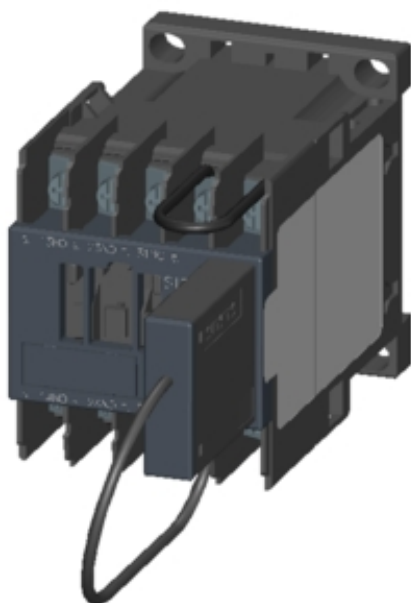




CONTACTOR RELAY FOR RAILWAY, 2NO+1NC,  
DC 24V, 0.7...1.25\*US,  
W. SUPPRESSOR DIODE INTEGRATED,  
SZ S00,RINGCABLE LUG CONNECTION

### General technical data:

|                                                                                                                                                                                                                                    |          |                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------|
| product brand name                                                                                                                                                                                                                 |          | SIRIUS                                                                              |
| Size of the contactor                                                                                                                                                                                                              |          | S00                                                                                 |
| Identification number and letter for switching elements                                                                                                                                                                            |          | 21                                                                                  |
| 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 <ul style="list-style-type: none"> <li>during storage</li> <li>during operating</li> <li>note</li> </ul>                                                                                                       | °C<br>°C | -55 ... +80<br>-40 ... +70<br>Railway application: See catalog for rated conditions |
| Shock resistance <ul style="list-style-type: none"> <li>at rectangular impulse <ul style="list-style-type: none"> <li>at DC</li> </ul> </li> <li>at sine pulse <ul style="list-style-type: none"> <li>at DC</li> </ul> </li> </ul> |          | 10g / 5 ms, 5g / 10 ms<br><br>15g / 5 ms, 8g / 10 ms                                |
| Impulse voltage resistance / rated value                                                                                                                                                                                           | kV       | 6                                                                                   |

|                                                                                       |  |            |
|---------------------------------------------------------------------------------------|--|------------|
| <b>Mechanical operating cycles as operating time</b>                                  |  |            |
| • of the contactor / typical                                                          |  | 30,000,000 |
| • of the contactor with added auxiliary switch block / typical                        |  | 10,000,000 |
| • of the contactor with added electronics-compatible auxiliary switch block / typical |  | 5,000,000  |

| Control circuit/ Control:                                                             |    |                       |
|---------------------------------------------------------------------------------------|----|-----------------------|
| <b>Design of the surge suppressor</b>                                                 |    | with suppressor diode |
| <b>Voltage type / of control feed voltage</b>                                         |    | DC                    |
| <b>Control supply voltage</b>                                                         |    |                       |
| • for DC / rated value                                                                | V  | 24                    |
| <b>Operating range factor control supply voltage rated value / of the magnet coil</b> |    |                       |
| • for DC                                                                              |    | 0.7 ... 1.25          |
| <b>Holding power / of the solenoid / for DC</b>                                       | W  | 4                     |
| <b>Pull-in power / of the solenoid / for DC</b>                                       | W  | 13                    |
| <b>Closing delay</b>                                                                  |    |                       |
| • at DC                                                                               | ms | 30 ... 100            |
| <b>Opening delay</b>                                                                  |    |                       |
| • at DC                                                                               | ms | 25 ... 90             |
| <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> |   | 2                                               |
| <b>Operating current</b>                                                        |   |                                                 |
| • at AC-12 / maximum                                                            | A | 10                                              |
| • at AC-15                                                                      |   |                                                 |
| • at 230 V / rated value                                                        | A | 10                                              |
| • at 400 V / rated value                                                        | A | 3                                               |
| • at 500 V / rated value                                                        | A | 2                                               |
| • at 690 V / rated value                                                        | A | 1                                               |
| <b>Operating current</b>                                                        |   |                                                 |
| • with 1 current path / at DC-12                                                |   |                                                 |
| • at 24 V / rated value                                                         | A | 10                                              |
| • at 110 V / rated value                                                        | A | 3                                               |
| • at 220 V / rated value                                                        | A | 1                                               |
| • at 440 V / rated value                                                        | A | 0.3                                             |
| • at 600 V / rated value                                                        | A | 0.15                                            |

|                                             |     |        |
|---------------------------------------------|-----|--------|
| • 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                           |     |        |
| • with 1 current path / at DC-13            |     |        |
| • at 24 V / rated value                     | A   | 10     |
| • at 110 V / rated value                    | A   | 1      |
| • at 220 V / rated value                    | A   | 0.3    |
| • at 440 V / rated value                    | A   | 0.14   |
| • at 600 V / rated value                    | A   | 0.1    |
| • 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
- at AC-15 / maximum
- at DC-12 / maximum
- at DC-13 / maximum

|     |       |
|-----|-------|
| 1/h | 1,000 |
| 1/h | 1,000 |
| 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

##### Design of the miniature circuit breaker / for short-circuit protection of the auxiliary circuit / up to 230 V

C characteristic: 6 A; 0.4 kA

#### Installation/ mounting/ dimensions:

##### mounting position

+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface

##### Mounting type

screw and snap-on mounting onto 35 mm standard mounting rail

##### Width

mm 45

##### Height

mm 70

##### Depth

mm 123

#### Connections/ terminals:

##### Design of the electrical connection

- for auxiliary and control current circuit

ring cable connection

#### Certificates/ approvals:

##### General Product Approval

Functional Safety /  
Safety of  
Machinery

Declaration of  
Conformity



CCC



CSA



UL

[Type Examination](#)



EG-Konf.

##### Test Certificates

[Special Test Certificate](#)

##### Shipping Approval



ABS



BUREAU  
VERITAS



DNV



GL



LRS



PRS

##### Shipping Approval

##### other



RINA



RMRS



VDE

[Environmental Confirmations](#)

#### UL/CSA ratings:

Contact rating designation / for auxiliary contacts / according to UL

A600 / Q600

#### Safety related data:

##### B10 value / with high demand rate

- according to SN 31920
- note

1,000,000

With 0.3 x I<sub>e</sub>

##### T1 value / for proof test interval or service life

- according to IEC 61508

a

20

##### 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] / 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://mall.industry.siemens.com/>

##### Cax online generator

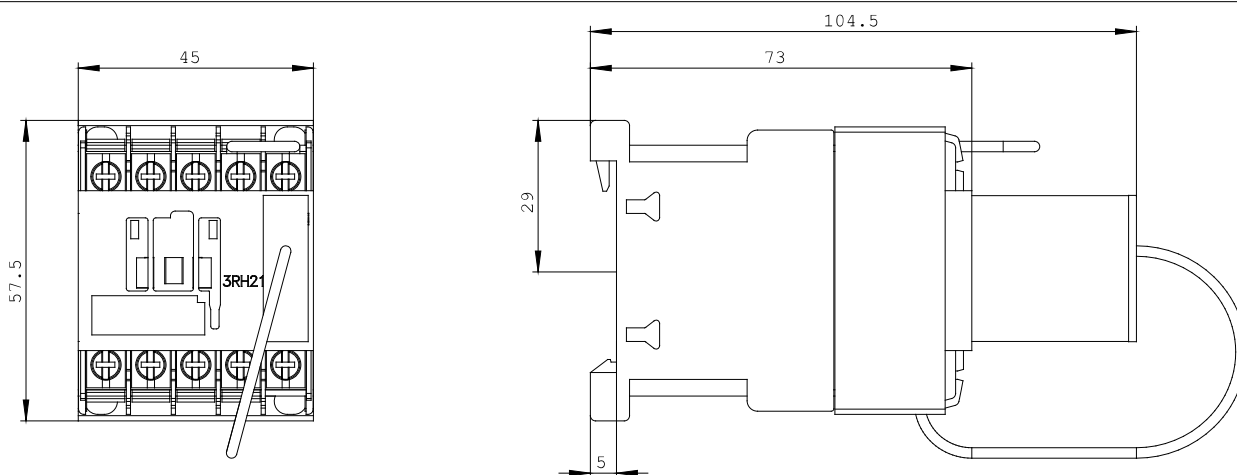
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RH2122-4KB40-0LA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RH2122-4KB40-0LA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2122-4KB40-0LA0)





Jul 21, 2014