

3RT2015-1BB41 CONTACTOR,AC3:3KW 1NO DC24V

Technical / CAx data

☒ Technical Data ☐ CAx data



CONTACTOR, AC-3, 3KW/400V, 1NO, DC 24V, 3-POLE, SZ  
S00 SCREW TERMINAL

| General technical data:                                                               |    |                            |
|---------------------------------------------------------------------------------------|----|----------------------------|
| product brand name                                                                    |    | SIRIUS                     |
| Size of the contactor                                                                 |    | S00                        |
| Product extension / auxiliary switch                                                  |    | Yes                        |
| 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                  |
| Ambient temperature / 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                        |
| Mechanical operating cycles as operating time                                         |    |                            |
| • 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                  |

| Main circuit:                             |  |   |
|-------------------------------------------|--|---|
| Number of NC contacts / for main contacts |  | 0 |
| Number of NO contacts / for main contacts |  | 3 |

**Operating current**

- at AC-1 / at 400 V
  - at 40 °C ambient temperature / rated value
  - at 60 °C ambient temperature / rated value
- at AC-2 / at 400 V / rated value
- at AC-3 / at 400 V / rated value
- at AC-4 / at 400 V / rated value

|   |     |
|---|-----|
| A | 18  |
| A | 16  |
| A | 7   |
| A | 7   |
| A | 6.5 |

**Operating current**

- with 1 current path / at DC-1
  - at 24 V / rated value
  - at 110 V / rated value
- with 2 current paths in series / at DC-1
  - at 24 V / rated value
  - at 110 V / rated value
- with 3 current paths in series / at DC-1
  - at 24 V / rated value
  - at 110 V / rated value
- with 1 current path / at DC-3 / at DC-5
  - at 24 V / rated value
  - at 110 V / rated value
- with 2 current paths in series / at DC-3 / at DC-5
  - at 24 V / rated value
  - at 110 V / rated value
- with 3 current paths in series / at DC-3 / at DC-5
  - at 24 V / rated value
  - at 110 V / rated value

|   |      |
|---|------|
| A | 15   |
| A | 1.5  |
| A | 15   |
| A | 8.4  |
| A | 15   |
| A | 15   |
| A | 15   |
| A | 0.1  |
| A | 15   |
| A | 0.25 |
| A | 15   |
| A | 15   |

**Service power**

- at AC-2 / at 400 V / rated value
- at AC-3 / at 400 V / rated value
- at AC-4 / at 400 V / rated value

|    |   |
|----|---|
| kW | 3 |
| kW | 3 |
| kW | 3 |

**Active power loss / per conductor / typical**

|   |     |
|---|-----|
| W | 0.4 |
|---|-----|

**Off-load operating frequency**

- at AC
- at DC

|     |        |
|-----|--------|
| 1/h | 10,000 |
| 1/h | 10,000 |

**Frequency of operation / at AC-1 / according to IEC 60947-6-2**

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

**Frequency of operation / at AC-2 / according to IEC 60947-6-2**

|     |     |
|-----|-----|
| 1/h | 750 |
|-----|-----|

**Frequency of operation / at AC-3 / according to IEC 60947-6-2**

|     |     |
|-----|-----|
| 1/h | 750 |
|-----|-----|

**Frequency of operation / at AC-4 / according to IEC 60947-6-2**

|     |     |
|-----|-----|
| 1/h | 250 |
|-----|-----|

**Control circuit:**
**Type of voltage / of the controlled supply voltage**

|    |
|----|
| DC |
|----|

**Control supply voltage / 1**

- for DC / rated value

|   |    |
|---|----|
| V | 24 |
|---|----|

**operating range factor control supply voltage rated value / of the magnet coil**

- for DC

|           |
|-----------|
| 0.8...1.1 |
|-----------|

**Pull-in power / of the solenoid / for DC**

|   |   |
|---|---|
| W | 4 |
|---|---|

**Holding power / of the solenoid / for DC**

|   |   |
|---|---|
| W | 4 |
|---|---|

**Closing delay**

|                                                         |    |          |
|---------------------------------------------------------|----|----------|
| <ul style="list-style-type: none"> <li>at DC</li> </ul> | ms | 30...100 |
| <b>Opening delay</b>                                    |    |          |
| <ul style="list-style-type: none"> <li>at DC</li> </ul> | ms | 7...13   |
| <b>Arcing time</b>                                      | ms | 10...15  |

#### Auxiliary circuit:

|                                                                                 |   |                                                 |
|---------------------------------------------------------------------------------|---|-------------------------------------------------|
| <b>Contact reliability / of the auxiliary contacts</b>                          |   | 1 faulty switching per 100 million (17 V, 1 mA) |
| <b>Number of NC contacts / for auxiliary contacts / instantaneous switching</b> |   | 0                                               |
| <b>Number of NO contacts / for auxiliary contacts / instantaneous switching</b> |   | 1                                               |
| <b>Operating current / of the auxiliary contacts</b>                            |   |                                                 |
| <ul style="list-style-type: none"> <li>at AC-12 / maximum</li> </ul>            | A | 10                                              |
| <ul style="list-style-type: none"> <li>at AC-15</li> </ul>                      |   |                                                 |
| <ul style="list-style-type: none"> <li>at 230 V</li> </ul>                      | A | 6                                               |
| <ul style="list-style-type: none"> <li>at 400 V</li> </ul>                      | A | 3                                               |
| <ul style="list-style-type: none"> <li>at DC-12</li> </ul>                      |   |                                                 |
| <ul style="list-style-type: none"> <li>at 48 V</li> </ul>                       | A | 6                                               |
| <ul style="list-style-type: none"> <li>at 60 V</li> </ul>                       | A | 6                                               |
| <ul style="list-style-type: none"> <li>at 110 V</li> </ul>                      | A | 3                                               |
| <ul style="list-style-type: none"> <li>at 220 V</li> </ul>                      | A | 1                                               |
| <ul style="list-style-type: none"> <li>at DC-13</li> </ul>                      |   |                                                 |
| <ul style="list-style-type: none"> <li>at 24 V</li> </ul>                       | A | 6                                               |
| <ul style="list-style-type: none"> <li>at 48 V</li> </ul>                       | A | 2                                               |
| <ul style="list-style-type: none"> <li>at 60 V</li> </ul>                       | A | 2                                               |
| <ul style="list-style-type: none"> <li>at 110 V</li> </ul>                      | A | 1                                               |
| <ul style="list-style-type: none"> <li>at 220 V</li> </ul>                      | A | 0.3                                             |

#### Short-circuit:

|                                                                                                                   |  |                                                |
|-------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------|
| <b>Design of the fuse link</b>                                                                                    |  |                                                |
| <ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch / required</li> </ul> |  | fuse gL/gG: 10 A                               |
| <ul style="list-style-type: none"> <li>for short-circuit protection of the main circuit</li> </ul>                |  |                                                |
| <ul style="list-style-type: none"> <li>with type of assignment 1 / required</li> </ul>                            |  | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A |
| <ul style="list-style-type: none"> <li>at type of coordination 2 / required</li> </ul>                            |  | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20A  |

#### Installation/mounting/dimensions:

|                                                                     |    |                                                                                        |
|---------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|
| <b>Built in orientation</b>                                         |    | vertical                                                                               |
| <b>Type of mounting</b>                                             |    | screw and snap-on mounting onto 35 mm standard mounting rail 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>Distance, to be maintained, to earthed part / sideways</b>       | mm | 6                                                                                      |

#### Connections:

|                                                                                             |  |                                                       |
|---------------------------------------------------------------------------------------------|--|-------------------------------------------------------|
| <b>Design of the electrical connection</b>                                                  |  |                                                       |
| <ul style="list-style-type: none"> <li>for main current circuit</li> </ul>                  |  | screw-type terminals                                  |
| <ul style="list-style-type: none"> <li>for auxiliary and control current circuit</li> </ul> |  | screw-type terminals                                  |
| <b>Type of the connectable conductor cross-section</b>                                      |  |                                                       |
| <ul style="list-style-type: none"> <li>for main contacts</li> </ul>                         |  |                                                       |
| <ul style="list-style-type: none"> <li>solid</li> </ul>                                     |  | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² |

- 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

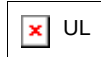
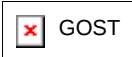
2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)  
 2x (20 ... 16), 2x (18 ... 14), 2x 12

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

#### Certificates/approvals:

##### General Product Approval



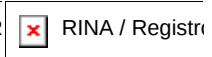
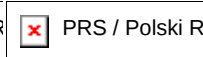
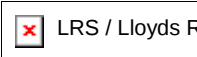
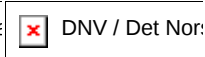
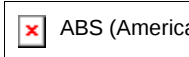
##### Declaration of Conformity



##### Test Certificates

other      Special Test Certificate      Type Test Certificates/Test Report

##### Shipping Approval

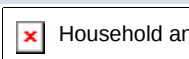


##### Shipping Approval

other



Confirmation



#### UL/CSA ratings:

##### yielded mechanical performance (hp)

- for single-phase squirrel cage motors
  - at 110/120 V / rated value
  - at 230 V / rated value
- for three-phase squirrel cage motors
  - at 200/208 V / rated value
  - at 220/230 V / rated value
  - at 460/480 V / rated value
  - at 575/600 V / rated value

hp      0.25  
 hp      0.75

hp      1.5  
 hp      2  
 hp      3  
 hp      5

##### Operating current (FLA) / for three-phase squirrel cage motors

- at 480 V / rated value
- at 600 V / rated value

A      4.8  
 A      6.1  
 A600 / Q600

##### Contact rating designation / for auxiliary contacts / according to UL

#### Safety-related Parameter:

##### 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
- with high demand rate / according to SN 31920

%      40  
 %      73

##### Failure rate (FIT value) / with low demand rate

- according to SN 31920

FIT      100

##### Product function

- mirror contact to IEC 60947-4-1

Yes

- comment
- positively driven operation to IEC 60947-5-1

with 3RH29

No

#### 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:

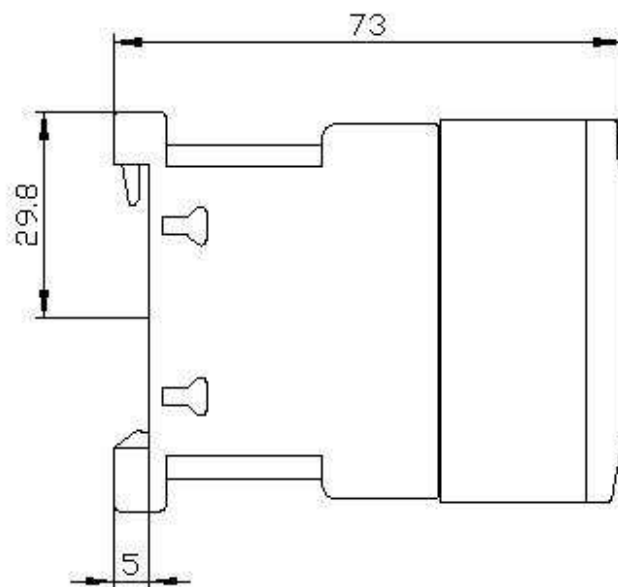
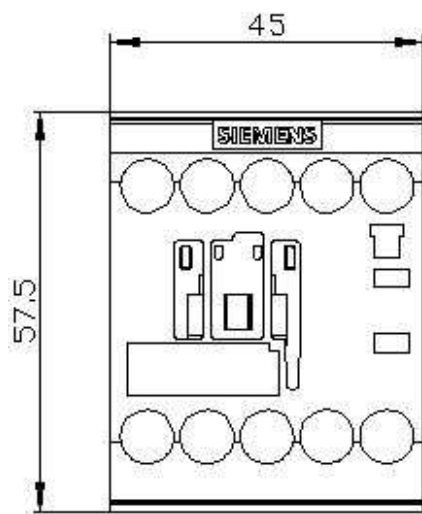
<http://www.siemens.com/cax>

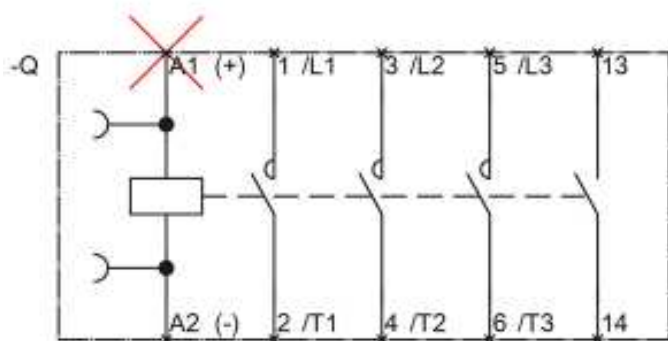
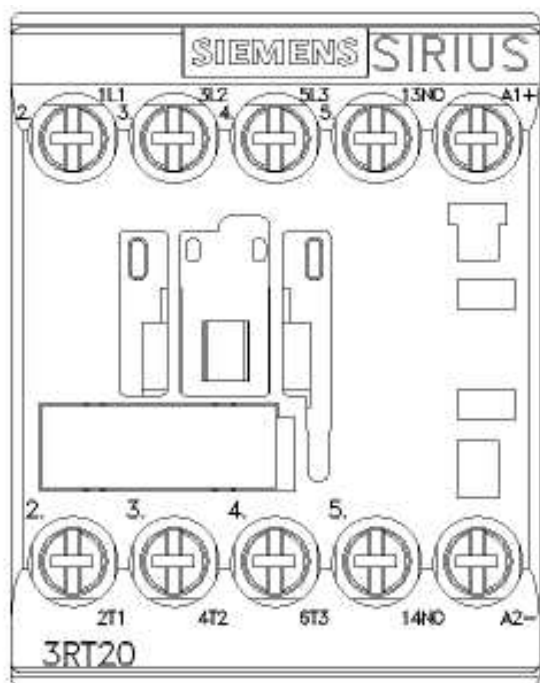
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RT2015-1BB41/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RT2015-1BB41](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2015-1BB41)





last change:

Mar 27, 2012