SIEMENS

Product data sheet 3RH2140-1AQ00



CONTACTOR RELAY, 4NO, AC 380V, 50/60 HZ, 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 AC		7,3g / 5 ms, 4,7g / 10 ms	
at sine pulse			
• at AC		11,4g / 5 ms, 7,3g / 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
 of the contactor with added electronics-compatible auxiliary switch block / typical 	5,000,000

Control circuit/ Control:		
Voltage type / of control feed voltage		AC
Control supply voltage		
• at 50 Hz / at AC / rated value	V	380
• at 60 Hz / at AC / rated value	V	380
Operating range factor control supply voltage rated value / of the magnet coil		
• at 50 Hz / for AC		0.8 1.1
• at 60 Hz / for AC		0.85 1.1
Apparent pull-in power / of the solenoid / for AC	V·A	37
Apparent holding power / of the solenoid / for AC	V·A	5.7
Inductive power factor		
• with the pull-in power of the coil		0.8
• with the pull-in power of the coil		0.25
Closing delay		
• at AC	ms	8 33
Opening delay		
• at AC	ms	6 25
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

• ant 440 V/ rated value			
• with 2 current paths in series / at DC-12 • at 24 V / rated value • at 60 V / rated value • at 110 V / rated value • at 110 V / rated value • at 110 V / rated value • at 220 V / rated value • at 600 V / rated value • at 100 V / rated value • at 100 V / rated value • at 100 V / rated value • at 220 V / rated value • at 600 V / rated value • at 600 V / rated value • at 600 V / rated value • at 100 V / rated value • at 600 V / rated value • a	• at 440 V / rated value	Α	0.3
* at 24 V / rated value	• at 600 V / rated value	Α	0.15
• at 60 V / rated value • at 110 V / rated value • at 220 V / rated value • at 220 V / rated value • at 600 V / rated value • at 60 V / rated value • at 60 V / rated value • at 110 V / rated value • at 110 V / rated value • at 600 V / rated value • at 110 V / rated value • at 600 V / rated value • at 800 V / rated value • at 600 V / rated value	• with 2 current paths in series / at DC-12		
** at 110 V / rated value	• at 24 V / rated value	Α	10
* at 220 V / rated value	• at 60 V / rated value	Α	10
** at 440 V / rated value	• at 110 V / rated value	Α	4
• at 600 V / rated value • with 3 current paths in series / at DC-12 • at 24 V / rated value • at 60 V / rated value • at 60 V / rated value • at 100 V / rated value • at 110 V / rated value • at 220 V / rated value • at 220 V / rated value • at 600 V / rated value • at 110 V / rated value • at 110 V / rated value • at 110 V / rated value • at 120 V / rated value • at 120 V / rated value • at 220 V / rated value • at 600 V / rated value • at 220 V / rated value • at 600 V / rated value	• at 220 V / rated value	Α	2
• with 3 current paths in series / at DC-12 • at 24 V / rated value • at 60 V / rated value • at 110 V / rated value • at 110 V / rated value • at 220 V / rated value • at 600 V / rated value • with 1 current path / at DC-13 • at 24 V / rated value • at 110 V / rated value • at 110 V / rated value • at 110 V / rated value • at 220 V / rated value • at 600 V / rated value • at 100 V / rated value • at 220 V / rated value • at 220 V / rated value • at 220 V / rated value • at 600 V / rated value • at 220 V / rated value • at 600 V / rated value • at 24 V / rated value • at 600 V / rated value • at 24 V / rated value • at 24 V / rated value • at 60 V / rated value • at 24 V / rated value • at 250 V / rated value • at 20 V / rated value • at	• at 440 V / rated value	Α	1.3
* at 24 V / rated value	• at 600 V / rated value	Α	0.65
* at 60 V / rated value	• with 3 current paths in series / at DC-12		
* at 110 V / rated value	• at 24 V / rated value	Α	10
* at 220 V / rated value	• at 60 V / rated value	Α	10
* at 440 V / rated value * at 600 V / rated value Operating current * with 1 current path / at DC-13 * at 24 V / rated value * at 110 V / rated value * at 440 V / rated value * at 440 V / rated value * at 600 V / rated value * at 600 V / rated value * with 2 current paths in series / at DC-13 * at 24 V / rated value * at 60 V / rated value * at 22 V / rated value * at 440 V / rated value * at 440 V / rated value * at 440 V / rated value * at 60 V / rated value * at 22 V / rated value * at 440 V / rated value * at 22 V / rated value * at 22 V / rated value * at 440 V / rated value * at 22 V / rated value * at 440 V / rated value * at 60 V / rated value * at 60 V / rated value * at 60 V / rated value * at 22 V / rated value * at 60 V / rated value * at 60 V / rated value * at 60 V / rated value * at 22 V / rated value * at 60 V	• at 110 V / rated value	Α	10
* at 600 V / rated value A 1.8 Operating current * with 1 current path / at DC-13 * at 24 V / rated value A 10 * at 110 V / rated value A 1 * at 440 V / rated value A 0.1 * at 600 V / rated value A 0.1 * with 2 current paths in series / at DC-13 * at 24 V / rated value A 3.5 * at 110 V / rated value A 3.5 * at 110 V / rated value A 3.5 * at 110 V / rated value A 0.9 * at 440 V / rated value A 0.9 * at 440 V / rated value A 0.9 * at 440 V / rated value A 0.1 * at 220 V / rated value A 0.2 * at 440 V / rated value A 0.1 * with 3 current paths in series / at DC-13 * at 24 V / rated value A 0.1 * with 3 current paths in series / at DC-13 * at 24 V / rated value A 0.1 * with 3 current paths in series / at DC-13 * at 24 V / rated value A 0.1 * at 60 V / rated value A 0.1 * at 60 V / rated value A 0.5 * at 440 V / rated value A 0.5 * at 440 V / rated value A 0.5 * at 440 V / rated value A 0.5 * at 600 V / rated value A 0.5 * at 600 V / rated value A 0.5 * at 600 V / rated value A 0.26 Off-load operating frequency * at ACC 1/h 10,000	• at 220 V / rated value	Α	3.6
Operating current • with 1 current path / at DC-13 • at 24 V / rated value A 10 • at 110 V / rated value A 0.3 • at 440 V / rated value A 0.14 • at 460 V / rated value A 0.1 • with 2 current paths in series / at DC-13 • at 60 V / rated value A 3.5 • at 110 V / rated value A 1.3 • at 22 V / rated value A 0.9 • at 440 V / rated value A 0.2 • at 460 V / rated value A 0.1 • with 3 current paths in series / at DC-13 • at 60 V / rated value A 0.1 • with 3 current paths in series / at DC-13 • at 22 V / rated value A 1.0 • at 110 V / rated value A 4.7 • at 110 V / rated value A 3 • at 22 V / rated value A 1.2 • at 440 V / rated value A 0.5 • at 440 V / rated value A 0.5 • at 600 V / rated value A 0.26 Off-load operating frequency • at 600 V / rated value	• at 440 V / rated value	Α	2.5
* with 1 current path / at DC-13 * at 24 V / rated value * at 110 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 * with 2 current paths in series / at DC-13 * at 24 V / rated value * at 60 V / rated value * at 110 V / rated value * at 110 V / rated value * at 220 V / rated value * at 600 V / rated value * at 110 V / rated value * at 220 V / rated value * at 24 V / rated value * at 3 * at 24 V / rated value * at 3 * at 24 V / rated value * at 3 * at 24 V / rated value * at 3 * at 24 V / rated value * at 3 * at 20 V / rated value * at 3 * at 20 V / rated value * at 3 * at 20 V / rated value * at 3 * at 20 V / rated value * at 440 V / rated value	• at 600 V / rated value	Α	1.8
• at 24 V / rated value A 10 • at 110 V / rated value A 1 • at 220 V / rated value A 0.3 • at 440 V / rated value A 0.14 • at 600 V / rated value A 0.1 • with 2 current paths in series / at DC-13 Image: series / at DC-13 • at 60 V / rated value A 3.5 • at 110 V / rated value A 0.9 • at 440 V / rated value A 0.2 • at 600 V / rated value A 0.1 • with 3 current paths in series / at DC-13 Image: series / at DC-13 • at 24 V / rated value A 10 • at 60 V / rated value A 4.7 • at 110 V / rated value A 4.7 • at 110 V / rated value A 1.2 • at 440 V / rated value A 1.2 • at 440 V / rated value A 0.5 • at 600 V / rated value A 0.26 Off-load operating frequency • at AC 1/h 10,000	Operating current		
 at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value with 2 current paths in series / at DC-13 at 24 V / rated value at 600 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value at	• with 1 current path / at DC-13		
 at 220 V / rated value at 440 V / rated value at 600 V / rated value with 2 current paths in series / at DC-13 at 24 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value at	• at 24 V / rated value	Α	10
 at 440 V / rated value at 600 V / rated value with 2 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value 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 24 V / rated value at 24 V / rated value at 24 V / rated value at 60 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 220 V / rated value at 440 V / rated value at 600 V	• at 110 V / rated value	Α	1
 at 600 V / rated value with 2 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 60 V / rated value at 110 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 with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 440 V / rated value at 440 V / rated value at 440 V / rated value at 600 V / rated val	• at 220 V / rated value	Α	0.3
 with 2 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 110 V / rated value at 1220 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value at 600 V / rated value at 220 V / rated value at 600 V / rated v	• at 440 V / rated value	Α	0.14
 at 24 V / rated value at 60 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 60 V / rated value at 21 V / rated value at 220 V / rated value at 220 V / rated value at 440 V / rated value at 600 V	• at 600 V / rated value	Α	0.1
 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 with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 60 V / rated value at 110 V / rated value at 120 V / rated value at 220 V / rated value at 20 V / rated value at 440 V / rated value at 600 V /	• with 2 current paths in series / at DC-13		
 at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value at 600 V / rated value at 110 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 600 V / rated value at AC 1/h 10,000 	• at 24 V / rated value	А	10
 at 220 V / rated value at 440 V / rated value at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 110 V / rated value at 220 V / rated value at 110 V / rated value at 220 V / rated value at 220 V / rated value at 3 at 220 V / rated value at 440 V / rated value at 600 V / rated value 	• at 60 V / rated value	Α	3.5
 at 440 V / rated value at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value 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 110 V / rated value	Α	1.3
 at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value 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 220 V / rated value	Α	0.9
 with 3 current paths in series / at DC-13 at 24 V / rated value 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 A 0.5 at 600 V / rated value A 0.26 Off-load operating frequency at AC 1/h 10,000 	• at 440 V / rated value	Α	0.2
 at 24 V / rated value 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 A 0.5 at 600 V / rated value A 0.26 Off-load operating frequency at AC 1/h 10,000 	• at 600 V / rated value	Α	0.1
 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 A 0.5 at 600 V / rated value A 0.26 Off-load operating frequency at AC 1/h 10,000 	• with 3 current paths in series / at DC-13		
 at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value A 0.26 Off-load operating frequency at AC 1/h 10,000 	• at 24 V / rated value	Α	10
 at 220 V / rated value at 440 V / rated value at 600 V / rated value A 0.26 Off-load operating frequency at AC 1/h 10,000 	• at 60 V / rated value	Α	4.7
• at 440 V / rated value • at 600 V / rated value A 0.5 A 0.26 Off-load operating frequency • at AC 1/h 10,000	• at 110 V / rated value	Α	3
• at 600 V / rated value Off-load operating frequency • at AC 1/h 10,000	• at 220 V / rated value	Α	1.2
Off-load operating frequency • at AC 1/h 10,000	• at 440 V / rated value	Α	0.5
• at AC 1/h 10,000	• at 600 V / rated value	Α	0.26
	Off-load operating frequency		
• at DC 1/h 10,000	• 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

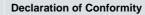
Short-circuit:	
Design of the fuse link / for short-circuit protection of the auxiliary switch	
• required	fuse gL/gG: 10 A
Design of the miniature circuit breaker / for short-circuit protection of the auxiliary circuit / up to 230 V	C characteristic: 6 A; 0.4 kA

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	
 for auxiliary contacts / finely stranded / with conductor end processing 	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













Test Certificates

Special Test Certificate Type Test
Certificates/Test
Report

Shipping Approval













Shipping Approval

other







Environmental Confirmations

	1004		
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Contact rating designation / for auxiliary contacts / according to $\ensuremath{\text{UL}}$

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

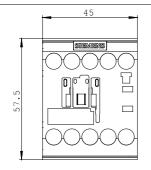
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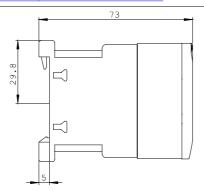
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

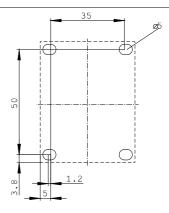
http://support.automation.siemens.com/WW/view/en/3RH2140-1AQ00/all

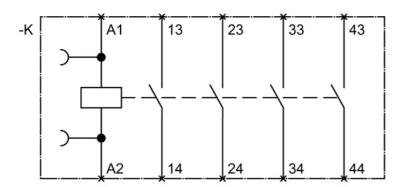
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2140-1AQ00









last change: Jul 21, 2014