

CONTACTOR RELAY, 3NO+1NC, AC 220V 50HZ,  
240V 60HZ, 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		
<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:

<b>Type of voltage / of the controlled supply voltage</b>		AC
<b>Control supply voltage / 1</b>		
• at 50 Hz / for AC / rated value	V	220
• at 60 Hz / for AC / rated value	V	240
<b>Operating range factor control supply voltage rated value / of the solenoid</b>		
• at 50 Hz / for AC		0.8 ... 1.1
• at 60 Hz / for AC		0.85 ... 1.1
<b>Apparent pull-in power / of the solenoid / for AC</b>	V·A	37
<b>Apparent holding power / of the solenoid / for AC</b>	V·A	5.7
<b>Inductive power factor</b>		
• with the pull-in power of the coil		0.8
• with the pull-in power of the coil		0.25
<b>Closing delay</b>		
• at AC	ms	8 ... 33
<b>Opening delay</b>		
• at AC	ms	6 ... 25
<b>Arcing time</b>	s	10 ... 15

#### Auxiliary circuit:

<b>Contact reliability / of the auxiliary contacts</b>		1 faulty switching per 100 million (17 V, 1 mA)
<b>Number of NC contacts / for auxiliary contacts / instantaneous switching</b>		1
<b>Number of NO contacts / for auxiliary contacts / instantaneous switching</b>		3
<b>Operating current / of the auxiliary contacts / at AC-12 / maximum</b>	A	10
<b>Operating current / of the auxiliary contacts / at AC-15</b>		
• at 230 V	A	6
• at 400 V	A	3
• at 500 V	A	2
• at 690 V	A	1
<b>Operating current</b>		
• 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
- 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 70

##### 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

spring-loaded terminals

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

- for auxiliary contacts
  - solid
  - finely stranded
    - with conductor end processing
    - without conductor final cutting
- for AWG conductors / for auxiliary contacts

2x (0.5 ... 4 mm<sup>2</sup>)

2x (0.5 ... 2.5 mm<sup>2</sup>)

2x (0.5 ... 2.5 mm<sup>2</sup>)

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
- with high demand rate / according to SN 31920

%

40

%

73

**Failure rate (FIT value) / with low demand rate**

- according to SN 31920

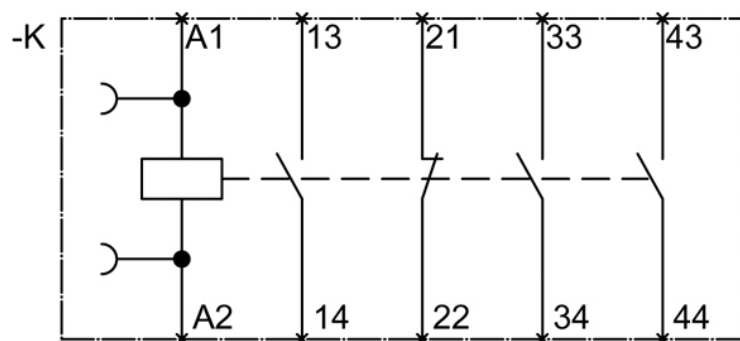
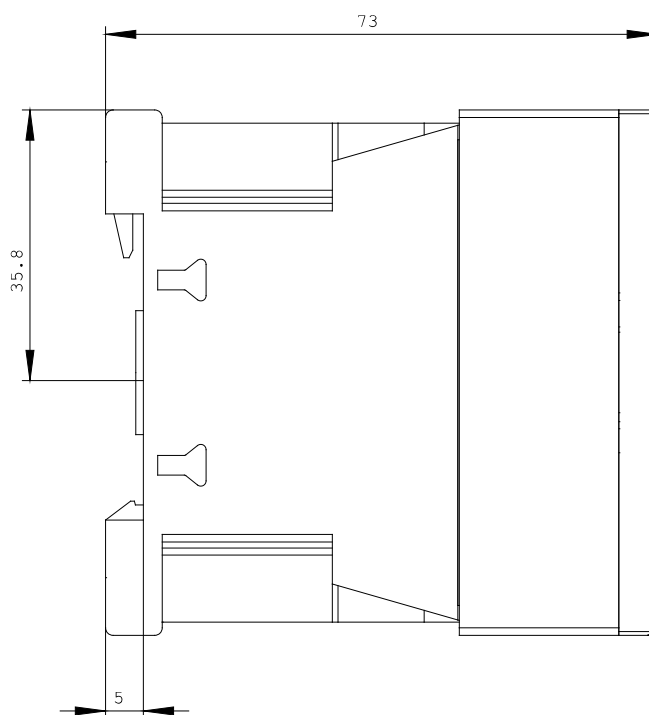
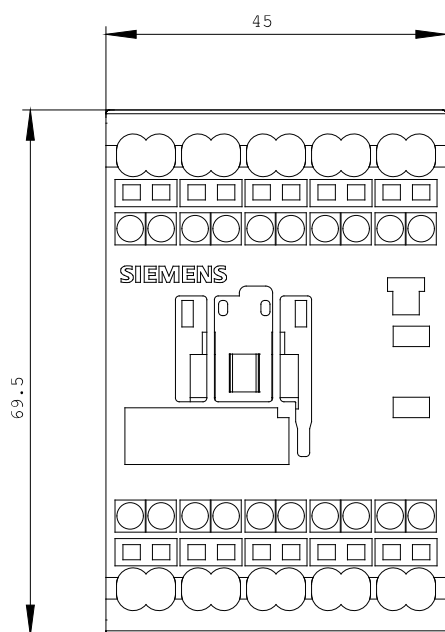
FIT

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/3RH2131-2AP60/all>**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RH2131-2AP60](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2131-2AP60)



last change:

Oct 24, 2011