## SIEMENS

## Data sheet

## 3RH2122-2UB40



Contactor relay, 2 NO + 2 NC, 24 V DC, integrated varistor Size S00, Spring-type terminal

product brand name	SIRIUS
product designation	Auxiliary contactor
product type designation	3RH2
General technical data	
size of contactor	S00
product extension auxiliary switch	Yes
insulation voltage with degree of pollution 3 at AC rated	690 V
value	
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 (switching cycles)	
<ul> <li>of contactor typical</li> </ul>	30 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code according to IEC 81346-2	К
Substance Prohibitance (Date)	10/01/2009
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	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
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	

Induction     Ideal value     Ideal     I	• initial value	0.8
design of the surge suppressor     with variation       closing power of magnet coil at DC     4 W       holding power of magnet coil at DC     4 W       closing delay     at CC       • at CC     30 100 ms       • at CC     2       • misantaneous contact     2       • misantaneous contact     2       • misantaneous contact     2       • misantaneous contact     2       • at 300 V rated value     3A       • at 300 V rated value     10A       • operational current at AC-12 maximum     10A       operational current at AC-13 maximum     10A       operational current at AC-14 maximum     10A       operational current at AC-15     1A       • at 300 V rated value     3A       • at 300 V rated value     1A       • at 300 V rated value     1A       • at 300 V rated value     1A       • at 32V rated value     1A       • at 34V rated value     1A		
closing power of magnet coll at DC       4 W         closing delay       at DC         • at DC       30 100 ms         • at DC       7 13 ms         • instantaneous contact       2         • it 300 V rate		
holding power of magnet coll at DC     4 W       closing delay     -       - at DC     30 100 ms       opening delay     -       - at Co     7 13 ms       arcing time     10 15 ms       Auxillary circuit     2       number of NC contacts for auxillary contacts     2       - instantaneous contact     2       Immer of NC contacts for auxillary contacts     2       - instantaneous contact     2       Operational current at AC-12 maximum     10 A       operational current at AC-15     2       - at 320 V rated value     3 A       - at 324 V rated value     10 A       - at 324 V rated value     10 A       - at 324 V rated value     0.3 A       - at 324 V rated value     0.4 A       - at 320 V rated value     0.4 A       - at 400 V rated value     0.4 A       - at 400 V rated value     0.4 A       - at 324 V rated value     0.4 A       - at 400 V rated value     0.4 A       - at		
closing delay		
• at DC         90 100 ms           opening delay         • 13 ms           • at CC         7 13 ms           arcing time         10 15 ms           Auxiliary circuit         2           number of NC contacts for auxiliary contacts         2           • instantaneous contact         2           • at 300 Vrated value         0A           • at 300 Vrated value         0A           • at 400 Vrated value         0.3 A </th <th></th> <th></th>		
opening delay         • at DC           • acting time         1015 ms           Auxiliary circuit         • instantaneous contact.         2           operational current at AC-12 maximum         10 A           operational current at AC-15         10 A           • at 300 V rated value         3 A           • at 400 V rated value         10 A           • at 600 V rated value         3 A           • at 600 V rated value         3 A           • at 600 V rated value         10 A           • at 600 V rated value         10 A           • at 600 V rated value         10 A           • at 600 V rated value         0.3 A           • at 600 V rated value         10 A           • at 600 V rated value         1		30 100 ms
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Auxiliary circuit           number of NC contacts for auxiliary contacts         2           - instantaneous contact         2           instantaneous contact         2           identification number and letter for switching elements         22           operational current at AC-12 maximum         10 A           operational current at AC-15         10 A           • at 230 V rated value         10 A           • at 240 V rated value         2A           • at 690 V rated value         2A           • at 690 V rated value         1A           • at 490 V rated value         0.5A           operational current with 2 current paths in series at DC-12         0.15A           operational current with 2 current paths in series at DC-12         0.16A           • at 20 V rated value         10A		7 13 ms
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<ul> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>0.65 A</li> </ul> operational current with 3 current paths in series at DC-12 <ul> <li>at 24 V rated value</li> <li>10 A</li> <li>at 60 V rated value</li> <li>10 A</li> <li>at 110 V rated value</li> <li>10 A</li> <li>at 220 V rated value</li> <li>10 A</li> <li>at 220 V rated value</li> <li>10 A</li> <li>at 220 V rated value</li> <li>36 A</li> <li>at 440 V rated value</li> <li>25 A</li> <li>at 600 V rated value</li> <li>1000 1/h</li> <li>operational current at 1 current path at DC-13</li> <li>at 24 V rated value</li> <li>10 A</li> <li>at 220 V rated value</li> <li>0.3 A</li> <li>at 440 V rated value</li> <li>0.1 A</li> <li>operational current with 2 current paths in series at DC-13</li> <li>at 24 V rated value</li> <li>10 A</li> <li>at 460 V value</li> <li>11 A</li> <li>operational current with 2 current paths in series at DC-13</li> <li>at 24 V rated value</li> <li>10 A</li> <li>at 24 V rated value</li> <li>0.1 A</li> <li>operational current with 2 current paths in series at DC-13</li> <li>at 24 V rated value</li> <li>0.1 A</li> <li>operational current with 2 current paths in series at DC-13</li> <li>at 24 V rated value</li> <li>35 A</li> <li>at 110 V rated value</li> <li>35 A</li> <li>at 110 V rated value</li> <li>0.9 A</li> </ul>		
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<ul> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>1.8 A</li> <li>operating frequency at DC-12 maximum</li> <li>1000 1/h</li> <li>operational current at 1 current path at DC-13 <ul> <li>at 24 V rated value</li> <li>10 A</li> <li>at 110 V rated value</li> <li>1A</li> <li>at 220 V rated value</li> <li>0.3 A</li> <li>at 440 V rated value</li> <li>0.14 A</li> <li>at 600 V rated value</li> <li>0.1 A</li> </ul> </li> <li>operational current with 2 current paths in series at DC-13 <ul> <li>at 24 V rated value</li> <li>10 A</li> <li>at 24 V rated value</li> <li>0.1 A</li> </ul> </li> <li>operational current with 2 current paths in series at DC-13 <ul> <li>at 24 V rated value</li> <li>10 A</li> <li>at 24 V rated value</li> <li>0.1 A</li> </ul> </li> <li>operational current with 2 current paths in series at DC-13 <ul> <li>at 24 V rated value</li> <li>10 A</li> <li>at 24 V rated value</li> <li>0.1 A</li> </ul> </li> <li>operational current with 2 current paths in series at DC-13 <ul> <li>at 24 V rated value</li> <li>0.1 A</li> <li>0.1 A</li> </ul> </li> </ul>	• at 110 V rated value	10 A
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	• at 110 V rated value	1.3 A
• at 440 V rated value 0.2 A	• at 220 V rated value	0.9 A
	• at 440 V rated value	0.2 A
• at 600 V rated value 0.1 A	• at 600 V rated value	0.1 A
operational current with 3 current paths in series at	operational current with 3 current paths in series at	

DC-13			
<ul> <li>at 24 V rated value</li> </ul>	10 A		
<ul> <li>at 60 V rated value</li> </ul>	4.7 A		
<ul> <li>at 110 V rated value</li> </ul>	3 A		
<ul> <li>at 220 V rated value</li> </ul>	1.2 A		
<ul> <li>at 440 V rated value</li> </ul>	0.5 A		
• at 600 V rated value	0.26 A		
operating frequency at DC-13 maximum	1 000 1/h		
design of the miniature circuit breaker for short-circuit	C characteristic: 6 A; 0.4 kA		
protection of the auxiliary circuit up to 230 V			
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)		
UL/CSA ratings			
contact rating of auxiliary contacts according to UL	A600 / Q600		
Short-circuit protection			
design of the fuse link for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A		
Installation/ mounting/ dimensions			
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface		
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail		
height	70 mm		
width	45 mm		
depth	73 mm		
required spacing			
with side-by-side mounting			
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	0 mm		
<ul> <li>for grounded parts</li> </ul>			
— forwards	10 mm		
— upwards	10 mm		
— at the side	6 mm		
— downwards	10 mm		
• for live parts			
	10 mm		
— forwards			
— upwards	10 mm		
— downwards	10 mm		
— at the side	6 mm		
Connections/ Terminals			
type of electrical connection for auxiliary and control circuit	spring-loaded terminals		
type of connectable conductor cross-sections			
<ul> <li>for auxiliary contacts</li> </ul>			
— solid or stranded	2x (0,5 4 mm²)		
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 2.5 mm²)		
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)		
<ul> <li>at AWG cables for auxiliary contacts</li> </ul>	2x (20 12)		
Safety related data			
B10 value with high demand rate according to SN 31920	1 000 000; With 0.3 x le		
proportion of dangerous failures			
with low demand rate according to SN 31920	40 %		
<ul> <li>with high demand rate according to SN 31920</li> </ul>	73 %		
failure rate [FIT] with low demand rate according to SN 31920	100 FIT		
T1 value for proof test interval or service life according to IEC 61508	20 у		
protection class IP on the front according to IEC 60529	IP20		
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front		
Certificates/ approvals			

General Product Approval							
(SP)	CCC	<u>Confirmation</u>		KC	EAC		
EMC	Functional Safety/Safety of Machinery	Declaration of Con	formity	Test Certificates			
RCM	<u>Type Examination</u> <u>Certificate</u>	CE EG-Konf.	UK CA	<u>Special Test Certific-</u> <u>ate</u>	Type Test Certific- ates/Test Report		
Marine / Shipping							
ABS	BUREAU VERITAS		Lloyd's Register	PRS	RINA		
Marine / Shipping	other		Dangerous Good				
KMRS RMRS	<u>Confirmation</u>	VDE	<u>Transport Informa-</u> tion				
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=3RH2122-2UB40 Cax opling generator							

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2122-2UB40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2UB40

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RH2122-2UB40&lang=en

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2UB40/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2122-2UB40&objecttype=14&gridview=view1

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