# **SIEMENS**

Product data sheet 3RH2140-1KF40



COUPLING CONTACTOR RELAY, 4NO, DC 110V, 0.7...1.25\*US, W/ INTEGRATED SUPPRESSOR DIODE, SIZE S00, SCREW TERMINAL

General technical data:			
Product brand name		SIRIUS	
Size of the contactor		S00	
Identification number and letter for switching elements		40 E	
Product extension / auxiliary switch		No	
Protection class IP / on the front		IP20	
Protection against electrical shock		finger-safe	
Degree of pollution		3	
Insulation voltage / with degree of pollution 3 / rated value	V	690	
Installation altitude / at a height over sea level / maximum	m	2,000	
Ambient temperature / during storage	°C	-55 80	
Ambient temperature / during operating	°C	-25 60	
Shock resistance			
at rectangular impulse			
• at DC		10g / 5 ms, 5g / 10 ms	
• at sine pulse			
• at DC		15g / 5 ms, 8g / 10 ms	
Impulse voltage resistance / rated value	kV	6	
Mechanical operating cycles as operating time			
of the contactor / typical		30,000,000	

Control circuit:			
Design of the surge suppressor		with suppressor diode	
Type of voltage / of the controlled supply voltage		DC	
Control supply voltage / 1			
• for DC / rated value	V	110	
Operating range factor control supply voltage rated value / of the solenoid			
• for DC		0.7 1.25	
Holding power / of the solenoid / for DC	W	2.8	
Pull-in power / of the solenoid / for DC	W	2.8	
Closing delay			
• at DC	ms	30 100	
Opening delay			
• at DC	ms	25 90	
Arcing time	s	10 15	
Auxiliary circuit:			

Auxiliary circuit:		
Contact reliability / of the auxiliary contacts		1 faulty switching per 100 million (17 V, 1 mA)
Number of NC contacts / for auxiliary contacts / instantaneous switching		0
Number of NO contacts / for auxiliary contacts / instantaneous switching		4
Operating current / of the auxiliary contacts / at AC-12 / maximum	Α	10
Operating current / of the auxiliary contacts / at AC-15		
• at 230 V	Α	6
• at 400 V	Α	3
• at 500 V	Α	2
• at 690 V	Α	1
Operating current		
• of the auxiliary contacts / with 1 current path / at DC-12		
• at 24 V	Α	6
• at 110 V	Α	3
• at 220 V	Α	1
• with 2 current paths in series / at DC-12		
• at 24 V / rated value	Α	10
• at 60 V / rated value	Α	10
• at 110 V / rated value	Α	4
• at 220 V / rated value	Α	2
• at 440 V / rated value	Α	1.3
• at 600 V / rated value	Α	0.65

• with 3 current paths in series / at DC-12		
• at 24 V / rated value	Α	10
• at 60 V / rated value	Α	10
• at 110 V / rated value	Α	10
• at 220 V / rated value	Α	3.6
• at 440 V / rated value	Α	2.5
• at 600 V / rated value	Α	1.8
Operating current		
• of the auxiliary contacts / with 1 current path / at DC-13		
• at 24 V	Α	6
• at 110 V	Α	1
• at 220 V	Α	0.3
• with 2 current paths in series / at DC-13		
• at 24 V / rated value	Α	10
• at 60 V / rated value	Α	3.5
• at 110 V / rated value	Α	1.3
• at 220 V / rated value	Α	0.9
• at 440 V / rated value	Α	0.2
• at 600 V / rated value	Α	0.1
• with 3 current paths in series / at DC-13		
• at 24 V / rated value	Α	10
• at 60 V / rated value	Α	4.7
• at 110 V / rated value	Α	3
• at 220 V / rated value	Α	1.2
• at 440 V / rated value	Α	0.5
• at 600 V / rated value	Α	0.26
Off-load operating frequency		
• at AC	1/h	10,000
• at DC	1/h	10,000
Frequency of operation		
• at AC-12 / maximum	1/h	1,000
• at AC-14 / maximum	1/h	1,000
• at AC-15 / maximum	1/h	1,000
• at DC-12 / maximum	1/h	1,000
• at DC-13 / maximum	1/h	1,000

Short-circuit:	
Design of the fuse link / for short-circuit protection of the auxiliary switch	
• required	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current lk < 400 A)

Installation/mounting/dimensions:			
Built in orientation		vertical	
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail	
Width	mm	45	
Height	mm	57.5	
Depth	mm	73	
Distance, to be maintained, to the ranks assembly / sidewards	mm	0	

Connections:		
Design of the electrical connection		
for auxiliary and control current circuit	screw-type te	rminals
Type of the connectable conductor cross-section		
for auxiliary contacts		
• solid	2x (0.5 1.5	mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
• finely stranded		
<ul> <li>with conductor end processing</li> </ul>	2x (0.5 1.5	mm²), 2x (0.75 2.5 mm²)
<ul> <li>for AWG conductors / for auxiliary contacts</li> </ul>	2x (20 16),	2x (18 14), 2x 12

## Certificates/approvals:

#### **General Product Approval**



ROSTEST



**Test Certificates** 

Manufacturer

## **Shipping Approval**



Cac

cqc





LRS





**Shipping Approval** 







UL/CSA ratings:			
Contact rating designation / for auxiliary contacts / according to UL		A600 / Q600	
Safety:related Parameter:			
B10 value / with high demand rate			
according to SN 31920		1,000,000	
T1 value / for proof test interval or service life			
according to IEC 61508	а	10	

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Proportion of dangerous failures		
<ul> <li>with low demand rate / according to SN 31920</li> </ul>	%	40
with high demand rate / according to SN 31920	%	73
Failure rate (FIT value) / with low demand rate		
according to SN 31920	FIT	100
Product function / positively driven operation to IEC 60947-5-1		Yes
• comment		with 3RH29

## Further information:

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

#### Industry Mall (Online ordering system)

http://www.siemens.com/industrial-controls/mall

#### Cax online generator:

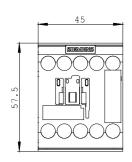
http://www.siemens.com/cax

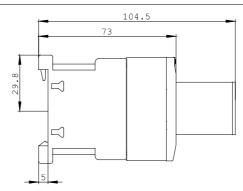
#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

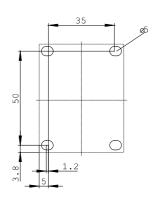
http://support.automation.siemens.com/WW/view/en/3RH2140-1KF40/all

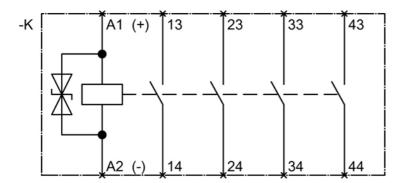
#### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RH2140-1KF40}$ 









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