



COUPLING RELAY, AC-3, 5.5KW/ 400V ,  
1NO, DC 24V, 0.7...1.25\*US,  
W. INTEGRA. SUPPRESSOR DIODE, 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 <ul style="list-style-type: none"> <li>during storage</li> <li>during operating</li> <li>note</li> </ul>                   | °C<br>°C | -55 ... +80<br>-25 ... +60<br>Railway application: -40 ... 70 °C with 10 mm clearance. See catalog for other rated conditions |
| 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> |          | 7.3g / 5 ms, 4.7g / 10 ms<br><br>11.4g / 5 ms, 7.3g / 10 ms                                                                   |
| Impulse voltage resistance / rated value                                                                                                       | kV       | 6                                                                                                                             |

|                                                                                                                               |   |            |
|-------------------------------------------------------------------------------------------------------------------------------|---|------------|
| <b>Insulation voltage / rated value</b>                                                                                       | 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                                                                                                                                                                                                                                                                                                                                                                                  | <br>m <sup>2</sup><br>m <sup>2</sup>                                      | <br>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><br>A<br>A<br>A<br>A                                                 | 12<br><br>12<br>9.2<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>A<br>A<br>A<br>A<br>A<br><br>A<br>A<br>A<br>A<br>A<br><br>A<br>A<br>A | <br>20<br>2.1<br>0.8<br>0.6<br>0.6<br><br>20<br>12<br>1.6<br>0.8<br>0.7<br><br>20<br>20<br>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  | 5.5                   |
| • at AC-3                                                                                            |     |                       |
| • at 230 V / rated value                                                                             | kW  | 3                     |
| • at 400 V / rated value                                                                             | kW  | 5.5                   |
| • 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   | 1.2                   |
| <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                   |
| <b>Control circuit:</b>                                                                              |     |                       |
| <b>Design of the surge suppressor</b>                                                                |     | with suppressor diode |

|                                                                                                                                                                         |          |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|
| <b>Type of voltage / of the controlled supply voltage</b>                                                                                                               |          | DC           |
| <b>Control supply voltage</b><br>• for DC / rated value                                                                                                                 | V        | 24           |
| <b>operating range factor control supply voltage rated value / of the magnet coil</b><br>• 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><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 | 0.5<br>2<br>3<br>3<br>7.5<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                           | 11<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</li> <li>• with type of assignment 1 / required</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</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</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>                                                                                                                                                                                                                                                                                                                                                                |    |                                                                                                                                                                                                                                                                                                                    |

|                                                        |     |     |
|--------------------------------------------------------|-----|-----|
| • according to IEC 61508                               | a   | 20  |
| <b>Proportion of dangerous failures</b>                |     |     |
| • 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                      |     | No  |
| • positively driven operation to IEC 60947-5-1         |     | No  |

#### Certificates/approvals:

##### General Product Approval



##### Functional Safety / Safety of Machinery

[Type Examination](#)

##### Declaration of Conformity



##### Test Certificates

[other](#)

[Special Test  
Certificate](#)

[Type Test  
Certificates/Test  
Report](#)

##### Shipping Approval



##### Shipping Approval

##### other



[Confirmation](#)



#### 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

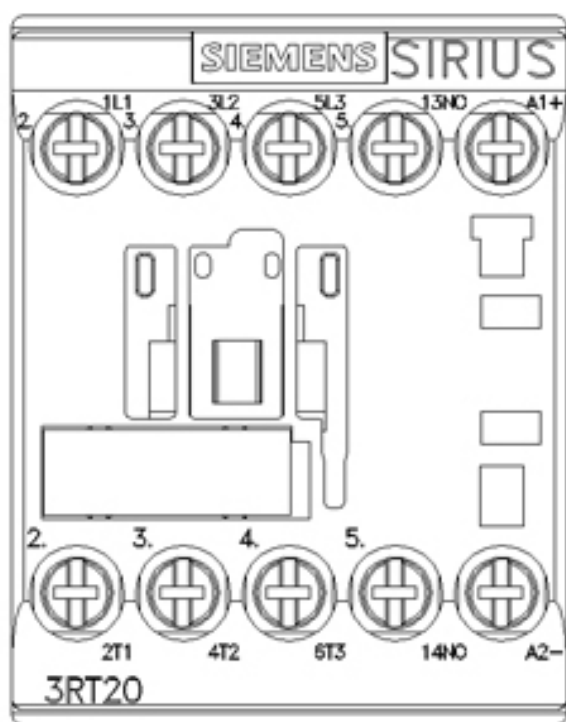
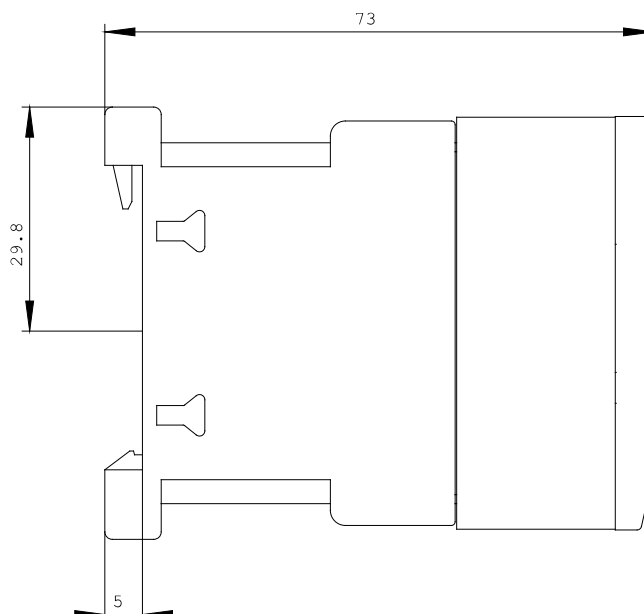
<http://www.siemens.com/cax>

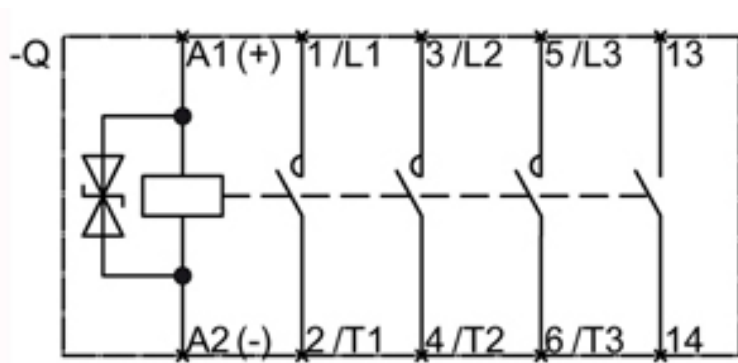
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RT2017-1KB41/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RT2017-1KB41](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2017-1KB41)





last change:

Feb 15, 2013