

CONTACTOR RELAY, 3NO+1NC, DC 24V,  
SZ S00,RINGCABLE LUG CONNECTION RING CABLE  
LUG CONNECTION

### 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 DC</li> <li>• at sine pulse</li> <li>• at DC</li> </ul> |    | 10g / 5 ms, 5g / 10 ms<br><br>15g / 5 ms, 8g / 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

DC

##### Control supply voltage / 1

- for DC / rated value

V

24

##### 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) |
|--|--|--|




#### 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> |  | ring cable connection |
|--|--|-----------------------|

#### Certificates/approvals:

| General Product Approval   |  |                         | Test Certificates  |                              |
|--|--|-------------------------|--|------------------------------|
|  |  | <a href="#">ROSTEST</a> |  | <a href="#">Manufacturer</a> |
| CQC  | CSA  |                         | UL   |                              |

| 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 |
|--|--|-------------|

#### Safety:related Parameter:

|  |   |           |
|--|---|-----------|
| <b>B10 value / with high demand rate</b> <ul style="list-style-type: none"> <li>• according to SN 31920</li> </ul>                       |   | 1,000,000 |
| <b>T1 value / for proof test interval or service life</b> <ul style="list-style-type: none"> <li>• according to IEC 61508</li> </ul>     | a | 10        |
| <b>Proportion of dangerous failures</b> <ul style="list-style-type: none"> <li>• with low demand rate / according to SN 31920</li> </ul> | % | 40        |

|  |     |     |
|--|-----|-----|
| • with high demand rate / according to SN 31920                        | %   | 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/3RH2131-4BB40/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RH2131-4BB40](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2131-4BB40)

