## **SIEMENS**

Data sheet 3RH2122-2JB40



Coupling contactor relay, 2 NO + 2 NC, 24 V DC, 0.7  $\dots$  1.25\* US, with integrated diode, Size S00, Spring-type terminal suitable for PLC outputs

product designation  product type designation  General technical data  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 en to the sistance at rectangular impulse e at DC  shock resistance with sine pulse e at DC  should reside the shock resistance with sine pulse e at DC  should reside the shock resistance with sine pulse e shock resistance with sine pulse e shock resistance with sine pulse e at DC  should reside the shock resistance with sine pulse e	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  of contactor typical  of contactor typical  installation altitude at height above sea level maximum  ambient temperature • during operation • during peration • during storage  relative humidity minimum relative humidity minimum relative humidity minimum  or load switching frequency • at DC  at AC  on to Control supply voltage  at AC  on to Control supply voltage at DC  or ated value • initial value • full-scale value • ful	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 10g / 5 ms, 5g / 10 ms  shock resistance at rectangular impulse • at DC 10g / 5 ms, 5g / 10 ms  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)  Amblent conditions installation altitude at height above sea level maximum amblent temperature • during operation • during storage - 55 +60 °C 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 11 0000 1/h 12 000 1/h 13 000 1/h 14 000 1/h 15 000 1/h 16 000 1/h 17 000 1/h 18 000 1/h 19 000 1/h 19 000 1/h 19 000 1/h 10 000 1	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	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  resistance with sine pulse • at DC  shock resistance with sine pulse • at DC  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  1.25  design of the surge suppressor	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     30 000 000       reference code according to IEC 81346-2     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     40uring operation     -25 +60 °C       6 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       at AC     10 000 1/h       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 initial value     0.7       e initial value     0.7       e linitial value     0.25       e logger of the control supply voltage rated value of magnet coil at DC     0.7       <	product extension auxiliary switch	No		
surge voltage resistance rated value shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC shock resistance • at DC shock res		690 V		
shock resistance at rectangular impulse	degree of pollution	3		
shock resistance with sine pulse  at DC  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 minimum  relative humidity at 55 °C according to IEC 60068-2-30  maximum  Main circuit  no-load switching frequency  at AC  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  1.25  diode	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  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	shock resistance at rectangular impulse			
e at DC mechanical service life (switching cycles) e of contactor typical reference code according to IEC 81346-2 K Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum abient temperature e during operation e during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit no-load switching frequency e at AC e at DC  Control circuit/ Control  type of voltage of the control supply voltage control supply voltage at DC e rated value operating range factor control supply voltage rated value of magnet coil at DC e full-scale value  0.7 e full-scale value 0.7 e full-scale value design of the surge suppressor  i 10 000 000  10 000 1/h 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7	• at DC	10g / 5 ms, 5g / 10 ms		
mechanical service life (switching cycles)  • 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  • 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  of full-scale value  design of the surge suppressor  diode	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     at AC	• 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 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  diode	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  diode		30 000 000		
installation altitude at height above sea level maximum ambient temperature  • during operation • during storage • 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  diode	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  diode	Substance Prohibitance (Date)	10/01/2009		
ambient temperature  • during operation • during storage -55 +80 °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  • initial value • full-scale value  full-scale value  1.25  design of the surge suppressor  diode	Ambient conditions			
<ul> <li>during operation</li> <li>during storage</li> <li>-55 +80 °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</li> <li>at AC</li> <li>10 000 1/h</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>o rated value</li> <li>o perating 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>diode</li> </ul>	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>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>or rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at DC</li> <li>initial value</li> <li>of ull-scale value</li> <li>design of the surge suppressor</li> <li>diode</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  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  10 000 1/h  10 000 1/h  DC  24 V  07  0.7  • full-scale value  1.25  design of the surge suppressor  diode	<ul><li>during operation</li></ul>	-25 +60 °C		
relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency	during storage	-55 +80 °C		
maximum  Main circuit  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  diode	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  10 000 1/h  DC  24 V  07  07  10 000 1/h  10 000 1/h		95 %		
<ul> <li>at AC</li> <li>at DC</li> <li>10 000 1/h</li> <li>10 000 1/h</li> </ul> Control circuit/ Control type of voltage of the control supply voltage <ul> <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>of tull-scale value</li> <li>design of the surge suppressor</li> <li>diode</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  24 V  0.7  1.25  diode	no-load switching frequency			
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 0.7  • full-scale value 1.25  design of the surge suppressor diode	• 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	• 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  0.7  • full-scale value  diode	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>0.7</li> <li>diode</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  operating range factor control supply voltage rated  0.7  • full-scale value  diode	control supply voltage at DC			
value of magnet coil at DC	rated value	24 V		
● full-scale value 1.25  design of the surge suppressor diode				
design of the surge suppressor diode	• initial value	0.7		
	• full-scale value	1.25		
closing power of magnet coil at DC 2.8 W	design of the surge suppressor	diode		
	closing power of magnet coil at DC	2.8 W		

holding power of magnet coil at DC	2.8 W
closing delay	
• at DC	25 130 ms
opening delay	20 100 1110
• at DC	38 65 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
<ul> <li>at 440 V rated value</li> </ul>	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
<ul><li>at 110 V rated value</li></ul>	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	40.4
at 24 V rated value	10 A
• at 110 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	0.1 A
operational current with 2 current paths in series at DC-13	
• at 24 V rated value	10 A
• at 60 V rated value	3.5 A
• at 110 V rated value	1.3 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
operational current with 3 current paths in series at DC-13	
• at 24 V rated value	10 A
• at 60 V rated value	4.7 A
<ul> <li>at 110 V rated value</li> </ul>	3 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** 





Type Test Certificates/Test Report

**Special Test Certific**ate

## 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=3RH2122-2JB40

Cax online generator

 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RH2122-2JB40}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2JB40

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RH2122-2JB40&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-2JB40/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2122-2JB40&objecttype=14&gridview=view1

last modified:

1/26/2022

