 70 mm • endprint 73 mm • endprint 73 mm • endprint 73 mm • endprint 10 mm • endprint 10 mm • endprint 6 mm		
• et 500 V rand value 0.26 Å operating frequency at DC-13 maximum 0.00 1h contact valuebility of auxiliary contacts 1 fauly soluthing per 100 million (17 V, 1 mÅ) UUCSA variangs A800 / 0600 Short-circuit protection Catacateristic: 10 Å; 0.4 kÅ design of the malature circuit protection of the auxiliary variatic by 2-20 / Catacateristic: 10 Å; 0.4 kÅ manufage particle link for short-circuit protection of the auxiliary variatic by 4-22 if 0.4 KatageluG:: 10 Å maturities circuit protection of the auxiliary variatic by 4-22 if 0.4 KatageluG:: 10 Å maturities circuit protection Extension Fasteriang method fasteriang method screw and samp-orm counting surface: can be titled forward and backer by 4-22 if 0.7 mm required spacing */150 rotation possible on vertical mounting surface: can be titled forward and backer by 4-22 if 0.7 mm with side-by-side mounting -/150 rotation possible on vertical mounting surface: can be titled forward and backer by 4-22 if 0.7 mm required spacing */150 rotation possible on vertical mounting surface: can be titled forward and backer by 4-22 if 0.7 mm with side-by-side mounting -/150 rotation possible on vertical mounting surface: can be titled forward and backer by according to 150 rotation • with side-by-side mounting <td></td> <td></td>		
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control table of auxiliary contacts according to UL A000 / Q800 Short-circuit protection characteristic: 10 A; 0.4 KA of the auxiliary circuit up 230 Y faste auxiliary circuit up 230 Y design of the line link for short-circuit protection of the auxiliary switch required faste auxiliary faste		1 faulty switching per 100 million (17 V, 1 mA)
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with side-by-side mounting -forwards -upwards -forwards -upwards -upwards -forwards -forwards	depth	73 mm
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	type of connectable conductor cross-sections	
finely stranded with core end processing2x (0.5 2.5 mm²) finely stranded without core end processing2x (0.5 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 12)Safety related dataproduct functionYes• positively driven operation according to IEC 60947-5-1Yessuitability for use safety-related switching OFFYessuitability for use safety-related switching OFFYesservice life maximum20 aproportion of dangerous failures40 %• with high demand rate according to SN 3192040 %• with high demand rate according to SN 319201000 000; With 0.3 x lefailure rate [FIT] with low demand rate according to SN 319201000 FITS1920ISO 13849device type according to ISO 13849-13overdimensioning according to ISO 13849-2 necessaryYes	 for auxiliary contacts 	
finely stranded without core end processing2x (0.5 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 12)Safety related dataproduct function• positively driven operation according to IEC 60947-5-1Yes• suitable for safety functionYessuitability for use safety-related switching OFFYesservice life maximum20 aproportion of dangerous failures40 %• with high demand rate according to SN 3192073 %B10 value with high demand rate according to SN 319201 000 000; With 0.3 x lefailure rate [FIT] with low demand rate according to SN 31920100 FITStor 138493device type according to ISO 13849-13overdimensioning according to ISO 13849-2 necessaryYes	— solid or stranded	2x (0,5 4 mm²)
• for AWG cables for auxiliary contacts 2x (20 12) Safety related data product function • positively driven operation according to IEC 60947-5-1 Yes • suitable for safety function Yes suitability for use safety-related switching OFF Yes service life maximum 20 a proportion of dangerous failures 40 % • with low demand rate according to SN 31920 40 % • with high demand rate according to SN 31920 73 % B10 value with high demand rate according to SN 31920 1000 000; With 0.3 x le failure rate [FIT] with low demand rate according to SN 31920 1000 FIT ISO 13849 3 device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary Yes	 finely stranded with core end processing 	2x (0.5 2.5 mm²)
Safety related data product function • positively driven operation according to IEC 60947-5-1 • suitable for safety function Yes suitability for use safety-related switching OFF Yes service life maximum 20 a proportion of dangerous failures • with low demand rate according to SN 31920 40 % • with high demand rate according to SN 31920 73 % B10 value with high demand rate according to SN 31920 100 000; With 0.3 x le failure rate [FIT] with low demand rate according to SN 31920 ISO 13849 device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary	 finely stranded without core end processing 	2x (0.5 2.5 mm²)
product function • positively driven operation according to IEC 60947-5-1 Yes • suitable for safety function Yes suitability for use safety-related switching OFF Yes service life maximum 20 a proportion of dangerous failures • • with low demand rate according to SN 31920 40 % • with high demand rate according to SN 31920 73 % B10 value with high demand rate according to SN 31920 1 000 000; With 0.3 x le failure rate [FIT] with low demand rate according to SN 31920 100 FIT ISO 13849 3 device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary Yes	for AWG cables for auxiliary contacts	2x (20 12)
	Safety related data	
• suitable for safety functionYessuitability for use safety-related switching OFFYesservice life maximum20 aproportion of dangerous failures40 %• with low demand rate according to SN 3192040 %• with high demand rate according to SN 3192073 %B10 value with high demand rate according to SN 319201 000 000; With 0.3 x lefailure rate [FIT] with low demand rate according to SN 31920100 FITISO 138493device type according to ISO 13849-13overdimensioning according to ISO 13849-2 necessaryYes	product function	
suitability for use safety-related switching OFF Yes service life maximum 20 a proportion of dangerous failures 40 % • with low demand rate according to SN 31920 40 % • with high demand rate according to SN 31920 73 % B10 value with high demand rate according to SN 31920 1 000 000; With 0.3 x le failure rate [FIT] with low demand rate according to SN 31920 100 FIT ISO 13849 3 device type according to ISO 13849-2 necessary Yes	 positively driven operation according to IEC 60947-5-1 	Yes
service life maximum20 aproportion of dangerous failures40 %• with low demand rate according to SN 3192040 %• with high demand rate according to SN 3192073 %B10 value with high demand rate according to SN 319201 000 000; With 0.3 x lefailure rate [FIT] with low demand rate according to SN100 FITISO 138493device type according to ISO 13849-13overdimensioning according to ISO 13849-2 necessaryYes	 suitable for safety function 	Yes
proportion of dangerous failures 40 % • with low demand rate according to SN 31920 40 % • with high demand rate according to SN 31920 73 % B10 value with high demand rate according to SN 31920 1 000 000; With 0.3 x le failure rate [FIT] with low demand rate according to SN 31920 1 000 FIT SISO 13849 100 FIT device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary Yes	suitability for use safety-related switching OFF	Yes
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with high demand rate according to SN 31920 73 % B10 value with high demand rate according to SN 31920 1 000 000; With 0.3 x le failure rate [FIT] with low demand rate according to SN 31920 ISO 13849 device type according to ISO 13849-1 overdimensioning according to ISO 13849-2 necessary Yes	proportion of dangerous failures	
B10 value with high demand rate according to SN 31920 1 000 000; With 0.3 x le failure rate [FIT] with low demand rate according to SN 31920 100 FIT ISO 13849 device type according to ISO 13849-1 overdimensioning according to ISO 13849-2 necessary Yes	 with low demand rate according to SN 31920 	40 %
failure rate [FIT] with low demand rate according to SN 31920 100 FIT ISO 13849 device type according to ISO 13849-1 overdimensioning according to ISO 13849-2 necessary Yes	 with high demand rate according to SN 31920 	73 %
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device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary Yes		100 FIT
overdimensioning according to ISO 13849-2 necessary Yes	ISO 13849	
	device type according to ISO 13849-1	3
	overdimensioning according to ISO 13849-2 necessary	Yes
IE 01500	IEC 61508	

safety device type acc	ording to IEC 61508-2	Туре	A				
Electrical Safety							
protection class IP on	the front according to	IEC 60529 IP20	IP20				
touch protection on th	e front according to IE	EC 60529 finge	finger-safe, for vertical contact from the front				
Approvals Certificates							
General Product Appr	roval						
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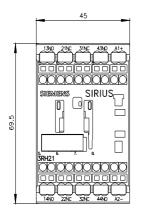
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2BB40

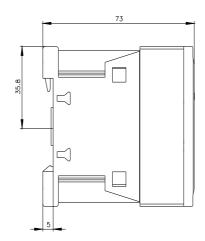
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2122-2BB40&lang=en

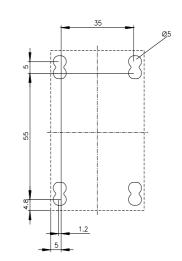
Characteristic: Tripping characteristics, I²t, Let-through current

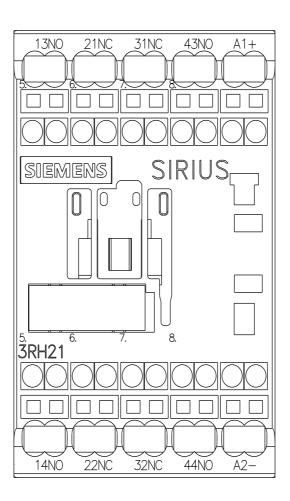
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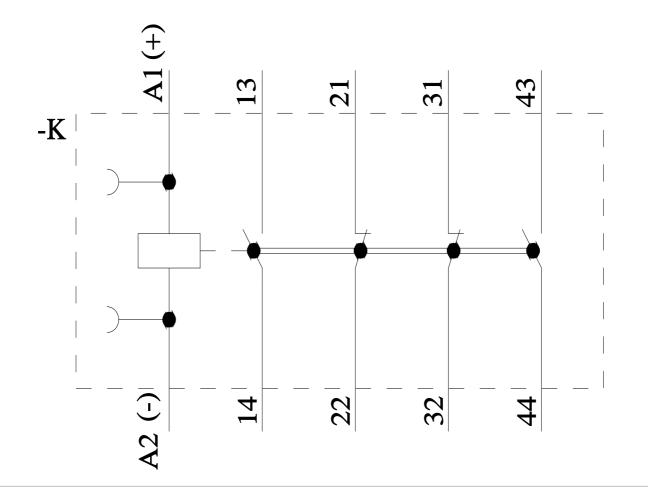
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2122-2BB40&objecttype=14&gridview=view1











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