



power contactor AC-1 690 A / 690 V / 40 °C 3-pole, U<sub>c</sub>: 575-600 V AC(50-60 Hz) / DC drive: conventional auxiliary contacts 2 NO + 2 NC main circuit: busbar control and auxiliary circuit: screw terminal

|   |                            |
|---|----------------------------|
| <b>product brand name</b>   | SIRIUS                     |
| <b>product designation</b>  | Contacteur                 |
| <b>product type designation</b>   | 3RT14                      |
| <b>General technical data</b>   |                            |
| <b>size of contactor</b>  | S12                        |
| <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  | 185.7 W                    |
| • at AC in hot operating state per pole   | 61.9 W                     |
| • without load current share typical  | 10 W                       |
| <b>type of calculation of power loss depending on pole</b>                            | quadratic                  |
| <b>insulation voltage</b>   |                            |
| • of main circuit with degree of pollution 3 rated value                              | 1 000 V                    |
| • of auxiliary circuit with degree of pollution 3 rated value                         | 500 V                      |
| <b>surge voltage resistance</b>   |                            |
| • of main circuit rated value   | 8 kV                       |
| • of auxiliary circuit rated value  | 6 kV                       |
| <b>shock resistance at rectangular impulse</b>  |                            |
| • at AC   | 8,5g / 5 ms, 4,2g / 10 ms  |
| • at DC   | 8,5g / 5 ms, 4,2g / 10 ms  |
| <b>shock resistance with sine pulse</b>   |                            |
| • at AC   | 13,4g / 5 ms, 6,5g / 10 ms |
| • at DC   | 13,4g / 5 ms, 6,5g / 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>  | 05/01/2012                 |
| <b>SVHC substance name</b>  | Lead - 7439-92-1           |
| <b>Weight</b>   | 10.26 kg                   |
| <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 %                       |

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| 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   |
| number of NC contacts for main contacts  | 0   |
| type of voltage for main current circuit   | AC  |
| <b>operational current</b>   |   |
| <ul style="list-style-type: none"> <li>● at AC-1 <ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 40 °C rated value</li> <li>— up to 690 V at ambient temperature 55 °C rated value</li> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> <li>● at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>   | <p>690 A</p> <p>650 A</p> <p>650 A</p> <p>170 A</p> <p>170 A</p>  |
| minimum cross-section in main circuit at maximum AC-1 rated value  | 480 mm <sup>2</sup>   |
| <b>operational current</b>   |   |
| <ul style="list-style-type: none"> <li>● at 1 current path at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● with 2 current paths in series at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● with 3 current paths in series at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> </ul> </li> </ul> | <p>500 A</p> <p>500 A</p> <p>33 A</p> <p>3.8 A</p> <p>0.9 A</p> <p>0.6 A</p> <p>500 A</p> <p>500 A</p> <p>500 A</p> <p>500 A</p> <p>500 A</p> <p>11 A</p> <p>5.2 A</p> <p>500 A</p> <p>11 A</p> <p>3 A</p> <p>0.6 A</p> <p>0.18 A</p> <p>0.125 A</p> <p>500 A</p> <p>500 A</p> <p>500 A</p> <p>2.5 A</p> <p>0.65 A</p> <p>0.37 A</p> <p>500 A</p> <p>500 A</p> <p>500 A</p> <p>500 A</p> <p>1.4 A</p> |

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|---|------------------|
| — at 600 V rated value  | 0.75 A           |
| <b>no-load switching frequency</b>  |                  |
| • at AC   | 2 000 1/h        |
| • at DC   | 2 000 1/h        |
| operating frequency at AC-1 maximum   | 600 1/h          |
| <b>Control circuit/ Control</b>   |                  |
| <b>type of voltage</b>  | AC/DC            |
| <b>type of voltage of the control supply voltage</b>                                  | AC/DC            |
| <b>control supply voltage at AC</b>   |                  |
| • at 50 Hz rated value  | 575 ... 600 V    |
| • at 60 Hz rated value  | 575 ... 600 V    |
| <b>control supply voltage at DC rated value</b>                                       | 575 ... 600 V    |
| <b>operating range factor control supply voltage rated value of magnet coil at DC</b> |                  |
| • initial value   | 0.8              |
| • full-scale value  | 1.1              |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> |                  |
| • at 50 Hz  | 0.8 ... 1.1      |
| • at 60 Hz  | 0.8 ... 1.1      |
| <b>design of the surge suppressor</b>   | with varistor    |
| <b>apparent pick-up power</b>   |                  |
| • at minimum rated control supply voltage at AC                                       |                  |
| — at 50 Hz  | 700 VA           |
| — at 60 Hz  | 700 VA           |
| • at maximum rated control supply voltage at AC                                       |                  |
| — at 60 Hz  | 830 VA           |
| — at 50 Hz  | 830 VA           |
| <b>apparent pick-up power of magnet coil at AC</b>                                    |                  |
| • at 50 Hz  | 830 VA           |
| <b>inductive power factor with closing power of the coil</b>                          |                  |
| • at 50 Hz  | 0.9              |
| <b>apparent holding power</b>   |                  |
| • at minimum rated control supply voltage at DC                                       | 8.5 VA           |
| • at maximum rated control supply voltage at DC                                       | 10 VA            |
| <b>apparent holding power</b>   |                  |
| • at minimum rated control supply voltage at AC                                       |                  |
| — at 50 Hz  | 7.6 VA           |
| — at 60 Hz  | 7.6 VA           |
| • at maximum rated control supply voltage at AC                                       |                  |
| — at 50 Hz  | 9.2 VA           |
| — at 60 Hz  | 9.2 VA           |
| <b>apparent holding power of magnet coil at AC</b>                                    |                  |
| • at 50 Hz  | 9.2 VA           |
| <b>inductive power factor with the holding power of the coil</b>                      |                  |
| • at 50 Hz  | 0.9              |
| <b>closing power of magnet coil at DC</b>   | 920 W            |
| <b>holding power of magnet coil at DC</b>   | 10 W             |
| <b>closing delay</b>  |                  |
| • at AC   | 45 ... 100 ms    |
| • at DC   | 45 ... 100 ms    |
| <b>opening delay</b>  |                  |
| • at AC   | 60 ... 100 ms    |
| • at DC   | 60 ... 100 ms    |
| <b>arcing time</b>  | 10 ... 15 ms     |
| <b>control version of the switch operating mechanism</b>                              | Standard A1 - A2 |
| <b>Auxiliary circuit</b>  |                  |
| <b>number of NC contacts for auxiliary contacts</b>                                   | 2                |
| • attachable  | 4                |
| • instantaneous contact   | 2                |
| <b>number of NO contacts for auxiliary contacts</b>                                   | 2                |

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|--|--|
| <ul style="list-style-type: none"> <li>• attachable</li> </ul>   | 4  |
| <ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>  | 2  |
| operational current at AC-12 maximum   | 10 A   |
| <b>operational current at AC-15</b>  |  |
| <ul style="list-style-type: none"> <li>• at 230 V rated value</li> </ul>   | 6 A  |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>   | 3 A  |
| <ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>   | 2 A  |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>   | 1 A  |
| <b>operational current at DC-13</b>  |  |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>  | 10 A   |
| <ul style="list-style-type: none"> <li>• at 48 V rated value</li> </ul>  | 2 A  |
| <ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>  | 2 A  |
| <ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>   | 1 A  |
| <ul style="list-style-type: none"> <li>• at 125 V rated value</li> </ul>   | 0.9 A  |
| <ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>   | 0.3 A  |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>   | 0.1 A  |
| <b>contact reliability of auxiliary contacts</b>   | 1 faulty switching per 100 million (17 V, 1 mA)  |
| <b>Short-circuit protection</b>  |  |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V  | C characteristic: 10 A; 0.4 kA   |
| <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 coordination 2 required</li> </ul> </li> </ul> | gG: 800 A (690 V, 50 kA)<br>gR: 710 A (690 V, 100 kA)  |
| <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>  | gG: 10 A (500 V, 1 kA)   |
| <b>Installation/ mounting/ dimensions</b>  |  |
| <b>mounting position</b>   | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| fastening method side-by-side mounting   | Yes  |
| <b>fastening method</b>  | screw fixing   |
| <b>height</b>  | 214 mm   |
| <b>width</b>   | 160 mm   |
| <b>depth</b>   | 225 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> </ul>                                    | 20 mm<br>10 mm<br>10 mm<br>0 mm  |
| <ul style="list-style-type: none"> <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> </ul>  | 20 mm<br>10 mm<br>10 mm<br>10 mm   |
| <ul style="list-style-type: none"> <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>  | 20 mm<br>10 mm<br>10 mm<br>10 mm   |
| <b>Connections/ Terminals</b>  |  |
| <b>type of electrical connection</b>   |  |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>   | Connection bar   |
| <ul style="list-style-type: none"> <li>• for auxiliary and control circuit</li> </ul>  | screw-type terminals   |
| <ul style="list-style-type: none"> <li>• at contactor for auxiliary contacts</li> </ul>  | Screw-type terminals   |
| <ul style="list-style-type: none"> <li>• of magnet coil</li> </ul>   | 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>  |  |
| <ul style="list-style-type: none"> <li>• for AWG cables for main contacts</li> </ul>   | 2/0 ... 500 kcmil  |

|   |  |
|---|--|
| <b>connectable conductor cross-section for main contacts</b>  |  |
| <ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• stranded</li> </ul>   | 70 ... 240 mm <sup>2</sup><br>70 ... 240 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 ... 4 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</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for 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> ), max. 2x (0.75 ... 4 mm <sup>2</sup> )<br>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> )<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), 1x 12 |
| <b>AWG number as coded connectable conductor cross section for auxiliary contacts</b>   | 18 ... 14  |

### Safety related data

|   |           |
|---|-----------|
| <b>product function</b>   |           |
| <ul style="list-style-type: none"> <li>• mirror contact according to IEC 60947-4-1</li> <li>• positively driven operation according to IEC 60947-5-1</li> </ul> | Yes<br>No |
| suitability for use safety-related switching OFF  | No        |
| <b>service life maximum</b>   | 20 a      |

### Electrical Safety

|  |  |
|--|--|
| <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 |



### Approvals Certificates

|                                 |            |                          |
|---------------------------------|------------|--------------------------|
| <b>General Product Approval</b> | <b>EMV</b> | <b>Functional Safety</b> |
|---------------------------------|------------|--------------------------|





[Type Examination Certificate](#)

### Test Certificates

|  |  |   |   |   |   |
|--|--|---|---|---|---|
| <a href="#">Special Test Certificate</a> | <a href="#">Type Test Certificates/Test Report</a> |  |  |  |  |
|--|--|---|---|---|---|

### Maritime application

|   |   |                              |                               |                              |  |
|---|---|------------------------------|-------------------------------|------------------------------|--|
|  |  | <a href="#">Confirmation</a> | <a href="#">Miscellaneous</a> | <a href="#">Confirmation</a> | <a href="#">Special Test Certificate</a> |
|---|---|------------------------------|-------------------------------|------------------------------|--|

### Environment

|   |
|---|
| <a href="#">Environmental Confirmations</a> |
|---|

### Further information

Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>  
Information for data generation and storage  
<https://support.industry.siemens.com/cs/ww/en/view/109995012>  
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=3RT1476-6AT36>  
Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1476-6AT36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1476-6AT36>

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

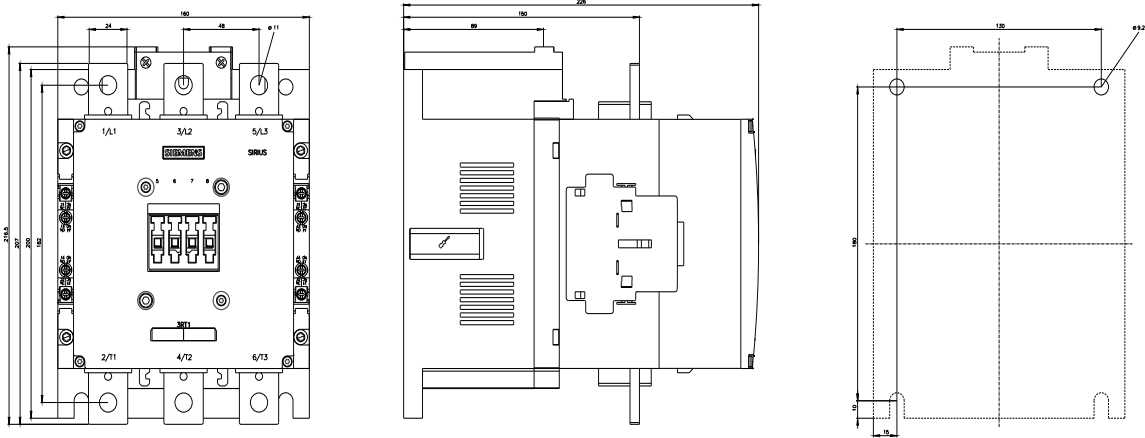
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1476-6AT36&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1476-6AT36&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1476-6AT36/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1476-6AT36&objecttype=14&gridview=view1>





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