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 contractor with addeel defamines compatible suuliary witch block / typical 10,000,000 Control circuit Control controls supply voltage C Control supply voltage / 1 V 60 of the controls supply voltage rated value / of the solenoid / for DC V 60 Operating range factor control supply voltage rated value / of the solenoid / for DC W 4 Full in power / of the solenoid / for DC W 4 Closing delay W 4 • at DC ms 20100 Operating range factor control supply voltage rated value / of the solenoid / for DC W 4 Pull-In power / of the solenoid / for DC W 4 Closing delay	 of the contactor with added auxiliary switch block / typical 		10,000,000
switch block / typical Control circuit: Type of voltage / of the controlled supply voltage DC Control supply voltage / 1 V • for DC / rated value V 0perating range factor control supply voltage rated value / of the solenoid / for DC W Holding power / of the solenoid / for DC W Publi- power / of the solenoid / for DC W Publi- power / of the solenoid / for DC W Publi- power / of the solenoid / for DC W Publi- power / of the solenoid / for DC W Publi- power / of the solenoid / for DC W Publi- power / of the solenoid / for DC W Opening delay			
Type of voltage / of the controlled supply voltageDCControl supply voltage / 1V• for DC / rated valueVOperating range factor control supply voltage rated value / of the solenoid / for DCW40.8 1.1Holding power / of the solenoid / for DCWPull-in power / of the solenoid / for DCW• at DCM- at DCM- at DCms- at DCat S- at DCat S- at 20 VA- at 20 VA- at			
Control supply voltage / 1v60Operating range factor control supply voltage rated value / of the solenoidV60of cr DC0.8 1.1Holding power / of the solenoid / for DCW4Pull-in power / of the solenoid / for DCW4Closing delayW4• at DCMM30 100Opening delayS100• at DCms25 90Arcing times1 faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts / instantaneous switching1Number of NC contacts / for auxiliary contacts / instantaneous switching1Operating current / of the auxiliary contacts / at AC-12 / maximumA0A3• at 200 VA6• at 200 VA6 </td <td>Control circuit:</td> <td></td> <td></td>	Control circuit:		
• for DC/rated valueV60Operating range factor control supply voltage rated value / of the solenoid0.8 1.1Holding power / of the solenoid / for DCW4Pull-in power / of the solenoid / for DCW4Pull-in power / of the solenoid / for DCW4Closing delayW4• at DCms30 100Opening delays10 15• at DCms25 90Arcing times10 15Auxiliary clocults11Auxiliary clocults1Auxiliary clocults / instantaneous switching1Operating current / of the auxiliary contacts / instantaneous switching3Operating current / of the auxiliary contacts / at AC-12 / maximumA0 Age valueA3Operating current / of the auxiliary contacts / at AC-12 / maximumA0 Age valueA3Operating current / of the auxiliary contacts / at AC-12 / maximumA0 Age valueA30 Age valueA3• at 400 VA3• at 400 VA3• at 400 VA3• at 400 VA3• at 210 VA6• at 220 VA6• at 110 VA3• at 220 VA6• at 220 VA6• at 220 VA1• at 220 VA1• at 24 V / rated valueA10<	Type of voltage / of the controlled supply voltage		DC
Operating range factor control supply voltage rated value / of the solenoid0.8 1.1Notifies power / of the solenoid / for DC0.8 1.1Holding power / of the solenoid / for DCW4Pull-in power / of the solenoid / for DCW4Closing delayW30 100• at DCms30 100Opening delayW10• at DCms25 90Arcing timeTo1 soletower / of the soletower / of the auxiliary contacts / instantaneous switching1Number of NC contacts / for auxiliary contacts / instantaneous switching11Operating current / of the auxiliary contacts / at AC-12 / maximumA6• at 200 \A61• at 200 \A61 <td>Control supply voltage / 1</td> <td>_</td> <td></td>	Control supply voltage / 1	_	
the solenoid i for DC	• for DC / rated value	V	60
Holding power / of the solenoid / for DCW4Pull-in power / of the solenoid / for DCW4Pull-in power / of the solenoid / for DCW4Closing delayms30 100• at DCms30 100Opening delays10 15• at DCms10 15Auxillary circult:1 faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts / instantaneous switching1Operating current / of the auxiliary contacts / instantaneous switching3Operating current / of the auxiliary contacts / at AC-12 / maximumA06• at 200 VAA• at 600 VAA• at 100 VAA• at 200 VAA• at 200 VAA• at 220 VAA• at 24 V / rated valueAA• at 600 V / rated valueAA• at 24 V / rated valueAA• at 24 V / rated valueAA• at 24 V / rated valueAA• at 60 V / rated valueAA<		_	
Pull-in power / of the solenoid / for DCW4Closing delay • at DCms30 100Opening delay • at DCms25 90Arcing times10 15Arcing times1 aulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts / instantaneous switching1Operating current / of the auxiliary contacts / instantaneous switching1Operating current / of the auxiliary contacts / at AC-12 / maximumA6• at 230 V • at 400 V • at 600 VA3• at 600 V • at 424 V • at 100 VA6• at 100 V • at 220 VA6• at 220 V • at 220 VA1• at 220 V • at 220 VA6• at 220 V • at 220 VA1• at 220 V • at 220 VA1• at 220 V • at 220 VA1• at 24 V / rated value • at 20 V / rated valueA1• at 24 V / rated value • at 20 V / rated valueA1• at 24 V / rated value • at 100 V / rated valueA1• at 24 V / rated value • at 24 V / rated valueA10• at 24 V / rated value • at 60 V / rated valueA10• at 100 V / rated value • at 100 V / rated valueA10	• for DC		0.8 1.1
Closing delay • at DCms30 100Opening delay • at DCms25 90Arcing times10 15Auxillary circuit:1 faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxillary contacts / instantaneous switching1Operating current / of the auxillary contacts / at AC-12 / maximumACOperating current / of the auxillary contacts / at AC-12 / maximumA06• at 230 V • at 400 V • at 600 VA• at 600 VA• at 600 VA• at 110 V • at 220 VA• at 24 V / rated value • at 24 V / rated valueA• at 24 V / rated value • at 60 V / rated valueA• at 24 V / rated value • at 60 V / rated valueA• at 10 V / rated valueA <tr< td=""><td>Holding power / of the solenoid / for DC</td><td>W</td><td>4</td></tr<>	Holding power / of the solenoid / for DC	W	4
• at DCms30100Opening delayrms2590Arcing times1015Autilary circuit:1 faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts / instantaneous switching1Number of NC contacts / for auxiliary contacts / instantaneous switching3Operating current / of the auxiliary contacts / instantaneous switching1Operating current / of the auxiliary contacts / instantaneous switchingA06switchingA0A	Pull-in power / of the solenoid / for DC	W	4
Opening delay • at DCms25 90Arcing times10 15Auxiliary circuit:I faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts / instantaneous switching1Number of NC contacts / for auxiliary contacts / instantaneous switching3Operating current / of the auxiliary contacts / at AC-12 / maximumA10Operating current / of the auxiliary contacts / at AC-12 / maximumA3Operating current / of the auxiliary contacts / at AC-15 / • at 230 VA6• at 230 VAA6• at 230 VAA3• at 690 VAA3Operating current / • at 24 VA6• of the auxiliary contacts / at AC-12 / maximumA1• of the auxiliary contacts / at AC-15	Closing delay	_	
• at DCms25 90Arcing times10 15Auxiliary circuit:I faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts / instantaneous switching1Number of NC contacts / for auxiliary contacts / instantaneous switching1Operating current / of the auxiliary contacts / at AC-12 / maximumA10Operating current / of the auxiliary contacts / at AC-15 • at 230 VA6• at 600 VA32• at 600 VA6• at 400 VA6• at 230 VA6• at 230 VA6• at 400 VA3• at 230 VA6• at 400 VA3• at 400 VA6• at 230 VA1• at 230 VA1• at 110 VA3• at 24 VA6• at 24 VA6• at 24 VA6• at 220 VA1• at 24 V/ rated valueA1• at 24 V/ rated valueA10• at 24 V/ rated valueA10• at 60 V/ rated valueA10• at 10 V/ rated	• at DC	ms	30 100
Arcing times10 15Auxiliary circuit:Contact reliability / of the auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts / instantaneous switching1Number of NO contacts / for auxiliary contacts / instantaneous switching1Operating current / of the auxiliary contacts / at AC-12 / maximumA0perating current / of the auxiliary contacts / at AC-15I• at 230 VAA• at 230 VA• at 600 VA• at 400 VA• at 230 VA• at 400 VA• at 230 VA• at 230 VA• at 230 VA• at 230 VA• at 110 VA• at 24 VA• at 24 VA• at 110 VA• at 220 VA• at 24 V/ rated valueA• at 24 V/ rated valueA• at 24 V/ rated valueA• at 60 V/ rated valueA• at 60 V/ rated valueA• at 10 V/ rated valueA• at	Opening delay	_	
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 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 690 V A 1 Operating current A 1 • at 220 V A 6 • at 220 V A 1 • of the auxiliary contacts / at DC-12 A 1 • of the auxiliary contacts / with 1 current path / at DC-12 A 1 • at 220 V A 6 • at 220 V A 1 • of the auxiliary contacts / with 1 current path / at DC-12 - - • at 220 V A 6 • at 220 V A 1 • with 2 current paths in series / at DC-12 - - • at 24 V / rated value A 10 • at 24 V / rated value A 10 • at 60 V / rated value A 10 • at 60 V / rated value A 10	• at DC	ms	25 90
Contact reliability / of the auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts / instantaneous switching1Number of NO contacts / for auxiliary contacts / instantaneous switching3Operating current / of the auxiliary contacts / at AC-12 / maximumA10Operating current / of the auxiliary contacts / at AC-15• at 230 VAA6-• at 00 VAA3-• at 690 VAA1-Operating current• of the auxiliary contacts / with 1 current path / at DC-12A6• at 220 VAA6-• at 220 VAA6-• of the auxiliary contacts / with 1 current path / at DC-12• at 220 VAA6-• at 220 VAA6-• at 220 VAA6-• at 24 VAA6-• at 220 VAA1• at 220 VAA1• at 220 VAA6• at 220 VAA1• at 220 VAA1• with 2 current paths in series / at DC-12-• at 24 V / rated valueAA10• at 60 V / rated valueAA10• at 60 V / rated valueAA10• at 110 V	Arcing time	S	10 15
Contact reliability / of the auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts / instantaneous switching1Number of NO contacts / for auxiliary contacts / instantaneous switching3Operating current / of the auxiliary contacts / at AC-12 / maximumA10Operating current / of the auxiliary contacts / at AC-15• at 230 VAA6-• at 00 VAA3-• at 690 VAA1-Operating current• of the auxiliary contacts / with 1 current path / at DC-12A6• at 220 VAA6-• at 220 VAA6-• of the auxiliary contacts / with 1 current path / at DC-12• at 220 VAA6-• at 220 VAA6-• at 220 VAA6-• at 24 VAA6-• at 220 VAA1• at 220 VAA1• at 220 VAA6• at 220 VAA1• at 220 VAA1• with 2 current paths in series / at DC-12-• at 24 V / rated valueAA10• at 60 V / rated valueAA10• at 60 V / rated valueAA10• at 110 V	Auxiliary circuit:		
switchingINumber of NO contacts / for auxiliary contacts / instantaneous switching3Operating current / of the auxiliary contacts / at AC-12 / maximumA10Operating current / of the auxiliary contacts / at AC-15• at 230 VAA6• at 230 VAA3• at 400 VAA3• at 690 VAA2• at 690 VAA1Operating current• at 42VAA6• at 22V VAA6• at 220 VAA3• at 220 VAA6• at 220 VAA1• at 220 VAA1• at 24 VAA3• at 24 VAA1• at 24 VAA1• at 24 V/ rated valueAA1• at 24 V/ rated valueAA1• at 24 V/ rated valueAA10• at 60 V/ rated valueAA10• at 60 V/ rated valueAA10• at 60 V/ rated valueAA10• at 10 V/ rated valueAA4			1 faulty switching per 100 million (17 V, 1 mA)
switchingImage: contracts / at AC-12 / maximumImage: contracts / at AC-12 / AImage: contracts / at AC-13 / AOperating current / of the auxiliary contacts / at AC-15Image: contracts / at AC-15 / AImage: contracts / at AC-15 / A• at 230 VAA6• at 400 VAA3• at 500 VAA2• at 690 VAA1Operating currentImage: contracts / with 1 current path / at DC-12 / AImage: contracts / with 1 current path / at DC-12 / A• of the auxiliary contacts / with 1 current path / at DC-12 / AImage: contracts / With 1 current path / at DC-12 / A• at 220 VAA3• with 2 current paths in series / at DC-12 / AImage: contracts / With 1 current path / at DC-12 / A• with 2 current paths in series / at DC-12 / AImage: contracts / With 1 current path / at DC-12 / A• with 2 current paths in series / at DC-12 / AImage: contracts / With 1 current path / at DC-12 / A• with 2 current paths in series / at DC-12 / AImage: contracts / With 1 current path / at DC-12 / A• with 2 current paths in series / at DC-12 / AImage: contracts / With 1 current path / at DC-12 / A• at 60 V / rated valueImage: contracts / A• at 60 V / rated valueImage: contracts / A• at 60 V / rated valueImage: contracts / A• at 110 V / rated valueImage: contracts / A• at 10 V / rated valueImage: contracts / A• at 10 V / rated valueImage: contracts / A• at 10 V / rated valueImage: contracts / A• at 10 V / rated valueImage: contracts			1
maximumImage: constant of the auxiliary contacts / at AC-15Image: constant of the auxiliary contacts / at AC-15• at 230 VA6• at 230 VA3• at 400 VA3• at 400 VA2• at 500 VA1• at 690 VA1Operating currentFF• of the auxiliary contacts / with 1 current path / at DC-12A6• at 220 VA6• at 110 VAA3• at 220 VAA1• with 2 current paths in series / at DC-12A10• at 60 V / rated valueAA10• at 60 V / rated valueAA10• at 110 V / rated valueA4		_	3
• at 230 VA6• at 400 VAA3• at 500 VAA2• at 690 VAA1Operating current		A	10
• at 400 VA3• at 500 VA2• at 690 VA1Operating current	Operating current / of the auxiliary contacts / at AC-15	_	
• at 500 VA2• at 690 VA1Operating current• of the auxiliary contacts / with 1 current path / at DC-12A6• at 24 VAA6• at 110 VAA3• at 220 VAA1• with 2 current paths in series / at DC-12A1• at 24 V/ rated valueAA10• at 60 V/ rated valueAA10• at 110 V/ rated valueAA4	• at 230 V	А	6
• at 690 ٧A1 Operating current • of the auxiliary contacts / with 1 current path / at DC-12• at 24 √AA6• at 10 √AA3• at 220 √AA1• with 2 current paths in series / at DC-12• at 24 √ / rated valueAA10• at 60 √ / rated valueAA10• at 10 √ / rated valueAA4	• at 400 V	А	3
Operating currentHere• of the auxiliary contacts / with 1 current path / at DC-12A• at 24 VA• at 24 VA• at 110 VA• at 220 VA• at 24 V / rated valueA• at 24 V / rated valueA• at 60 V / rated valueA• at 110 V / rated valueA	• at 500 V	А	2
• of the auxiliary contacts / with 1 current path / at DC-12A6• at 24 VA3• at 110 VA3• at 220 VA1• with 2 current paths in series / at DC-12• at 24 V / rated valueA10• at 60 V / rated valueA10• at 110 V / rated valueA4	• at 690 V	А	1
• 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	Operating current	_	
• 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	• of the auxiliary contacts / with 1 current path / at DC-12		
• at 220 VA1• with 2 current paths in series / at DC-12A10• at 24 V / rated valueA10• at 60 V / rated valueA10• at 110 V / rated valueA4	• at 24 V	А	6
• with 2 current paths in series / at DC-12Image: Constant of the series / at DC-12• at 24 V / rated valueA10• at 60 V / rated valueA10• at 10 V / rated valueA4	• at 110 V	А	3
• at 24 V / rated valueA10• at 60 V / rated valueA10• at 110 V / rated valueA4	• at 220 V	А	1
• at 60 V / rated valueA10• at 110 V / rated valueA4	• with 2 current paths in series / at DC-12		
• at 110 V / rated value A 4	• at 24 V / rated value	А	10
	• at 60 V / rated value	А	10
• at 220 V / rated value A 2	• at 110 V / rated value	А	4

• 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		
• of the auxiliary contacts / with 1 current path / at DC-13		
• at 24 V	А	6
• at 110 V	А	1
• at 220 V	А	0.3
• 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
		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 App	proval			Test Certificates	
coc	(SA)	ROSTEST		Manufacturer	
Shipping Approval					
ABS	JÅ DNV DNV	GL	Lloyd's Register LRS	PRS	RINA
Shipping Approval	other				
RMRS					

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
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:

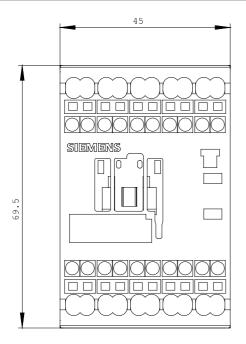
http://www.siemens.com/cax

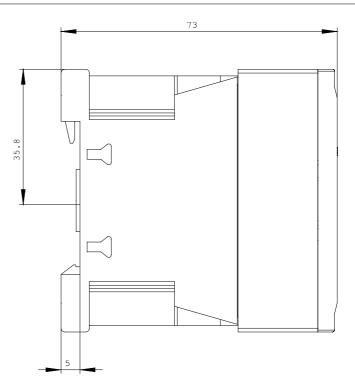
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

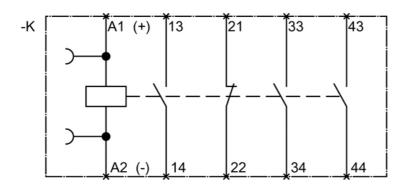
http://support.automation.siemens.com/WW/view/en/3RH2131-2BE40/all

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2131-2BE40







last change:

Oct 24, 2011