



COUPLING RELAY, AC-3, 4KW/400V, 1NC,  
DC 24V, 0.7...1.25\*US, 3-POLE,  
SZ S00 SCREW TERMINAL

### General technical data:

|                                                              |    |                            |
|--------------------------------------------------------------|----|----------------------------|
| product brand name                                           |    | SIRIUS                     |
| Size of the contactor                                        |    | S00                        |
| Product extension / auxiliary switch                         |    | No                         |
| Product extension / function module for communication        |    | No                         |
| Protection class IP / on the front                           |    | IP20                       |
| Protection against electrical shock                          |    | finger-safe                |
| Degree of pollution                                          |    | 3                          |
| Installation altitude / at a height over sea level / maximum | m  | 2,000                      |
| Ambient temperature                                          |    |                            |
| • during storage                                             | °C | -55 ... +80                |
| • during operating                                           | °C | -25 ... +60                |
| Shock resistance                                             |    |                            |
| • at rectangular impulse                                     |    |                            |
| • at DC                                                      |    | 6,7g / 5 ms, 4,2g / 10 ms  |
| • at sine pulse                                              |    |                            |
| • at DC                                                      |    | 10,5g / 5 ms, 6,6g / 10 ms |
| Impulse voltage resistance / rated value                     | kV | 6                          |
| Insulation voltage / rated value                             | V  | 690                        |

|                                                                                                                               |   |            |
|-------------------------------------------------------------------------------------------------------------------------------|---|------------|
| <b>Maximum permissible voltage for protective separation / between coil and main contacts / in accordance with EN 60947-1</b> | V | 400        |
| <b>Mechanical operating cycles as operating time</b><br>• of the contactor / typical                                          |   | 30,000,000 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                        |                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>Main circuit:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                        |                                                                                          |
| <b>Number of NC contacts / for main contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                        | 0                                                                                        |
| <b>Number of NO contacts / for main contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                        | 3                                                                                        |
| <b>Operating current / at AC-1 / at 400 V</b><br>• at 40 °C ambient temperature / rated value<br>• at 60 °C ambient temperature / rated value                                                                                                                                                                                                                                                                                                                                                                                                                  | A<br>A                                                                                 | 22<br>20                                                                                 |
| <b>Connectable conductor cross-section / in main circuit</b><br>• at AC-1<br>• at 40 °C / minimum permissible<br>• at 60 °C / minimum permissible                                                                                                                                                                                                                                                                                                                                                                                                              | m <sup>2</sup><br>m <sup>2</sup>                                                       | 4<br>2.5                                                                                 |
| <b>Operational current</b><br>• at AC-2 / at 400 V / rated value<br>• at AC-3<br>• at 400 V / rated value<br>• at 500 V / rated value<br>• at 690 V / rated value<br>• at AC-4 / at 400 V / rated value                                                                                                                                                                                                                                                                                                                                                        | A<br>A<br>A<br>A<br>A                                                                  | 9<br>9<br>7.7<br>6.7<br>8.5                                                              |
| <b>Operational current</b><br>• with 1 current path / at DC-1<br>• at 24 V / rated value<br>• at 110 V / rated value<br>• at 220 V / rated value<br>• at 440 V / rated value<br>• at 600 V / rated value<br>• with 2 current paths in series / at DC-1<br>• at 24 V / rated value<br>• at 110 V / rated value<br>• at 220 V / rated value<br>• at 440 V / rated value<br>• at 600 V / rated value<br>• with 3 current paths in series / at DC-1<br>• at 24 V / rated value<br>• at 110 V / rated value<br>• at 220 V / rated value<br>• at 440 V / rated value | A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A | 20<br>2.1<br>0.8<br>0.6<br>0.6<br>20<br>12<br>1.6<br>0.8<br>0.7<br>20<br>20<br>20<br>1.3 |

|                                                                                                      |     |        |
|------------------------------------------------------------------------------------------------------|-----|--------|
| • at 600 V / rated value                                                                             | A   | 1      |
| <b>Operational current</b>                                                                           |     |        |
| • with 1 current path / at DC-3 / at DC-5                                                            |     |        |
| • at 24 V / rated value                                                                              | A   | 20     |
| • at 110 V / rated value                                                                             | A   | 0.1    |
| • with 2 current paths in series / at DC-3 / at DC-5                                                 |     |        |
| • at 24 V / rated value                                                                              | A   | 20     |
| • at 110 V / rated value                                                                             | A   | 0.35   |
| • with 3 current paths in series / at DC-3 / at DC-5                                                 |     |        |
| • at 24 V / rated value                                                                              | A   | 20     |
| • at 110 V / rated value                                                                             | A   | 20     |
| • at 220 V / rated value                                                                             | A   | 1.5    |
| • at 440 V / rated value                                                                             | A   | 0.2    |
| • at 600 V / rated value                                                                             | A   | 0.2    |
| <b>Service power</b>                                                                                 |     |        |
| • at AC-1                                                                                            |     |        |
| • at 230 V / rated value                                                                             | kW  | 7.5    |
| • at 400 V / rated value                                                                             | kW  | 13     |
| • at 500 V / rated value                                                                             | kW  | 17     |
| • at 690 V / rated value                                                                             | kW  | 22     |
| • at AC-2 / at 400 V / rated value                                                                   | kW  | 4      |
| • at AC-3                                                                                            |     |        |
| • at 230 V / rated value                                                                             | kW  | 2.2    |
| • at 400 V / rated value                                                                             | kW  | 4      |
| • at 690 V / rated value                                                                             | kW  | 5.5    |
| • at AC-4 / at 400 V / rated value                                                                   | kW  | 4      |
| <b>Active power loss / at AC-3 / at 400 V / with rated operational current value / per conductor</b> | W   | 0.7    |
| <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-1 / according to IEC 60947-6-2                                                               | 1/h | 1,000  |
| • at AC-2 / according to IEC 60947-6-2                                                               | 1/h | 750    |
| • at AC-3 / according to IEC 60947-6-2                                                               | 1/h | 750    |
| • at AC-4 / according to IEC 60947-6-2                                                               | 1/h | 250    |
| <b>Control circuit:</b>                                                                              |     |        |
| <b>Type of voltage / of the controlled supply 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>Pull-in power / of the solenoid / for DC</b>                                       | W  | 2.8          |
| <b>Holding power / of the solenoid / for DC</b>                                       | W  | 2.8          |
| <b>Closing delay</b>                                                                  |    |              |
| • at DC                                                                               | ms | 30 ... 100   |
| <b>Opening delay</b>                                                                  |    |              |
| • at DC                                                                               | ms | 7 ... 13     |
| <b>Arcing time</b>                                                                    | ms | 10 ... 15    |
| <b>Residual current / of electronics / for control with signal &lt;0&gt;</b>          |    |              |
| • at 230 V / with AC / maximum permissible                                            | mA | 3            |
| • at 24 V / with DC / maximum permissible                                             | mA | 10           |

#### 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> |   | 0                                               |
| <b>Operating current / of the auxiliary contacts</b>                            |   |                                                 |
| • [nicht versorgt: PMD_ABP551_001_000]                                          |   |                                                 |
| •                                                                               | A | 2                                               |
| • at 690 V                                                                      | A | 1                                               |

#### UL/CSA ratings:

|                                                                              |    |             |
|------------------------------------------------------------------------------|----|-------------|
| <b>yielded mechanical performance (hp)</b>                                   |    |             |
| • for single-phase squirrel cage motors                                      |    |             |
| • at 110/120 V / rated value                                                 | hp | 0.33        |
| • at 230 V / rated value                                                     | hp | 1           |
| • for three-phase squirrel cage motors                                       |    |             |
| • at 200/208 V / rated value                                                 | hp | 2           |
| • at 220/230 V / rated value                                                 | hp | 3           |
| • at 460/480 V / rated value                                                 | hp | 5           |
| • at 575/600 V / rated value                                                 | hp | 7.5         |
| <b>Operating current (FLA) / for three-phase squirrel cage motors</b>        |    |             |
| • at 480 V / rated value                                                     | A  | 7.6         |
| • at 600 V / rated value                                                     | A  | 9           |
| <b>Contact rating designation / for auxiliary contacts / according to UL</b> |    | A600 / Q600 |

**Short-circuit:****Design of the fuse link**

- for short-circuit protection of the auxiliary switch / required
- for short-circuit protection of the main circuit
  - with type of assignment 1 / required
- at type of coordination 2 / required

fuse gL/gG: 10 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20A

**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

**Type of mounting**

screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022

**Type of fixing/fixation / series installation**

Yes

**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 main current circuit
- for auxiliary and control current circuit

screw-type terminals

screw-type terminals

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

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

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

**Sicherheitsrelevante Kenngrößen:****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

20

**Proportion of dangerous failures**

|                                                        |     |     |
|--------------------------------------------------------|-----|-----|
| • with low demand rate / according to SN 31920         | %   | 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</b>                                |     |     |
| • mirror contact to IEC 60947-4-1                      |     | Yes |
| • positively driven operation to IEC 60947-5-1         |     | No  |

#### Certificates/approvals:

##### General Product Approval

##### Functional Safety / Safety of Machinery

##### Declaration of Conformity



CCC



CSA



GOST



UL

[Type Examination](#)



EG-Konf.

##### Test Certificates

[Special Test  
Certificate](#)

[Type Test  
Certificates/Test  
Report](#)

##### Shipping Approval



ABS



BUREAU  
VERITAS



DNV



GL



LRS



PRS

##### Shipping Approval

##### other



RINA



RMRS

[Confirmation](#)



VDE

#### 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

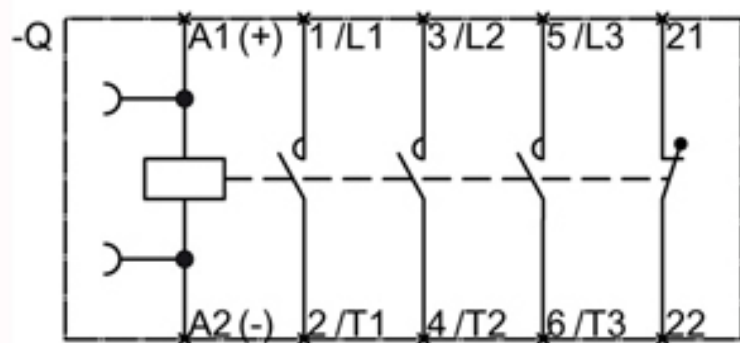
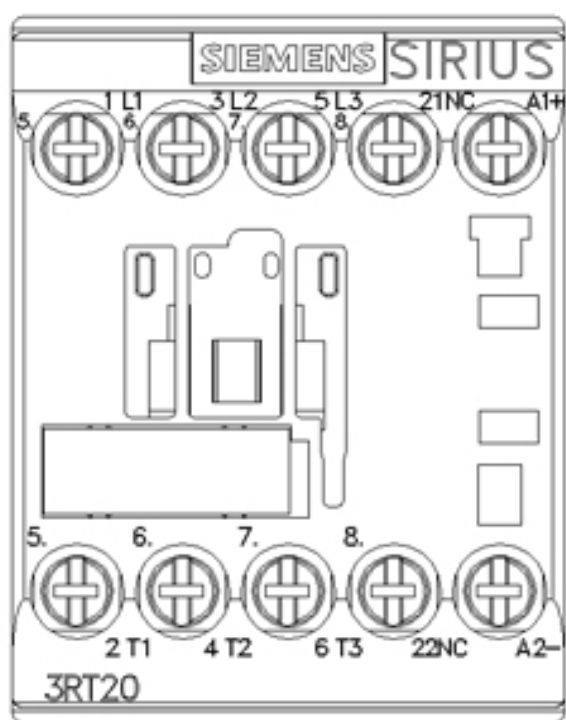
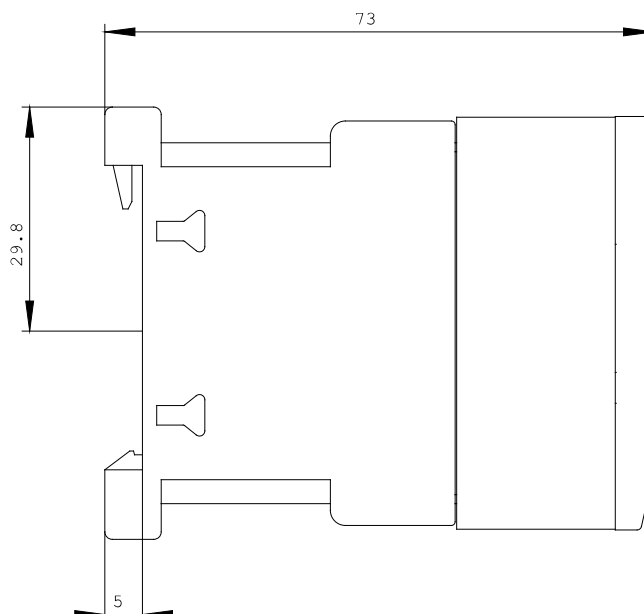
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RT2016-1HB42/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RT2016-1HB42](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2016-1HB42)



last change:

Feb 15, 2013