



vacuum contactor, AC-3 225 A, 110 kW / 400 V AC (50-60 Hz) / DC operation 575-600 V AC/DC, auxiliary contacts 2 NO + 2 NC, 3-pole, frame size S10, busbar connections drive: conventional

|   |   |
|---|---|
| <b>product brand name</b>   | SIRIUS  |
| <b>product designation</b>  | Vacuum contactor  |
| <b>product type designation</b>   | 3RT12   |
| <b>General technical data</b>   |   |
| <b>size of contactor</b>  | S10   |
| <b>product extension</b>  |   |
| <ul style="list-style-type: none"> <li>function module for communication</li> <li>auxiliary switch</li> </ul>   | <p>No</p> <p>Yes</p>  |
| <b>power loss [W] for rated value of the current</b>  |   |
| <ul style="list-style-type: none"> <li>at AC in hot operating state</li> <li>at AC in hot operating state per pole</li> <li>without load current share typical</li> </ul>   | <p>27 W</p> <p>9 W</p> <p>8.2 W</p>                                 |
| <b>insulation voltage</b>   |   |
| <ul style="list-style-type: none"> <li>of main circuit with degree of pollution 3 rated value</li> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>   | <p>1 000 V</p> <p>500 V</p>   |
| <b>surge voltage resistance</b>   |   |
| <ul style="list-style-type: none"> <li>of main circuit rated value</li> <li>of auxiliary circuit rated value</li> </ul>   | <p>8 kV</p> <p>6 kV</p>   |
| maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1   | 690 V   |
| <b>shock resistance at rectangular impulse</b>  |   |
| <ul style="list-style-type: none"> <li>at AC</li> <li>at DC</li> </ul>  | <p>8,5g / 5 ms, 4,2g / 10 ms</p> <p>8,5g / 5 ms, 4,2g / 10 ms</p>   |
| <b>shock resistance with sine pulse</b>   |   |
| <ul style="list-style-type: none"> <li>at AC</li> <li>at DC</li> </ul>  | <p>13,4g / 5 ms, 6,5g / 10 ms</p> <p>13,4g / 5 ms, 6,5g / 10 ms</p> |
| <b>mechanical service life (switching cycles)</b>   |   |
| <ul style="list-style-type: none"> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> </ul> | <p>10 000 000</p> <p>5 000 000</p> <p>10 000 000</p>                |
| <b>reference code according to IEC 81346-2</b>  | Q   |
| <b>Substance Prohibitance (Date)</b>  | 05/01/2012  |
| <b>Ambient conditions</b>   |   |
| installation altitude at height above sea level maximum   | 2 000 m   |
| <b>ambient temperature</b>  |   |
| <ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> </ul>  | <p>-25 ... +60 °C</p> <p>-55 ... +80 °C</p>                         |

|  |                     |
|--|---------------------|
| relative humidity minimum  | 10 %                |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum         | 95 %                |
| <b>Main circuit</b>  |                     |
| number of poles for main current circuit                               | 3                   |
| number of NO contacts for main contacts                                | 3                   |
| <b>operating voltage</b>   |                     |
| • at AC-3 rated value maximum  | 1 000 V             |
| • at AC-3e rated value maximum   | 1 000 V             |
| <b>operational current</b>   |                     |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value            | 330 A               |
| • at AC-1  |                     |
| — up to 690 V at ambient temperature 40 °C rated value                 | 330 A               |
| — up to 690 V at ambient temperature 60 °C rated value                 | 300 A               |
| — up to 1000 V at ambient temperature 40 °C rated value                | 330 A               |
| — up to 1000 V at ambient temperature 60 °C rated value                | 300 A               |
| • at AC-3  |                     |
| — at 400 V rated value   | 225 A               |
| — at 500 V rated value   | 225 A               |
| — at 690 V rated value   | 225 A               |
| — at 1000 V rated value  | 225 A               |
| • at AC-3e   |                     |
| — at 400 V rated value   | 225 A               |
| — at 500 V rated value   | 225 A               |
| — at 690 V rated value   | 225 A               |
| — at 1000 V rated value  | 225 A               |
| • at AC-4 at 400 V rated value   | 195 A               |
| • at AC-6a   |                     |
| — up to 230 V for current peak value n=20 rated value                  | 225 A               |
| — up to 400 V for current peak value n=20 rated value                  | 225 A               |
| — up to 500 V for current peak value n=20 rated value                  | 225 A               |
| — up to 690 V for current peak value n=20 rated value                  | 225 A               |
| — up to 1000 V for current peak value n=20 rated value                 | 225 A               |
| • at AC-6a   |                     |
| — up to 230 V for current peak value n=30 rated value                  | 209 A               |
| — up to 400 V for current peak value n=30 rated value                  | 209 A               |
| — up to 500 V for current peak value n=30 rated value                  | 209 A               |
| — up to 690 V for current peak value n=30 rated value                  | 209 A               |
| — up to 1000 V for current peak value n=30 rated value                 | 209 A               |
| minimum cross-section in main circuit at maximum AC-1 rated value      | 185 mm <sup>2</sup> |
| <b>operational current for approx. 200000 operating cycles at AC-4</b> |                     |
| • at 400 V rated value   | 97 A                |
| • at 690 V rated value   | 97 A                |
| <b>operating power</b>   |                     |
| • at AC-3  |                     |
| — at 230 V rated value   | 55 kW               |
| — at 400 V rated value   | 110 kW              |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> <li>— at 1000 V rated value</li> <li>● at AC-3e <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> <li>— at 1000 V rated value</li> </ul> </li> </ul>                                      | 160 kW<br>200 kW<br>315 kW<br><br>55 kW<br>110 kW<br>160 kW<br>200 kW<br>315 kW |
| <b>operating power for approx. 200000 operating cycles at AC-4</b> <ul style="list-style-type: none"> <li>● at 400 V rated value</li> <li>● at 690 V rated value</li> </ul>   | 55 kW<br>94 kW  |
| <b>operating apparent power at AC-6a</b> <ul style="list-style-type: none"> <li>● up to 230 V for current peak value n=20 rated value</li> <li>● up to 400 V for current peak value n=20 rated value</li> <li>● up to 500 V for current peak value n=20 rated value</li> <li>● up to 690 V for current peak value n=20 rated value</li> <li>● up to 1000 V for current peak value n=20 rated value</li> </ul> | 90 000 kVA<br>150 000 VA<br>190 000 VA<br>260 000 VA<br>390 000 VA              |
| <b>operating apparent power at AC-6a</b> <ul style="list-style-type: none"> <li>● up to 230 V for current peak value n=30 rated value</li> <li>● up to 400 V for current peak value n=30 rated value</li> <li>● up to 500 V for current peak value n=30 rated value</li> <li>● up to 690 V for current peak value n=30 rated value</li> <li>● up to 1000 V for current peak value n=30 rated value</li> </ul> | 80 000 VA<br>140 000 VA<br>180 000 VA<br>250 000 VA<br>360 000 VA               |
| <b>no-load switching frequency</b> <ul style="list-style-type: none"> <li>● at AC</li> <li>● at DC</li> </ul>   | 2 000 1/h<br>2 000 1/h  |
| <b>operating frequency</b> <ul style="list-style-type: none"> <li>● at AC-1 maximum</li> <li>● at AC-2 maximum</li> <li>● at AC-3 maximum</li> <li>● at AC-3e maximum</li> <li>● at AC-4 maximum</li> </ul>   | 800 1/h<br>300 1/h<br>750 1/h<br>750 1/h<br>250 1/h                             |
| <b>Control circuit/ Control</b>   |   |
| <b>type of voltage of the control supply voltage</b>  | AC/DC   |
| <b>control supply voltage at AC</b> <ul style="list-style-type: none"> <li>● at 50 Hz rated value</li> <li>● at 60 Hz rated value</li> </ul>  | 575 ... 600 V<br>575 ... 600 V  |
| <b>control supply voltage at DC</b> <ul style="list-style-type: none"> <li>● rated value</li> </ul>   | 575 ... 600 V   |
| <b>operating range factor control supply voltage rated value of magnet coil at DC</b> <ul style="list-style-type: none"> <li>● initial value</li> <li>● full-scale value</li> </ul>   | 0.8<br>1.1  |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> <ul style="list-style-type: none"> <li>● at 50 Hz</li> <li>● at 60 Hz</li> </ul>  | 0.8 ... 1.1<br>0.8 ... 1.1  |
| <b>design of the surge suppressor</b>   | with varistor   |
| <b>apparent pick-up power of magnet coil at AC</b> <ul style="list-style-type: none"> <li>● at 50 Hz</li> <li>● at 60 Hz</li> </ul>   | 590 VA<br>590 VA  |
| <b>inductive power factor with closing power of the coil</b> <ul style="list-style-type: none"> <li>● at 50 Hz</li> <li>● at 60 Hz</li> </ul>   | 0.9<br>0.9  |
| <b>apparent holding power of magnet coil at AC</b> <ul style="list-style-type: none"> <li>● at 50 Hz</li> <li>● at 60 Hz</li> </ul>   | 6.1 VA<br>6.1 VA  |

|   |   |
|---|---|
| <b>inductive power factor with the holding power of the coil</b>      |   |
| • at 50 Hz  | 0.9   |
| • at 60 Hz  | 0.9   |
| <b>closing power of magnet coil at DC</b>                             | 700 W   |
| <b>holding power of magnet coil at DC</b>                             | 8.2 W   |
| <b>closing delay</b>  |   |
| • at AC   | 30 ... 95 ms  |
| • at DC   | 30 ... 95 ms  |
| <b>opening delay</b>  |   |
| • at AC   | 40 ... 80 ms  |
| • at DC   | 40 ... 80 ms  |
| <b>arcing time</b>  | 10 ... 15 ms  |
| <b>control version of the switch operating mechanism</b>              | Standard A1 - A2  |
| <b>Auxiliary circuit</b>  |   |
| number of NC contacts for auxiliary contacts<br>instantaneous contact | 2   |
| number of NO contacts for auxiliary contacts<br>instantaneous contact | 2   |
| operational current at AC-12 maximum                                  | 10 A  |
| <b>operational current at AC-15</b>                                   |   |
| • at 230 V rated value  | 6 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)                                 |
| <b>UL/CSA ratings</b>   |   |
| <b>full-load current (FLA) for 3-phase AC motor</b>                   |   |
| • at 480 V rated value  | 180 A   |
| • at 600 V rated value  | 192 A   |
| <b>yielded mechanical performance [hp]</b>                            |   |
| • for 3-phase AC motor  |   |
| — at 200/208 V rated value  | 60 hp   |
| — at 220/230 V rated value  | 75 hp   |
| — at 460/480 V rated value  | 150 hp  |
| — at 575/600 V rated value  | 200 hp  |
| <b>contact rating of auxiliary contacts according to UL</b>           | A600 / Q600   |
| <b>Short-circuit protection</b>                                       |   |
| <b>design of the fuse link</b>  |   |
| • for short-circuit protection of the main circuit                    |   |
| — with type of coordination 1 required                                | gG: 500 A (690 V, 100 kA)   |
| — with type of assignment 2 required                                  | gG: 500 A (690 V, 100 kA), aM: 400 A (690 V, 50 kA), BS88: 450 A (415 V, 50 kA) |
| • for short-circuit protection of the auxiliary switch required       | gG: 10 A (500 V, 1 kA)  |

| Installation/ mounting/ dimensions                                |   |
|---|---|
| <b>mounting position</b>  | +/-22,5° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; standing, on horizontal mounting surface |
| <b>fastening method</b>   | screw fixing  |
| • side-by-side mounting   | Yes   |
| <b>height</b>   | 210 mm  |
| <b>width</b>  | 145 mm  |
| <b>depth</b>  | 206 mm  |
| <b>required spacing</b>   |   |
| • with side-by-side mounting                                      |   |
| — forwards  | 20 mm   |
| — upwards   | 10 mm   |
| — downwards   | 10 mm   |
| — at the side   | 0 mm  |
| • for grounded parts  |   |
| — forwards  | 20 mm   |
| — upwards   | 10 mm   |
| — at the side   | 10 mm   |
| — downwards   | 10 mm   |
| • for live parts  |   |
| — forwards  | 20 mm   |
| — upwards   | 10 mm   |
| — downwards   | 10 mm   |
| — at the side   | 10 mm   |
| Connections/ Terminals  |   |
| <b>type of electrical connection</b>                              |   |
| • for main current circuit  | Connection bar  |
| • for auxiliary and control circuit                               | screw-type terminals  |
| • at contactor for auxiliary contacts                             | Screw-type terminals  |
| • of magnet coil  | Screw-type terminals  |
| <b>width of connection bar</b>                                    | 25 mm   |
| <b>thickness of connection bar</b>                                | 6 mm  |
| <b>diameter of holes</b>  | 11 mm   |
| <b>number of holes</b>  | 1   |
| <b>type of connectable conductor cross-sections</b>               |   |
| • at AWG cables for main contacts                                 | 2/0 ... 500 kcmil   |
| <b>connectable conductor cross-section for main contacts</b>      |   |
| • stranded  | 70 ... 240 mm <sup>2</sup>  |
| <b>connectable conductor cross-section for auxiliary contacts</b> |   |
| • solid or stranded   | 0.5 ... 4 mm <sup>2</sup>   |
| • finely stranded with core end processing                        | 0.5 ... 2.5 mm <sup>2</sup>   |
| <b>type of connectable conductor cross-sections</b>               |   |
| • for auxiliary contacts  |   |
| — solid   | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), max. 2x (0.75 ... 4 mm <sup>2</sup> )  |
| — solid or stranded   | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), max. 2x (0,75 ... 4 mm <sup>2</sup> )  |
| — finely stranded with core end processing                        | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )   |
| • at AWG cables for auxiliary contacts                            | 2x (20 ... 16), 2x (18 ... 14), 1x 12   |
| <b>AWG number as coded connectable conductor cross section</b>    |   |
| • for auxiliary contacts  | 18 ... 14   |
| Safety related data   |   |
| <b>product function</b>   |   |
| • mirror contact according to IEC 60947-4-1                       | Yes   |
| • positively driven operation according to IEC 60947-5-1          | No  |
| <b>protection class IP on the front according to IEC 60529</b>    | IP00; IP20 with box terminal/cover  |
| <b>touch protection on the front according to IEC 60529</b>       | finger-safe, for vertical contact from the front with box terminal/cover  |

|  |     |
|--|-----|
| <b>suitability for use</b>   | Yes |
| <ul style="list-style-type: none"> <li>• safety-related switching OFF</li> </ul> |     |

**Certificates/ approvals**

**General Product Approval**



[Confirmation](#)



[KC](#)



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



[Type Examination Certificate](#)



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

**Marine / Shipping** **other**



LRS



PRS



RMRS



DNV-GL

[Confirmation](#)

**other** **Railway**

[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)

**Further information**

**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=3RT1264-6AT36>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1264-6AT36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1264-6AT36>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1264-6AT36&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1264-6AT36&lang=en)

**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1264-6AT36/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1264-6AT36&objecttype=14&gridview=view1>

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