



CONTACTOR RELAY, 3NO+1NC, DC 110V,  
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
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
- of the contactor with added electronics-compatible auxiliary switch block / typical

10,000,000  
10,000,000

#### Control circuit:

##### Type of voltage / of the controlled supply voltage

DC

##### Control supply voltage / 1

- for DC / rated value

V

110

##### 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
- at 400 V
- at 500 V
- at 690 V

A

6

A

3

A

2

A

1

##### Operating current

- of the auxiliary contacts / with 1 current path / at DC-12
  - at 24 V
  - at 110 V
  - at 220 V
- 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 220 V / rated value

A

6

A

3

A

1

A

10

A

10

A

4

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
<b>Operating current</b>		
• 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
<b>Off-load operating frequency</b>		
• at AC	1/h	10,000
• at DC	1/h	10,000
<b>Frequency of operation</b>		
• 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:**

<b>Design of the fuse link / for short-circuit protection of the auxiliary switch</b> <ul style="list-style-type: none"> <li>• required</li> </ul>		Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I <sub>k</sub> < 400 A)
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### Installation/mounting/dimensions:

<b>Built in orientation</b>		vertical
<b>Type of mounting</b>		screw and snap-on mounting onto 35 mm standard mounting rail
<b>Width</b>	mm	45
<b>Height</b>	mm	57.5
<b>Depth</b>	mm	73
<b>Distance, to be maintained, to the ranks assembly / sideways</b>	mm	0

### Connections:

<b>Design of the electrical connection</b> <ul style="list-style-type: none"> <li>• for auxiliary and control current circuit</li> </ul>		screw-type terminals
<b>Type of the connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> </ul> </li> </ul> </li> <li>• for AWG conductors / for auxiliary contacts</li> </ul>		2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²  2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)  2x (20 ... 16), 2x (18 ... 14), 2x 12

### Certificates/approvals:

General Product Approval			Test Certificates		
 CQC	 CSA	<a href="#">ROSTEST</a>	 UL	<a href="#">Manufacturer</a>	
Shipping Approval					
 ABS	 DNV	 GL	 LRS	 PRS	 RINA
Shipping Approval	other				
 RMRS	 VDE				

### UL/CSA ratings:

<b>Contact rating designation / for auxiliary contacts / according to UL</b>		A600 / Q600
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### Safety:related Parameter:

<b>B10 value / with high demand rate</b> • according to SN 31920		1,000,000
<b>T1 value / for proof test interval or service life</b> • according to IEC 61508	a	10
<b>Proportion of dangerous failures</b> • with low demand rate / according to SN 31920 • with high demand rate / according to SN 31920	% %	40 73
<b>Failure rate (FIT value) / with low demand rate</b> • according to SN 31920	FIT	100
<b>Product function / positively driven operation to IEC 60947-5-1</b>		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:

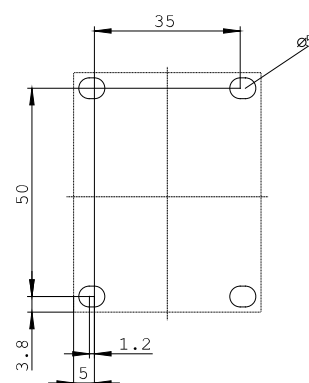
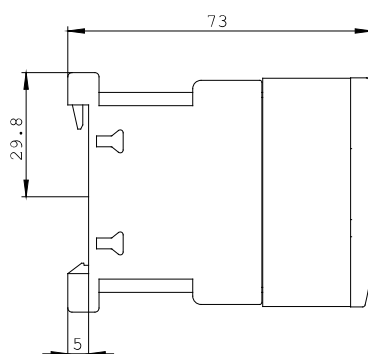
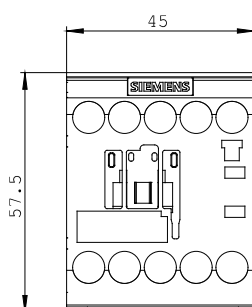
<http://www.siemens.com/cax>

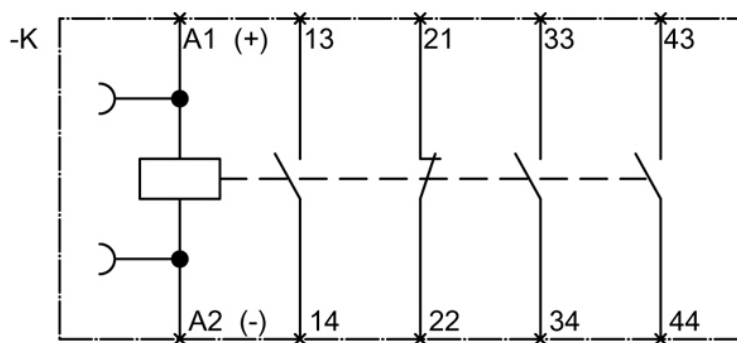
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RH2131-1BF40/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RH2131-1BF40](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2131-1BF40)





last change:

Oct 24, 2011