### **SIEMENS**

Product data sheet 3RH2140-1BE40



CONTACTOR RELAY, 4NO, DC 60V, 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		Yes
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
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
• of the contactor with added auxiliary switch block / typical	10,000,000
<ul> <li>of the contactor with added electronics-compatible auxiliary switch block / typical</li> </ul>	5,000,000

Control circuit/ Control:		
Voltage type / of control feed voltage		DC
Control supply voltage		
• for DC / rated value	V	60
Operating range factor control supply voltage rated value / of the magnet coil		
• for DC		0.8 1.1
Holding power / of the solenoid / for DC	W	4
Pull-in power / of the solenoid / for DC	W	4
Closing delay		
• at DC	ms	30 100
Opening delay		
• at DC	ms	25 90
Arcing time	S	10 15

Auxiliary circuit:		
Contact reliability / of the auxiliary contacts		1 faulty switching per 100 million (17 V, 1 mA)
Number of NO contacts / for auxiliary contacts / instantaneous switching		4
Operating current		
• at AC-12 / maximum	Α	10
• at AC-15		
• at 230 V / rated value	Α	10
• at 400 V / rated value	Α	3
• at 500 V / rated value	Α	2
• at 690 V / rated value	Α	1
Operating current		
• with 1 current path / at DC-12		
• at 24 V / rated value	Α	10
• at 110 V / rated value	Α	3
• at 220 V / rated value	Α	1
• at 440 V / rated value	Α	0.3
• at 600 V / rated value	Α	0.15
• 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	
* at 440 V / rated value A 0.65  * with 3 current paths in series / at DC-12  * at 24 V / rated value A 10  * at 600 V / rated value A 10  * at 60 V / rated value A 10  * at 110 V / rated value A 10  * at 110 V / rated value A 10  * at 220 V / rated value A 2.5  * at 600 V / rated value A 1.8   * Operating current  * with 1 current path / at DC-13  * at 24 V / rated value A 1.8  * at 110 V / rated value A 1.8  Operating current  * with 1 current path / at DC-13  * at 24 V / rated value A 1.8  * at 10 V / rated value A 1.8  * at 10 V / rated value A 1.8  * at 10 V / rated value A 1.8  * at 110 V / rated value A 1.1  * at 600 V / rated value A 1.1  * at 600 V / rated value A 1.3  * at 24 V / rated value A 1.3  * at 24 V / rated value A 1.3  * at 24 V / rated value A 1.3  * at 220 V / rated value A 1.3  * at 220 V / rated value A 1.3  * at 220 V / rated value A 1.3  * at 220 V / rated value A 1.3  * at 220 V / rated value A 1.3  * at 24 V / rated value A 1.3  * at 24 V / rated value A 1.3  * at 24 V / rated value A 1.3  * at 24 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 440 V / rated value A 1.2  * at 600 V / rated value A 1.2  * at 600 V / rated value A 1.2  * at 600 V / rated value A 1.2  * at 600 V / rated value A 1.2  * at 600 V / rated value A 1.2  * at 600 V / rated value A 1.2  * at 600 V / rated value A 1.2  * at 600 V / rated value A 1.2  * at 600 V / rated value A 1.2  * at 600 V / rated value A 1.3  * at 600 V / rated value A 1.3  * at 600 V / rated value A 1.3  * at 600 V / rated value A 1.3  * at 600 V / rated value A 1.3  * at 600 V / rated val	
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* at 24 V / rated value	55
*at 60 V / rated value  *at 110 V / rated value  *at 220 V / rated value  *at 440 V / rated value  *at 600 V / rated value  *at 600 V / rated value  *at 110 V / rated value  *at 220 V / rated value  *at 110 V / rated value  *at 110 V / rated value  *at 440 V / rated value  *at 600 V / rated value  *at 440 V / rated value  *at 600 V / rated valu	
• at 110 V / rated value       A       10         • at 220 V / rated value       A       3.6         • at 440 V / rated value       A       2.5         • at 600 V / rated value       A       1.8         Operating current         • with 1 current path / at DC-13       ————————————————————————————————————	
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• at 440 V / rated value  • at 600 V / rated value  Off-load operating frequency  • at AC  • at DC  • at DC  A  0.5  A  0.26	
• at 600 V / rated value  Off-load operating frequency  • at AC  • at DC  A 0.26   1/h 10,000  1/h 10,000	
Off-load operating frequency         1/h         10,000           • at DC         1/h         10,000	
• at AC • at DC  1/h 10,000 1/h 10,000	16
• at DC 1/h 10,000	
	,000
Fraguency of energical	,000
Frequency of operation	
• at AC-12 / maximum 1/h 1,000	000
• at AC-14 / maximum 1/h 1,000	000
• at AC-15 / maximum 1/h 1,000	000
• at DC-12 / maximum 1/h 1,000	000

protection of the auxiliary circuit / up to 230 V

1/h

1,000

# Short-circuit: Design of the fuse link / for short-circuit protection of the auxiliary switch • required Design of the miniature circuit breaker / for short-circuit C characteristic: 6 A; 0.4 kA

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
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail
Width	mm	45
Height	mm	57.5
Depth	mm	73

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

#### **Certificates/ approvals:**

#### **General Product Approval**

Functional Safety / Safety of Machinery Declaration of Conformity









Type Examination



#### **Test Certificates**

Special Test Certificate Type Test
Certificates/Test
Report

#### **Shipping Approval**













#### **Shipping Approval**







other

Environmental Confirmations

## UL/CSA ratings: Contact rating designation / for auxiliary contacts / according to UL A600 / Q600

Safety related data:		
B10 value / with high demand rate		
according to SN 31920		1,000,000
• note		With 0.3 x le
T1 value / for proof test interval or service life		
according to IEC 61508	а	20
Proportion of dangerous failures		
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	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://mall.industry.siemens.com/

#### Cax online generator

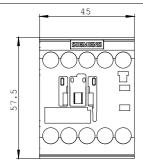
http://www.siemens.com/cax

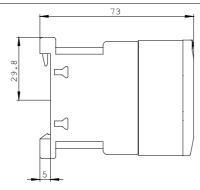
#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

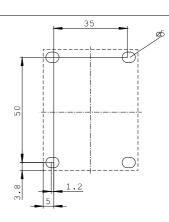
http://support.automation.siemens.com/WW/view/en/3RH2140-1BE40/all

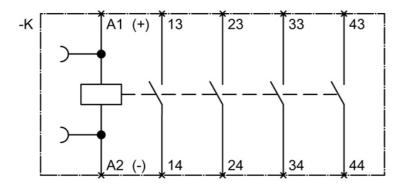
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RH2140-1BE40}$ 









last change: Aug 4, 2014