

CONTACTOR RELAY, 3NO+1NC, AC 110V,  
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		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		
<ul style="list-style-type: none"> <li>• at rectangular impulse</li> <li>• at AC</li> <li>• at sine pulse</li> <li>• at AC</li> </ul>		7,3g / 5 ms, 4,7g / 10 ms  11,4g / 5 ms, 7,3g / 10 ms
Impulse voltage resistance / rated value	kV	6
Mechanical operating cycles as operating time		
<ul style="list-style-type: none"> <li>• of the contactor / typical</li> </ul>		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

AC

##### Control supply voltage / 1

- at 50 Hz / for AC / rated value
- at 60 Hz / for AC / rated value

V  
V

110  
110

##### Operating range factor control supply voltage rated value / of the solenoid

- at 50 Hz / for AC
- at 60 Hz / for AC

0.8 ... 1.1  
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
- with the pull-in power of the coil

0.8  
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 / 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  
A  
A  
A

6  
3  
2  
1

##### Operating current

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

A  
A  
A

6  
3  
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
- at DC-13 / maximum

1/h	1,000
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  $I_k < 400$  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 57.5

##### Depth

mm 73

##### Distance, to be maintained, to the ranks assembly / sideways

mm 0

#### Connections:

##### Design of the electrical connection

- for auxiliary and control current circuit

screw-type terminals

##### Type of the connectable conductor cross-section

- for auxiliary contacts
  - solid
  - finely stranded
    - with conductor end processing
- for AWG conductors / for auxiliary contacts

2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), 2x 4 mm<sup>2</sup>  
  
2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)  
  
2x (20 ... 16), 2x (18 ... 14), 2x 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
- with high demand rate / according to SN 31920

%

40

%

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:

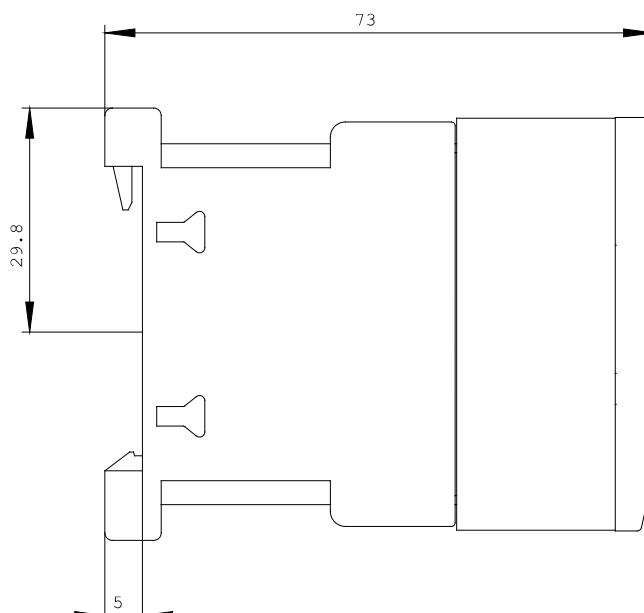
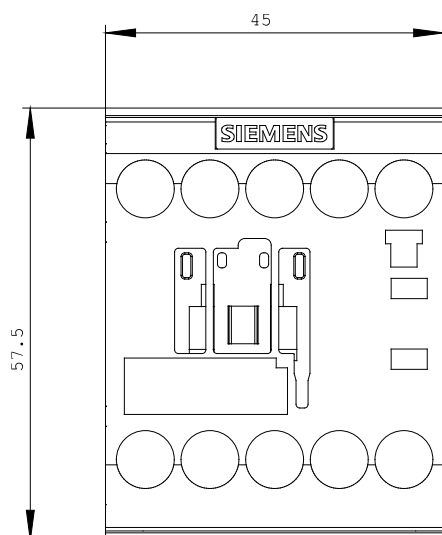
<http://www.siemens.com/cax>

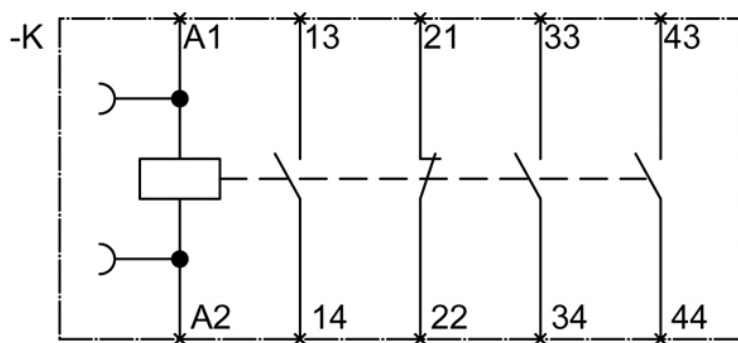
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RH2131-1AF00/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RH2131-1AF00](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2131-1AF00)





last change:

Oct 24, 2011