## SIEMENS

## Product data sheet

## 3RH2431-1AP00

CONTACTOR RELAY LATCHED, 3NO+1NC, AC 230V, 50/60HZ, SIZE S00, SCREW TERMINAL



General technical data:		
product brand name		SIRIUS
Size of the contactor		S00
Identification number and letter for switching elements		31 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		5,000,000
• of the contactor with added auxiliary switch block / typical		5,000,000
<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		AC
Control supply voltage		
• at 50 Hz / at AC / rated value	V	230
• at 60 Hz / at AC / rated value	V	230
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 NC contacts / for auxiliary contacts / instantaneous switching		1
Number of NO contacts / for auxiliary contacts / instantaneous switching		3
Operating current		
• at AC-12 / maximum	А	10
• at AC-15		
• at 230 V / rated value	А	10
• at 400 V / rated value	А	3
• at 500 V / rated value	А	2
• at 690 V / rated value	А	1
Operating current		
• with 1 current path / at DC-12		
• at 24 V / rated value	А	10
• at 110 V / rated value	А	3

• at 220 V / rated value	А	1
• at 440 V / rated value	А	0.3
• at 600 V / rated value	А	0.15
• with 2 current paths in series / at DC-12		
• at 24 V / rated value	А	10
• at 60 V / rated value	А	10
• at 110 V / rated value	А	4
• at 220 V / rated value	А	2
• at 440 V / rated value	А	1.3
• at 600 V / rated value	А	0.65
• with 3 current paths in series / at DC-12		
• at 24 V / rated value	А	10
• at 60 V / rated value	А	10
• at 110 V / rated value	А	10
• at 220 V / rated value	А	3.6
• at 440 V / rated value	А	2.5
• at 600 V / rated value	А	1.8
Operating current		
• with 1 current path / at DC-13		
• at 24 V / rated value	А	10
• at 110 V / rated value	А	1
• at 220 V / rated value	А	0.3
• at 440 V / rated value	А	0.14
• at 600 V / rated value	А	0.1
• with 2 current paths in series / at DC-13		
at 24 V / rated value	А	10
• at 60 V / rated value	А	3.5
• at 110 V / rated value	А	1.3
• at 220 V / rated value	А	0.9
• at 440 V / rated value	А	0.2
• at 600 V / rated value	А	0.1
• with 3 current paths in series / at DC-13		
at 24 V / rated value	А	10
• at 60 V / rated value	А	4.7
• at 110 V / rated value	А	3
• at 220 V / rated value	А	1.2
• at 440 V / rated value	А	0.5
• at 600 V / rated value	А	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
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	90	
Height	mm	57.5	
Depth	mm	73	

Connections/ terminals:			
Design of the electrical connection			
<ul> <li>for auxiliary and control current circuit</li> </ul>	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)		
<ul> <li>for AWG conductors / for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14), 2x 12		

Certificates/ approvals:

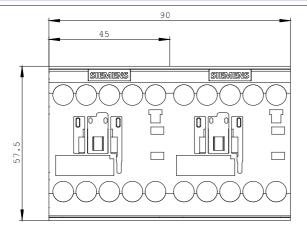
	pproval			Functional Safety / Safety of Machinery	Declaration of Conformity
	(SA)	EHC		Type Examination	EG-Konf.
Test Certificates					
Special Test Certificate	<u>Type Test</u> Certificates/Test <u>Report</u>				
Shipping Approval					
ABS	BUREAU VERITAS	ĴÅ DNV DNV	GL	L loyd's Kegister	PRS
Shipping Approval		other			
	RMRS	DVE VDE	Environment Confirmatior		
UL/CSA ratings:					
Contact rating desig UL	nation / for auxiliar	y contacts / according to		A600 / Q600	
Safety related data	a:				
B10 value / with high	n demand rate				
• according to SN 3	31920			1,000,000	
• note				With 0.3 x le	
T1 value / for proof t	est interval or serv	ice life			
T1 value / for proof t		ice life	а	20	
according to IEC	61508	ice life	а	20	
according to IEC	61508		a %	20 40	
according to IEC     Proportion of danger     with low demand	61508 rous failures	N 31920	-		
according to IEC     Proportion of danger     with low demand     with high demand	61508 <b>rous failures</b> rate / according to S I rate / according to S	N 31920 SN 31920	%	40	
according to IEC     Proportion of danger     with low demand     with high demand	61508 rous failures rate / according to S I rate / according to S ith low demand rate	N 31920 SN 31920	%	40	
according to IEC      Proportion of dange     with low demand     with high demand      Failure rate [FIT] / wi     according to SN 3	61508 rous failures rate / according to S I rate / according to S ith low demand rate 31920	N 31920 SN 31920	%	40 73	
according to IEC      Proportion of danger      with low demand      with high demand      Failure rate [FIT] / wi      according to SN 3  Product function / po	61508 rous failures rate / according to S I rate / according to S ith low demand rate 31920 ositively driven ope	N 31920 SN 31920 3	%	40 73 100	
Proportion of danger • with low demand • with high demand Failure rate [FIT] / wi • according to SN 3	61508 rous failures rate / according to S I rate / according to S ith low demand rate 31920 ositively driven ope on: wnloadcenter (Cata	N 31920 SN 31920 eration to IEC 60947-5-1 slogs, Brochures,)	%	40 73 100	

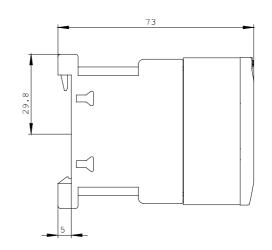
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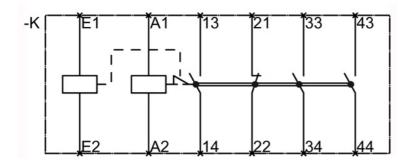
http://www.siemens.com/cax

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RH2431-1AP00/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RH2431-1AP00







last change:

Aug 4, 2014