SIEMENS

Data sheet 3RH2122-1WB40



Coupling contactor relay, 2 NO + 2 NC, 24 V DC, 0.85 \dots 1.85* US, with varistor plugged on, Size S00, screw 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 act value - at AC - at DC - at act value - a	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 • (unitial value • (unit value) • (unitial value • (unit	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 with sine pulse • at DC 15g / 5 ms, 8g / 10 ms 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 operation • during storage relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit no-load switching frequency • at AC • at DC oreating are frequency • at AC • at DC control suppity voltage at DC • rated value operating range factor control supply voltage rated value of magnet coll at DC • initial value • full-scale value 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 if you not	• 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 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 observed 2 000 m 2 00	reference code according to IEC 81346-2	К	
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		
 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 10 000 1/h at DC 10 000 1/h Control circuit/ Control type of voltage of the control supply voltage or rated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value O.85 full-scale value suppressor with varistor	installation altitude at height above sea level maximum	2 000 m	
 during storage 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 10 000 1/h 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 	ambient temperature		
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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 %	
 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 	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		
 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 with varistor 	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	40.4
at 24 V rated value	10 A
• at 110 V rated value	1 A
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 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
• at 110 V rated value	3 A

 at 220 V rated value 	1.2 A
 at 440 V rated value 	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	57.5 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
for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
for live parts	10 111111
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	0 111111
type of electrical connection for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
for auxiliary contacts add or stranded	2v (0 F 4 F mm²) 2v (0 7F 9 F mm²) 2v 4 mm²
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
at AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 2x 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	40.07
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920	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 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 Certificate

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=3RH2122-1WB40

Cax online generator

 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RH2122-1WB40}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-1WB40

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

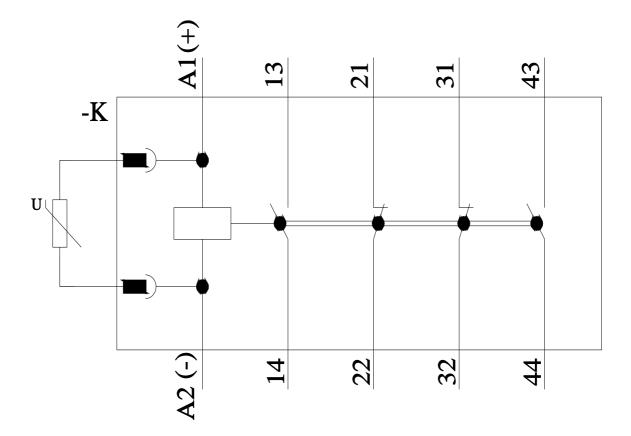
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2122-1WB40&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RH2122-1WB40/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2122-1WB40&objecttype=14&gridview=view1



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