## **SIEMENS**

Data sheet 3RH2122-2WB40



Coupling contactor relay, 2 NO + 2 NC, 24 V DC, 0.85  $\dots$  1.85\* US, with varistor plugged on, Size S00, Spring-type terminal

product designation Coupling relay for switching auxillary circuits  product type designation 3RH2  Size of contactor product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value  degree of pollution surge voltage resistance rated value + at DC shock resistance at rectangular impulse + at DC + at DC shock resistance with sine pulse - standard representation - continuity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit no-load switching frequency + at AC + at DC - at AC + at DC - at AC - at DC - ontroi circuit' Controi  type of voltage of the control supply voltage control supply voltage at DC - at at Value - at AC - at DC - at AC - at D	product brand name	SIRIUS	
size of contactor S00 product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value  degree of pollution surge voltage resistance rated value • at DC • at DC  shock resistance at rectangular impulse • at DC • at DC  shock resistance with sine pulse • at DC  mechanical service life (switching cycles) • of contactor typical reference code according to IEC 81346-2  Substance Prohibitance (Date)  Installation altitude at height above sea level maximum ambient temperature • during operation • during poration • during storage  relative humidity minimum relative humidity minimum relative humidity minimum  and increuit  no-load switching frequency • at AC • at DC • at AC • at DC • (ontrol circuit/ Control type of voltage of the control supply voltage control supply voltage at DC • (rated value • (unit) at value • (uni	product designation	Coupling relay for switching auxiliary circuits	
size of contactor product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value  degree of pollution 3 surge voltage resistance rated value • at DC  shock resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  mechanical service life (switching cycles) • of contactor typical of contactor typical reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Amblent conditions installation altitude at height above sea level maximum amblent temperature • during operation • during storage -55 +80 °C  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit no-load switching frequency • at AC • at DC  orentor supply voltage at DC • rated value  operating range factor control supply voltage rated value of magnet coll at DC • finitial value • full-scale value  olesign of the surge suppressor  with varistor	product type designation	3RH2	
product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value  degree of pollution  surge voltage resistance rated value	General technical data		
Insulation voltage with degree of pollution 3 at AC rated value degree of pollution  surge voltage resistance rated value shock resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  operating range factor control supply voltage control supply voltage at DC • rated value  operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value  outges of the surge suppressor  with varistor	size of contactor	S00	
value       degree of pollution     3       surge voltage resistance rated value     6 kV       shock resistance at rectangular impulse     10g / 5 ms, 5g / 10 ms       e at DC     15g / 5 ms, 8g / 10 ms       mechanical service life (switching cycles)     30 000 000       e of contactor typical     K       Substance Prohibitance (Date)     10/01/2009       Ambient conditions     10/01/2009       Installation altitude at height above sea level maximum     2 000 m       ambient temperature     -25 +50 °C       e during operation     -25 +50 °C       e during storage     -55 +80 °C       relative humidity minimum     10 %       relative humidity at 55 °C according to IEC 60068-2-30     95 %       maximum     95 %       Main circuit     10 000 1/h       no-load switching frequency     10 000 1/h       e at DC     10 000 1/h       Control circuit/ Control     24 V       operating range factor control supply voltage rated value of magnet coil at DC     24 V       e rated value     0.85       e initial value     0.85       e full-scale value     1.85       design of the surge suppressor     with varistor	product extension auxiliary switch	No	
surge voltage resistance rated value 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) of contactor typical 200000 reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during storage relative humidity minimum relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit no-load switching frequency at DC at DC control circuit/ Control type of voltage of the control supply voltage control supply voltage at DC initial value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value design of the surge suppressor with varistor		690 V	
shock resistance at rectangular impulse  at DC  shock resistance with sine pulse  at DC  technical service life (switching cycles)  of contactor typical  reference code according to IEC 81346-2  Kubstance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  during operation  during storage  relative humidity minimum  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30  maximum  Main circuit  no-load switching frequency  at AC  at DC  control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  reted value  operating range factor control supply voltage rated value of magnet coil at DC  initial value  full-scale value  full-scale value  full-scale value  design of the surge suppressor  ito 000 1/h sylthy coils of the control supples with varistor	degree of pollution	3	
shock resistance with sine pulse  • at DC  • at DC  mechanical service life (switching cycles)  • of contactor typical  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  relative humidity minimum  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency  • at AC  • at DC  10 000 1/h  • at DC  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  full-scale value  full-scale value  owith varistor	surge voltage resistance rated value	6 kV	
shock resistance with sine pulse  • at DC  mechanical service life (switching cycles)  • of contactor typical  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30  maximum  Main circuit  no-load switching frequency  • at AC  • at DC  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  design of the surge suppressor  with varistor	shock resistance at rectangular impulse		
at DC mechanical service life (switching cycles)  of contactor typical reference code according to IEC 81346-2 K Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ablent temperature of during operation during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit no-load switching frequency of at AC official at DC control circuit/ Control type of voltage of the control supply voltage control supply voltage at DC official range factor control supply voltage rated value of magnet coil at DC official surge suppressor  intial value of slul-scale value offilial-scale value design of the surge suppressor  with varistor	• at DC	10g / 5 ms, 5g / 10 ms	
mechanical service life (switching cycles)  • of contactor typical  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30  maximum  Main circuit  no-load switching frequency  • at AC  • at DC  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  outperson of the surge suppressor  with varistor	shock resistance with sine pulse		
of contactor typical     reference code according to IEC 81346-2     Substance Prohibitance (Date)     Ambient conditions     installation altitude at height above sea level maximum     ambient temperature     ouring operation     ouring storage     relative humidity minimum     relative humidity at 55 °C according to IEC 60068-2-30     maximum  Main circuit  no-load switching frequency     ot at AC     ot DC  Control circuit/ Control  type of voltage of the control supply voltage     control supply voltage at DC     orated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     one initial value     one full-scale value  of the surge suppressor  with varistor	• at DC	15g / 5 ms, 8g / 10 ms	
reference code according to IEC 81346-2 Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency  • at AC  • at DC  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  of the surge suppressor  with varistor	mechanical service life (switching cycles)		
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  Control circuit/ Control  type of voltage of the control supply voltage control supply voltage at DC • rated value  operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value  design of the surge suppressor  with varistor	of contactor typical	30 000 000	
installation altitude at height above sea level maximum ambient temperature  • during operation • during storage -55 +50 °C -55 +80 °C  relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  Control circuit/ Control  type of voltage of the control supply voltage control supply voltage at DC • rated value  operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value  full-scale value  design of the surge suppressor  with varistor	reference code according to IEC 81346-2	K	
installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC • rated value  operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value  design of the surge suppressor  with varistor	Substance Prohibitance (Date)	10/01/2009	
ambient temperature  • during operation • during storage -55 +50 °C  relative humidity minimum 10 %  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  Control circuit/ Control  type of voltage of the control supply voltage control supply voltage at DC • rated value  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value • full-scale value  full-scale value  odesign of the surge suppressor  with varistor	Ambient conditions		
<ul> <li>during operation</li> <li>during storage</li> <li>-55 +50 °C</li> <li>relative humidity minimum</li> <li>10 %</li> <li>relative humidity at 55 °C according to IEC 60068-2-30 maximum</li> <li>Main circuit</li> <li>no-load switching frequency <ul> <li>at AC</li> <li>10 000 1/h</li> <li>at DC</li> <li>10 000 1/h</li> </ul> </li> <li>Control circuit/ Control</li> <li>type of voltage of the control supply voltage</li> <li>or rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at DC</li> <li>initial value</li> <li>full-scale value</li> </ul> <li>O.85</li> <li>design of the surge suppressor</li> <li>with varistor</li>	installation altitude at height above sea level maximum	2 000 m	
<ul> <li>during storage</li> <li>relative humidity minimum</li> <li>10 %</li> <li>relative humidity at 55 °C according to IEC 60068-2-30 maximum</li> <li>Main circuit</li> <li>no-load switching frequency <ul> <li>at AC</li> <li>at DC</li> <li>10 000 1/h</li> <li>at DC</li> <li>10 000 1/h</li> </ul> </li> <li>Control circuit/ Control</li> <li>type of voltage of the control supply voltage</li> <li>control supply voltage at DC</li> <li>rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at DC</li> <li>initial value</li> <li>full-scale value</li> <li>design of the surge suppressor</li> <li>with varistor</li> </ul>	ambient temperature		
relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency  • at AC  • at DC  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  design of the surge suppressor  with varistor	<ul><li>during operation</li></ul>	-25 +50 °C	
relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency  • at AC  • at DC  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  design of the surge suppressor  95 %  95 %  95 %  95 %	during storage	-55 +80 °C	
maximum  Main circuit  no-load switching frequency  • at AC  • at DC  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  design of the surge suppressor  with varistor	relative humidity minimum	10 %	
no-load switching frequency  • at AC  • at DC  10 000 1/h  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  design of the surge suppressor  with varistor		95 %	
<ul> <li>at AC</li> <li>at DC</li> <li>10 000 1/h</li> <li>Control circuit/ Control</li> <li>type of voltage of the control supply voltage</li> <li>control supply voltage at DC</li> <li>rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at DC</li> <li>initial value</li> <li>full-scale value</li> <li>design of the surge suppressor</li> <li>with varistor</li> </ul>	Main circuit		
at DC  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC      • rated value  operating range factor control supply voltage rated value of magnet coil at DC      • initial value      • full-scale value  design of the surge suppressor  10 000 1/h  DC  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	no-load switching frequency		
type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  of tull-scale value  design of the surge suppressor  DC  24 V  0.85  1.85  design of the surge suppressor  with varistor	• at AC	10 000 1/h	
type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  design of the surge suppressor   DC  24 V  0.85  1.85	• at DC	10 000 1/h	
control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  design of the surge suppressor  24 V  0.85  1.85	Control circuit/ Control		
<ul> <li>rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at DC</li> <li>initial value</li> <li>full-scale value</li> <li>design of the surge suppressor</li> <li>24 V</li> <li>0.85</li> <li>with varistor</li> </ul>	type of voltage of the control supply voltage	DC	
operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  design of the surge suppressor   o 0.85  with varistor	control supply voltage at DC		
value of magnet coil at DC	rated value	24 V	
● full-scale value 1.85  design of the surge suppressor with varistor			
design of the surge suppressor with varistor	initial value	0.85	
	full-scale value	1.85	
closing power of magnet coil at DC 1.6 W	design of the surge suppressor	with varistor	
	closing power of magnet coil at DC	1.6 W	

holding power of magnet coil at DC	1.6 W
closing delay	
• at DC	25 120 ms
opening delay	
• at DC	5 20 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	22 E
elements	
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 110 V rated value	3 A
at 220 V rated value	1 A
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	40.0
at 24 V rated value	10 A
at 110 V rated value     at 220 V rated value	1 A
at 220 V rated value     at 440 V rated value	0.3 A
at 440 V rated value     at 600 V rated value	0.14 A
at 600 V rated value  operational current with 2 current paths in series at DC-13	0.1 A
at 24 V rated value	10 A
at 24 v rated value     at 60 V rated value	3.5 A
at 110 V rated value      at 110 V rated value	1.3 A
at 220 V rated value	0.9 A
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	
at 24 V rated value	10 A
The state of the s	
at 60 V rated value	4.7 A

at 220 V rated value	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 protection of the auxiliary circuit up to 230 V	C characteristic: 6 A; 0.4 kA
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	
<ul><li>with side-by-side mounting</li></ul>	
— 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	
— forwards	10 mm
— 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	
for auxiliary contacts	0. (0.542)
— solid or stranded	2x (0,5 4 mm²)
— finely stranded with core end processing	2x (0.5 2.5 mm²)
— finely stranded without core end processing	2x (0.5 2.5 mm²)
at AWG cables for auxiliary contacts  Sofoty related data.	2x (20 12)
Safety related data	4 000 000 Will 0 0 1
B10 value with high demand rate according to SN 31920	1 000 000; With 0.3 x le
proportion of dangerous failures	40.9/
with low demand rate according to SN 31920     with high demand rate according to SN 31920	40 %
with high demand rate according to SN 31920  failure rate [EIT] with low demand rate according to SN.	73 % 100 FIT
failure rate [FIT] with low demand rate according to SN 31920	
T1 value for proof test interval or service life according to IEC 61508	20 y
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	



Confirmation





<u>KC</u>



**EMC** 

Functional Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 



Type Examination
Certificate





Special Test Certificate

Type Test Certificates/Test Report

## Marine / Shipping













Marine / Shipping

other

Confirmation



Transport Information

**Dangerous Good** 

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=3RH2122-2WB40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2122-2WB40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2WB40

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

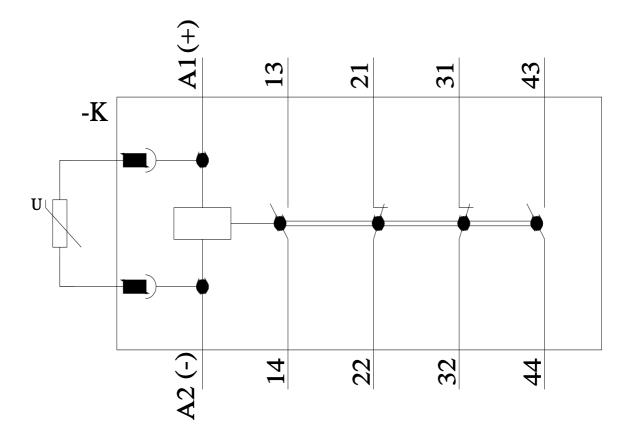
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RH2122-2WB40&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2WB40/char

Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2122-2WB40&objecttype=14&gridview=view1



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