



power contactor, AC-3e/AC-3, 32 A, 15 kW / 400 V, 3-pole, 230 V AC, 50 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal

|   |                            |
|---|----------------------------|
| <b>product brand name</b>   | SIRIUS                     |
| <b>product designation</b>  | Power contactor            |
| <b>product type designation</b>   | 3RT2                       |
| <b>General technical data</b>   |                            |
| <b>size of contactor</b>  | S0                         |
| <b>product extension</b>  |                            |
| • function module for communication   | No                         |
| • auxiliary switch  | Yes                        |
| <b>power loss [W] for rated value of the current</b>  |                            |
| • at AC in hot operating state  | 6.3 W                      |
| • at AC in hot operating state per pole   | 2.3 W                      |
| • without load current share typical  | 9.8 W                      |
| <b>insulation voltage</b>   |                            |
| • of main circuit with degree of pollution 3 rated value  | 690 V                      |
| • of auxiliary circuit with degree of pollution 3 rated value   | 690 V                      |
| <b>surge voltage resistance</b>   |                            |
| • of main circuit rated value   | 6 kV                       |
| • of auxiliary circuit rated value  | 6 kV                       |
| maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1 | 400 V                      |
| <b>shock resistance at rectangular impulse</b>  |                            |
| • at AC   | 8,3g / 5 ms, 5,3g / 10 ms  |
| <b>shock resistance with sine pulse</b>   |                            |
| • at AC   | 13,5g / 5 ms, 8,3g / 10 ms |
| <b>mechanical service life (operating cycles)</b>   |                            |
| • of contactor typical  | 10 000 000                 |
| • of the contactor with added electronically optimized auxiliary switch block typical                 | 5 000 000                  |
| • of the contactor with added auxiliary switch block typical  | 10 000 000                 |
| <b>reference code according to IEC 81346-2</b>  | Q                          |
| <b>Substance Prohibitance (Date)</b>  | 10/01/2009                 |
| <b>Ambient conditions</b>   |                            |
| installation altitude at height above sea level maximum   | 2 000 m                    |
| <b>ambient temperature</b>  |                            |
| • during operation  | -25 ... +60 °C             |
| • during storage  | -55 ... +80 °C             |
| <b>relative humidity minimum</b>  | 10 %                       |
| <b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b>                                 | 95 %                       |
| <b>Main circuit</b>   |                            |

|  |                    |
|--|--------------------|
| <b>number of poles for main current circuit</b>                        | 3                  |
| <b>number of NO contacts for main contacts</b>                         | 3                  |
| <b>operating voltage</b>   |                    |
| • at AC-3 rated value maximum  | 690 V              |
| • at AC-3e rated value maximum   | 690 V              |
| <b>operational current</b>   |                    |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value            | 50 A               |
| • at AC-1  |                    |
| — up to 690 V at ambient temperature 40 °C rated value                 | 50 A               |
| — up to 690 V at ambient temperature 60 °C rated value                 | 42 A               |
| • at AC-3  |                    |
| — at 400 V rated value   | 32 A               |
| — at 500 V rated value   | 32 A               |
| — at 690 V rated value   | 21 A               |
| • at AC-3e   |                    |
| — at 400 V rated value   | 32 A               |
| — at 500 V rated value   | 32 A               |
| — at 690 V rated value   | 21 A               |
| • at AC-4 at 400 V rated value   | 22 A               |
| • at AC-5a up to 690 V rated value                                     | 44 A               |
| • at AC-5b up to 400 V rated value                                     | 26.5 A             |
| • at AC-6a   |                    |
| — up to 230 V for current peak value n=20 rated value                  | 30.8 A             |
| — up to 400 V for current peak value n=20 rated value                  | 30.8 A             |
| — up to 500 V for current peak value n=20 rated value                  | 27 A               |
| — up to 690 V for current peak value n=20 rated value                  | 21 A               |
| • at AC-6a   |                    |
| — up to 230 V for current peak value n=30 rated value                  | 20.5 A             |
| — up to 400 V for current peak value n=30 rated value                  | 20.5 A             |
| — up to 500 V for current peak value n=30 rated value                  | 18 A               |
| — up to 690 V for current peak value n=30 rated value                  | 18 A               |
| minimum cross-section in main circuit at maximum AC-1 rated value      | 10 mm <sup>2</sup> |
| <b>operational current for approx. 200000 operating cycles at AC-4</b> |                    |
| • at 400 V rated value   | 12 A               |
| • at 690 V rated value   | 12 A               |
| <b>operational current</b>   |                    |
| • <b>at 1 current path at DC-1</b>                                     |                    |
| — at 24 V rated value  | 35 A               |
| — at 60 V rated value  | 20 A               |
| — at 110 V rated value   | 4.5 A              |
| — at 220 V rated value   | 1 A                |
| — at 440 V rated value   | 0.4 A              |
| — at 600 V rated value   | 0.25 A             |
| • <b>with 2 current paths in series at DC-1</b>                        |                    |
| — at 24 V rated value  | 35 A               |
| — at 60 V rated value  | 35 A               |
| — at 110 V rated value   | 35 A               |
| — at 220 V rated value   | 5 A                |
| — at 440 V rated value   | 1 A                |
| — at 600 V rated value   | 0.8 A              |
| • <b>with 3 current paths in series at DC-1</b>                        |                    |
| — at 24 V rated value  | 35 A               |
| — at 60 V rated value  | 35 A               |

|   |   |
|---|---|
| — at 110 V rated value  | 35 A  |
| — at 220 V rated value  | 35 A  |
| — at 440 V rated value  | 2.9 A   |
| — at 600 V rated value  | 1.4 A   |
| <b>● at 1 current path at DC-3 at DC-5</b>                              |   |
| — at 24 V rated value   | 20 A  |
| — at 60 V rated value   | 5 A   |
| — at 220 V rated value  | 1 A   |
| — at 440 V rated value  | 0.09 A  |
| — at 600 V rated value  | 0.06 A  |
| <b>● with 2 current paths in series at DC-3 at DC-5</b>                 |   |
| — at 24 V rated value   | 35 A  |
| — at 60 V rated value   | 35 A  |
| — at 110 V rated value  | 15 A  |
| — at 220 V rated value  | 3 A   |
| — at 440 V rated value  | 0.27 A  |
| — at 600 V rated value  | 0.16 A  |
| <b>● with 3 current paths in series at DC-3 at DC-5</b>                 |   |
| — at 24 V rated value   | 35 A  |
| — at 60 V rated value   | 35 A  |
| — at 110 V rated value  | 35 A  |
| — at 220 V rated value  | 10 A  |
| — at 440 V rated value  | 0.6 A   |
| — at 600 V rated value  | 0.6 A   |
| <b>operating power</b>  |   |
| ● at AC-3   |   |
| — at 230 V rated value  | 7.5 kW  |
| — at 400 V rated value  | 15 kW   |
| — at 500 V rated value  | 15 kW   |
| — at 690 V rated value  | 18.5 kW   |
| ● at AC-3e  |   |
| — at 230 V rated value  | 7.5 kW  |
| — at 400 V rated value  | 15 kW   |
| — at 500 V rated value  | 15 kW   |
| — at 690 V rated value  | 18.5 kW   |
| <b>operating power for approx. 200000 operating cycles at AC-4</b>      |   |
| ● at 400 V rated value  | 6 kW  |
| ● at 690 V rated value  | 10.3 kW   |
| <b>operating apparent power at AC-6a</b>                                |   |
| ● up to 230 V for current peak value n=20 rated value                   | 12.2 kVA  |
| ● up to 400 V for current peak value n=20 rated value                   | 21.3 kVA  |
| ● up to 500 V for current peak value n=20 rated value                   | 23.3 kVA  |
| ● up to 690 V for current peak value n=20 rated value                   | 25 kVA  |
| <b>operating apparent power at AC-6a</b>                                |   |
| ● up to 230 V for current peak value n=30 rated value                   | 8.1 kVA   |
| ● up to 400 V for current peak value n=30 rated value                   | 14.2 kVA  |
| ● up to 500 V for current peak value n=30 rated value                   | 15.5 kVA  |
| ● up to 690 V for current peak value n=30 rated value                   | 21.5 kVA  |
| <b>short-time withstand current in cold operating state up to 40 °C</b> |   |
| ● limited to 1 s switching at zero current maximum                      | 499 A; Use minimum cross-section acc. to AC-1 rated value |
| ● limited to 5 s switching at zero current maximum                      | 341 A; Use minimum cross-section acc. to AC-1 rated value |
| ● limited to 10 s switching at zero current maximum                     | 260 A; Use minimum cross-section acc. to AC-1 rated value |
| ● limited to 30 s switching at zero current maximum                     | 199 A; Use minimum cross-section acc. to AC-1 rated value |
| ● limited to 60 s switching at zero current maximum                     | 162 A; Use minimum cross-section acc. to AC-1 rated value |
| <b>no-load switching frequency</b>                                      |   |
| ● at AC   | 5 000 1/h   |
| <b>operating frequency</b>  |   |
| ● at AC-1 maximum   | 1 000 1/h   |
| ● at AC-2 maximum   | 750 1/h   |
| ● at AC-3 maximum   | 750 1/h   |
| ● at AC-3e maximum  | 750 1/h   |
| ● at AC-4 maximum   | 250 1/h   |

| Control circuit/ Control  |                  |
|---|------------------|
| <b>type of voltage of the control supply voltage</b>                                  | AC               |
| <b>control supply voltage at AC</b>   |                  |
| • at 50 Hz rated value  | 230 V            |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> |                  |
| • at 50 Hz  | 0.8 ... 1.1      |
| <b>apparent pick-up power of magnet coil at AC</b>                                    |                  |
| • at 50 Hz  | 77 VA            |
| <b>inductive power factor with closing power of the coil</b>                          |                  |
| • at 50 Hz  | 0.82             |
| <b>apparent holding power of magnet coil at AC</b>                                    |                  |
| • at 50 Hz  | 9.8 VA           |
| <b>inductive power factor with the holding power of the coil</b>                      |                  |
| • at 50 Hz  | 0.25             |
| <b>closing delay</b>  |                  |
| • at AC   | 8 ... 40 ms      |
| <b>opening delay</b>  |                  |
| • at AC   | 4 ... 16 ms      |
| <b>arcing time</b>  | 10 ... 10 ms     |
| <b>control version of the switch operating mechanism</b>                              | Standard A1 - A2 |

| Auxiliary circuit  |   |
|--|---|
| number of NC contacts for auxiliary contacts instantaneous contact | 1   |
| number of NO contacts for auxiliary contacts instantaneous contact | 1   |
| operational current at AC-12 maximum                               | 10 A  |
| <b>operational current at AC-15</b>                                |   |
| • at 230 V rated value   | 10 A  |
| • at 400 V rated value   | 3 A   |
| • at 500 V rated value   | 2 A   |
| • at 690 V rated value   | 1 A   |
| <b>operational current at DC-12</b>                                |   |
| • at 24 V rated value  | 10 A  |
| • at 48 V rated value  | 6 A   |
| • at 60 V rated value  | 6 A   |
| • at 110 V rated value   | 3 A   |
| • at 125 V rated value   | 2 A   |
| • at 220 V rated value   | 1 A   |
| • at 600 V rated value   | 0.15 A  |
| <b>operational current at DC-13</b>                                |   |
| • at 24 V rated value  | 10 A  |
| • at 48 V rated value  | 2 A   |
| • at 60 V rated value  | 2 A   |
| • at 110 V rated value   | 1 A   |
| • at 125 V rated value   | 0.9 A   |
| • at 220 V rated value   | 0.3 A   |
| • at 600 V rated value   | 0.1 A   |
| <b>contact reliability of auxiliary contacts</b>                   | 1 faulty switching per 100 million (17 V, 1 mA) |

| UL/CSA ratings  |             |
|---|-------------|
| <b>full-load current (FLA) for 3-phase AC motor</b>         |             |
| • at 480 V rated value                                      | 27 A        |
| • at 600 V rated value                                      | 27 A        |
| <b>yielded mechanical performance [hp]</b>                  |             |
| • for single-phase AC motor                                 |             |
| — at 110/120 V rated value                                  | 2 hp        |
| — at 230 V rated value                                      | 5 hp        |
| • for 3-phase AC motor                                      |             |
| — at 200/208 V rated value                                  | 10 hp       |
| — at 220/230 V rated value                                  | 10 hp       |
| — at 460/480 V rated value                                  | 20 hp       |
| — at 575/600 V rated value                                  | 25 hp       |
| <b>contact rating of auxiliary contacts according to UL</b> | A600 / P600 |

| Short-circuit protection  |   |
|---|---|
| <b>design of the fuse link</b> <ul style="list-style-type: none"> <li>for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>with type of coordination 1 required</li> <li>with type of assignment 2 required</li> </ul> </li> <li>for short-circuit protection of the auxiliary switch required</li> </ul>  | gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)<br>gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA)<br>gG: 10 A (500 V, 1 kA)  |
| Installation/ mounting/ dimensions  |   |
| <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>fastening method</b> <ul style="list-style-type: none"> <li>side-by-side mounting</li> </ul>   | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715<br>Yes   |
| <b>height</b>   | 85 mm   |
| <b>width</b>  | 45 mm   |
| <b>depth</b>  | 97 mm   |
| <b>required spacing</b> <ul style="list-style-type: none"> <li>with side-by-side mounting <ul style="list-style-type: none"> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> <li>for grounded parts <ul style="list-style-type: none"> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> </ul> </li> <li>for live parts <ul style="list-style-type: none"> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> </ul> | 10 mm<br>10 mm<br>10 mm<br>0 mm<br>10 mm<br>10 mm<br>6 mm<br>10 mm<br>10 mm<br>10 mm<br>10 mm<br>6 mm   |
| Connections/ Terminals  |   |
| <b>type of electrical connection</b> <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> </ul>   | screw-type terminals<br>screw-type terminals<br>Screw-type terminals<br>Screw-type terminals  |
| type of connectable conductor cross-sections for main contacts <ul style="list-style-type: none"> <li>solid</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul>   | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )<br>2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )<br>2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> |
| <b>connectable conductor cross-section for main contacts</b> <ul style="list-style-type: none"> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> </ul>  | 1 ... 10 mm <sup>2</sup><br>1 ... 10 mm <sup>2</sup><br>1 ... 10 mm <sup>2</sup>  |
| <b>connectable conductor cross-section for auxiliary contacts</b> <ul style="list-style-type: none"> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul>   | 0.5 ... 2.5 mm <sup>2</sup><br>0.5 ... 2.5 mm <sup>2</sup>  |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG cables for auxiliary contacts</li> </ul>   | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 16), 2x (18 ... 14)  |
| <b>AWG number as coded connectable conductor cross section</b> <ul style="list-style-type: none"> <li>for main contacts</li> <li>for auxiliary contacts</li> </ul>  | 16 ... 8<br>20 ... 14   |
| Safety related data   |   |
| <b>product function</b>   |   |

- mirror contact according to IEC 60947-4-1
- B10 value with high demand rate according to SN 31920
- proportion of dangerous failures**
- with low demand rate according to SN 31920
  - with high demand rate according to SN 31920
- failure rate [FIT] with low demand rate according to SN 31920
- T1 value for proof test interval or service life according to IEC 61508
- protection class IP on the front according to IEC 60529**
- touch protection on the front according to IEC 60529**
- suitability for use**
- safety-related switching OFF

Yes  
450 000  
40 %  
73 %  
100 FIT  
20 a  
IP20  
finger-safe, for vertical contact from the front  
Yes

### Certificates/ approvals

#### General Product Approval



[Confirmation](#)



[KC](#)



| EMC | Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates |
|-----|---------------------------------------|---------------------------|-------------------|
|-----|---------------------------------------|---------------------------|-------------------|



[Type Examination Certificate](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

#### Marine / Shipping



#### other

[Confirmation](#)



[Confirmation](#)

#### Railway

[Vibration and Shock](#)

### Further information

#### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

#### Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

#### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2027-1AP00>

#### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2027-1AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AP00>

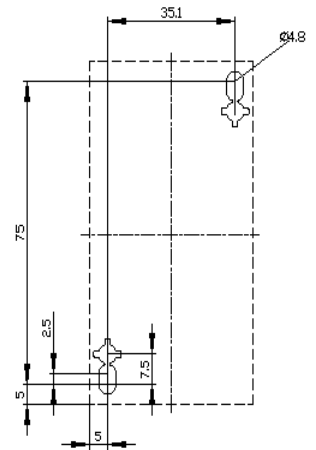
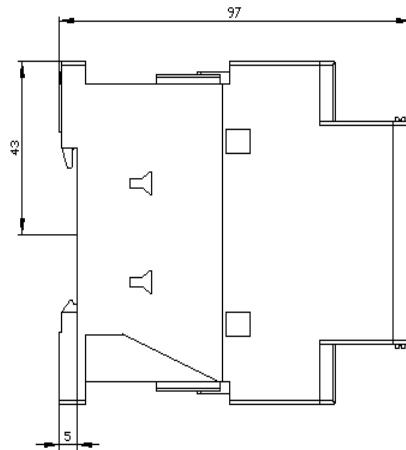
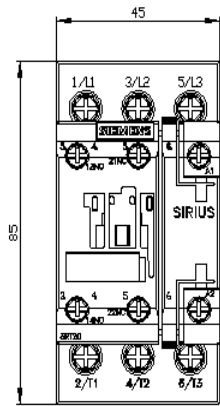
#### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2027-1AP00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2027-1AP00&lang=en)

#### Characteristic: Tripping characteristics, I<sup>t</sup>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AP00/char>

Further characteristics (e.g. electrical endurance, switching frequency)









last modified:

2/10/2023 