



CONTACTOR, AC-3, 7.5KW/400V, 1NO,  
DC 110V 3-POLE, SZ S00 SCREW TERMINAL

### General technical data:

|                                                              |    |                            |
|--------------------------------------------------------------|----|----------------------------|
| product brand name                                           |    | SIRIUS                     |
| Size of the contactor                                        |    | S00                        |
| Product extension / auxiliary switch                         |    | Yes                        |
| 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                                                      |    | 7.3g / 5 ms, 4.7g / 10 ms  |
| • at sine pulse                                              |    |                            |
| • at DC                                                      |    | 11.4g / 5 ms, 7.3g / 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>                                                                          |                |            |
| • 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  |
| <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>                                                                                 |                |            |
| • at 40 °C ambient temperature / rated value                                                                                  | A              | 22         |
| • at 60 °C ambient temperature / rated value                                                                                  | A              | 20         |
| <b>Connectable conductor cross-section / in main circuit</b>                                                                  |                |            |
| • at AC-1                                                                                                                     |                |            |
| • at 40 °C / minimum permissible                                                                                              | m <sup>2</sup> | 4          |
| • at 60 °C / minimum permissible                                                                                              | m <sup>2</sup> | 2.5        |
| <b>Operational current</b>                                                                                                    |                |            |
| • at AC-2 / at 400 V / rated value                                                                                            | A              | 16         |
| • at AC-3                                                                                                                     |                |            |
| • at 400 V / rated value                                                                                                      | A              | 16         |
| • at 500 V / rated value                                                                                                      | A              | 12.4       |
| • at 690 V / rated value                                                                                                      | A              | 8.9        |
| • at AC-4 / at 400 V / rated value                                                                                            | A              | 11.5       |
| <b>Operational current</b>                                                                                                    |                |            |
| • with 1 current path / at DC-1                                                                                               |                |            |
| • at 24 V / rated value                                                                                                       | A              | 20         |
| • at 110 V / rated value                                                                                                      | A              | 2.1        |
| • at 220 V / rated value                                                                                                      | A              | 0.8        |
| • at 440 V / rated value                                                                                                      | A              | 0.6        |
| • at 600 V / rated value                                                                                                      | A              | 0.6        |
| • with 2 current paths in series / at DC-1                                                                                    |                |            |
| • at 24 V / rated value                                                                                                       | A              | 20         |
| • at 110 V / rated value                                                                                                      | A              | 12         |
| • at 220 V / rated value                                                                                                      | A              | 1.6        |
| • at 440 V / rated value                                                                                                      | A              | 0.8        |
| • at 600 V / rated value                                                                                                      | A              | 0.7        |
| • with 3 current paths in series / at DC-1                                                                                    |                |            |
| • at 24 V / rated value                                                                                                       | A              | 20         |
| • at 110 V / rated value                                                                                                      | A              | 20         |

|                                                                                                      |     |        |
|------------------------------------------------------------------------------------------------------|-----|--------|
| • at 220 V / rated value                                                                             | A   | 20     |
| • at 440 V / rated value                                                                             | A   | 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  | 7.5    |
| • at AC-3                                                                                            |     |        |
| • at 230 V / rated value                                                                             | kW  | 4      |
| • at 400 V / rated value                                                                             | kW  | 7.5    |
| • at 690 V / rated value                                                                             | kW  | 7.5    |
| • at AC-4 / at 400 V / rated value                                                                   | kW  | 5.5    |
| <b>Active power loss / at AC-3 / at 400 V / with rated operational current value / per conductor</b> | W   | 2.2    |
| <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    |

Control circuit:

|                                                                                                                                                                         |          |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|
| <b>Type of voltage / of the controlled supply voltage</b>                                                                                                               |          | DC          |
| <b>Control supply voltage</b><br>• for DC / rated value                                                                                                                 | V        | 110         |
| <b>operating range factor control supply voltage rated value / of the magnet coil</b><br>• for DC                                                                       |          | 0.8 ... 1.1 |
| <b>Pull-in power / of the solenoid / for DC</b>                                                                                                                         | W        | 4           |
| <b>Holding power / of the solenoid / for DC</b>                                                                                                                         | W        | 4           |
| <b>Closing delay</b><br>• at DC                                                                                                                                         | ms       | 30 ... 100  |
| <b>Opening delay</b><br>• 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><br>• at 230 V / with AC / maximum permissible<br>• at 24 V / with DC / maximum permissible | mA<br>mA | 4<br>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>                                   |        | 0                                               |
| <b>Number of NO contacts / for auxiliary contacts / instantaneous switching</b>                                   |        | 1                                               |
| <b>Operating current / of the auxiliary contacts</b><br>• [nicht versorgt: PMD_ABP551_001_000]<br>•<br>• at 690 V | A<br>A | 2<br>1                                          |

#### UL/CSA ratings:

|                                                                                                                                                                                                                                                                                                                             |                                  |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------------|
| <b>yielded mechanical performance (hp)</b><br>• for single-phase squirrel cage motors<br>• at 110/120 V / rated value<br>• at 230 V / rated value<br>• for three-phase squirrel cage motors<br>• at 200/208 V / rated value<br>• at 220/230 V / rated value<br>• at 460/480 V / rated value<br>• at 575/600 V / rated value | hp<br>hp<br>hp<br>hp<br>hp<br>hp | 1<br>2<br>3<br>5<br>10<br>10 |
| <b>Operating current (FLA) / for three-phase squirrel cage motors</b><br>• at 480 V / rated value<br>• at 600 V / rated value                                                                                                                                                                                               | A<br>A                           | 14<br>11                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Contact rating designation / for auxiliary contacts / according to UL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    | A600 / Q600                                                                                                                                                                                                                                                                                                        |
| <b>Short-circuit:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |                                                                                                                                                                                                                                                                                                                    |
| <b>Design of the fuse link</b> <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch / required</li> <li>• for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>• with type of assignment 1 / required</li> </ul> </li> <li>• at type of coordination 2 / required</li> </ul>                                                                                                                                                                                                                                                                  |    | fuse gL/gG: 10 A<br><br>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A<br><br>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20A                                                                                                                                                                                        |
| <b>Installation/mounting/dimensions:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |    |                                                                                                                                                                                                                                                                                                                    |
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |    | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface                                                                                                                                                                               |
| <b>Type of mounting</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022                                                                                                                                                                                                                             |
| <b>Type of fixing/fixation / series installation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    | Yes                                                                                                                                                                                                                                                                                                                |
| <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                                                                                                                                                                                                                                                                                                                  |
| <b>Connections:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |                                                                                                                                                                                                                                                                                                                    |
| <b>Design of the electrical connection</b> <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                              |    | screw-type terminals<br><br>screw-type terminals                                                                                                                                                                                                                                                                   |
| <b>Type of the connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> </ul> </li> </ul> </li> <li>• for AWG conductors / for main contacts</li> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> </ul> </li> </ul> </li> <li>• for AWG conductors / for auxiliary contacts</li> </ul> |    | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²<br><br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)<br><br>2x (20 ... 16), 2x (18 ... 14), 2x 12<br><br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²<br><br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)<br><br>2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| <b>Sicherheitsrelevante Kenngrößen:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |                                                                                                                                                                                                                                                                                                                    |
| <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><br>• according to IEC 61508                                                        | a      | 20                      |
| <b>Proportion of dangerous failures</b><br>• with low demand rate / according to SN 31920<br>• with high demand rate / according to SN 31920 | %<br>% | 40<br>73                |
| <b>Failure rate (FIT value) / with low demand rate</b><br>• according to SN 31920                                                            | FIT    | 100                     |
| <b>Product function</b><br>• mirror contact to IEC 60947-4-1<br>• comment<br>• positively driven operation to IEC 60947-5-1                  |        | Yes<br>with 3RH29<br>No |

#### Certificates/approvals:

##### General Product Approval



CCC



CSA



GOST



UL

##### Functional Safety / Safety of Machinery

[Type Examination](#)



EG-Konf.

##### Test Certificates

[Special Test  
Certificate](#)

##### 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

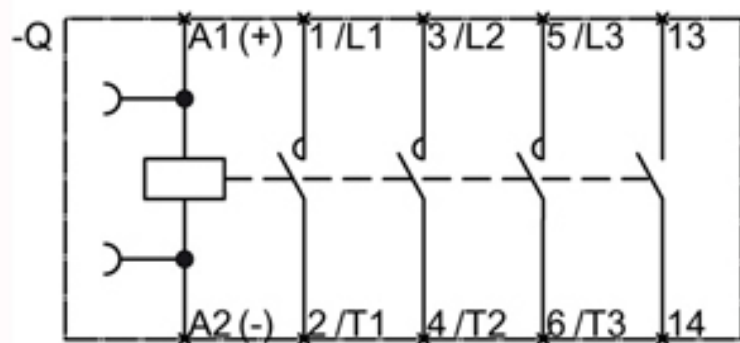
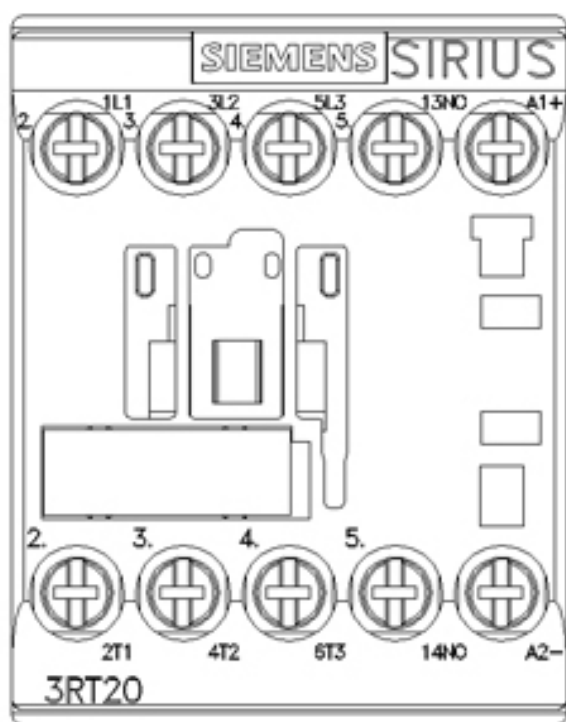
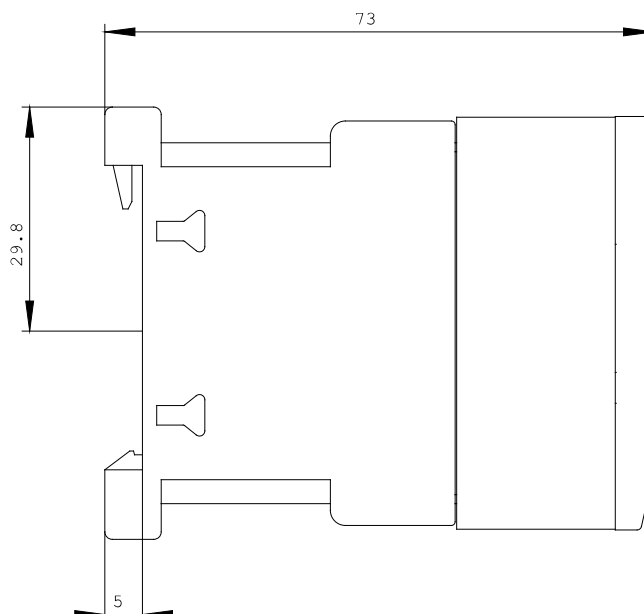
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RT2018-1BF41/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RT2018-1BF41](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2018-1BF41)



last change:

Feb 15, 2013