SIEMENS

Product data sheet 3RH2131-2BE40

CONTACTOR RELAY, 3NO+1NC, DC 60V,
SZ S00, SPRING-LOADED 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
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

• of the contactor with added auxiliary switch block / typical		10,000,000
• of the contactor with added electronics-compatible auxiliary switch block / typical		10,000,000

Control circuit:		
Type of voltage / of the controlled supply voltage		DC
Control supply voltage / 1		
• for DC / rated value	V	60
Operating range factor control supply voltage rated value / of the solenoid		
• 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 NC contacts / for auxiliary contacts / instantaneous switching		1
Number of NO contacts / for auxiliary contacts / instantaneous switching		3
Operating current / of the auxiliary contacts / at AC-12 / maximum	A	10
Operating current / of the auxiliary contacts / at AC-15		
• at 230 V	A	6
• at 400 V	A	3
• at 500 V	A	2
• at 690 V	A	1
Operating current		
• of the auxiliary contacts / with 1 current path / at DC-12		
• at 24 V	A	6
• at 110 V	A	3
• at 220 V	A	1
• with 2 current paths in series / at DC-12		
• at 24 V / rated value	A	10
• at 60 V / rated value	A	10
• at 110 V / rated value	A	4
• at 220 V / rated value	A	2

• at 440 V / rated value	A	1.3
• at 600 V / rated value	A	0.65
• with 3 current paths in series / at DC-12		
• at 24 V / rated value	A	10
• at 60 V / rated value	A	10
• 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		
• of the auxiliary contacts / with 1 current path / at DC-13		
• at 24 V	A	6
• at 110 V	A	1
• at 220 V	A	0.3
• with 2 current paths in series / at DC-13		
• at 24 V / rated value	A	10
• at 60 V / rated value	A	3.5
• at 110 V / rated value	A	1.3
• at 220 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		
• at 24 V / rated value	A	10
• at 60 V / rated value	A	4.7
• at 110 V / rated value	A	3
• at 220 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
• 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 Ik < 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	70
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		spring-loaded terminals
Type of the connectable conductor cross-section		
• for auxiliary contacts		
• solid		2x (0.5 ... 4 mm²)
• finely stranded		
• with conductor end processing		2x (0.5 ... 2.5 mm²)
• without conductor final cutting		2x (0.5 ... 2.5 mm²)
• for AWG conductors / for auxiliary contacts		2x (20 ... 12)

Certificates/approvals:

General Product Approval				Test Certificates	
CQC	CSA	ROSTEST	UL	Manufacturer	
Shipping Approval					
ABS	DNV	GL	LRS	PRS	RINA
Shipping Approval	**other**				
RMRS	VDE				

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	a	10
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 value) / with low demand rate		
• according to SN 31920	FIT	100
Product function / positively driven operation to IEC 60947-5-1		Yes

Further information:

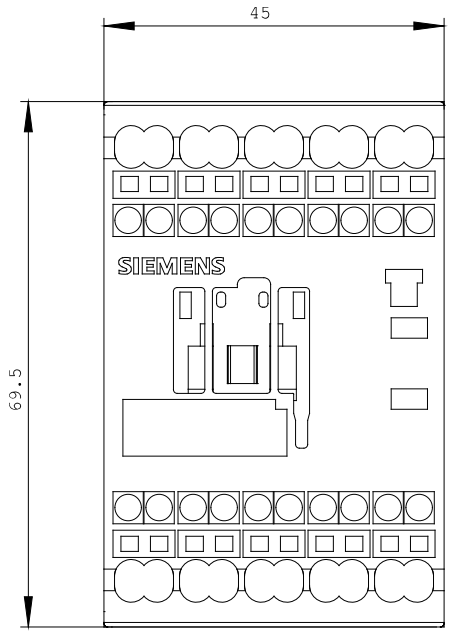
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

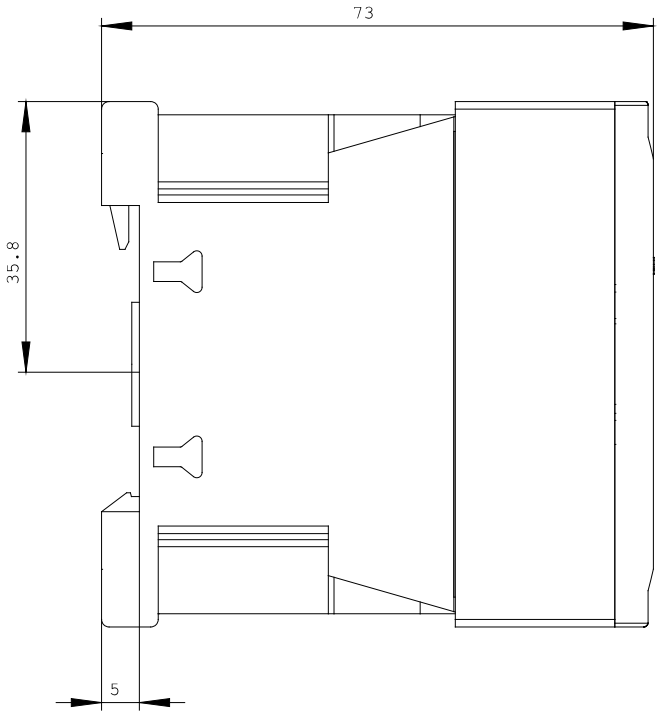
Industry Mall (Online ordering system)
http://www.siemens.com/industrial-controls/mall

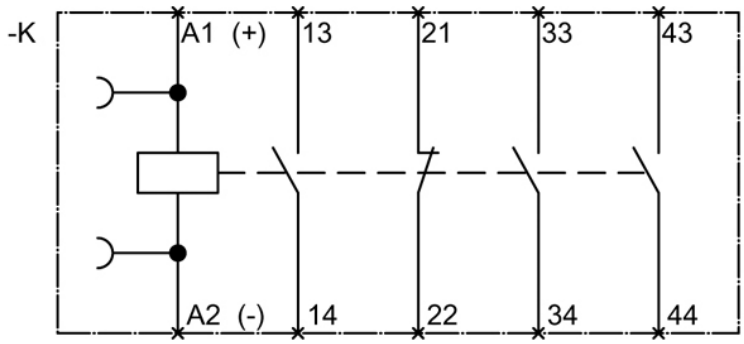
Cax online generator:
http://www.siemens.com/cax

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RH2131-2BE40/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2131-2BE40







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