



vacuum contactor AC-3e/AC-3 225 A, 110 kW / 400 V, 3-pole, U<sub>c</sub>: 110-127 V  
AC(50-60 Hz) / DC drive: conventional auxiliary contacts 2 NO + 2 NC main circuit:  
busbar control and auxiliary circuit: screw terminal

|                                                                                                              |                            |
|--------------------------------------------------------------------------------------------------------------|----------------------------|
| product brand name                                                                                           | SIRIUS                     |
| product designation                                                                                          | Vacuum contactor           |
| product type designation                                                                                     | 3RT12                      |
| <b>General technical data</b>                                                                                |                            |
| size of contactor                                                                                            | S10                        |
| product extension                                                                                            |                            |
| • function module for communication                                                                          | No                         |
| • auxiliary switch                                                                                           | Yes                        |
| power loss [W] for rated value of the current                                                                |                            |
| • at AC in hot operating state                                                                               | 27 W                       |
| • at AC in hot operating state per pole                                                                      | 9 W                        |
| • without load current share typical                                                                         | 8.2 W                      |
| type of calculation of power loss depending on pole                                                          | quadratic                  |
| insulation voltage                                                                                           |                            |
| • 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                      |
| surge voltage resistance                                                                                     |                            |
| • of main circuit rated value                                                                                | 8 kV                       |
| • of auxiliary circuit rated value                                                                           | 6 kV                       |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 690 V                      |
| shock resistance at rectangular impulse                                                                      |                            |
| • at AC                                                                                                      | 8,5g / 5 ms, 4,2g / 10 ms  |
| • at DC                                                                                                      | 8,5g / 5 ms, 4,2g / 10 ms  |
| shock resistance with sine pulse                                                                             |                            |
| • at AC                                                                                                      | 13,4g / 5 ms, 6,5g / 10 ms |
| • at DC                                                                                                      | 13,4g / 5 ms, 6,5g / 10 ms |
| mechanical service life (operating cycles)                                                                   |                            |
| • 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                 |
| reference code according to IEC 81346-2                                                                      | Q                          |
| Substance Prohibition (Date)                                                                                 | 05/01/2012                 |
| SVHC substance name                                                                                          | Lead - 7439-92-1           |
| Weight                                                                                                       | 7.272 kg                   |
| <b>Ambient conditions</b>                                                                                    |                            |
| installation altitude at height above sea level maximum                                                      | 2 000 m                    |
| ambient temperature                                                                                          |                            |
| • during operation                                                                                           | -25 ... +60 °C             |
| • during storage                                                                                             | -55 ... +80 °C             |

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| 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       |
| operating voltage                                                 |         |
| • at AC-3 rated value maximum                                     | 1 000 V |
| • at AC-3e rated value maximum                                    | 1 000 V |
| operational current                                               |         |
| • 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 mm² |
| operational current for approx. 200000 operating cycles at AC-4   |         |
| • at 400 V rated value                                            | 97 A    |
| • at 690 V rated value                                            | 97 A    |
| operating power                                                   |         |
| • at AC-3                                                         |         |
| — at 230 V rated value                                            | 55 kW   |
| — at 400 V rated value                                            | 110 kW  |
| — at 500 V rated value                                            | 160 kW  |
| — at 690 V rated value                                            | 200 kW  |
| — at 1000 V rated value                                           | 315 kW  |
| • at AC-3e                                                        |         |
| — at 230 V rated value                                            | 55 kW   |
| — at 400 V rated value                                            | 110 kW  |
| — at 500 V rated value                                            | 160 kW  |
| — at 690 V rated value                                            | 200 kW  |

|                                                                                       |               |
|---------------------------------------------------------------------------------------|---------------|
| — at 1000 V rated value                                                               | 315 kW        |
| <b>operating power for approx. 200000 operating cycles at AC-4</b>                    |               |
| • at 400 V rated value                                                                | 55 kW         |
| • at 690 V rated value                                                                | 94 kW         |
| <b>operating apparent power at AC-6a</b>                                              |               |
| • up to 230 V for current peak value n=20 rated value                                 | 90 kVA        |
| • up to 400 V for current peak value n=20 rated value                                 | 150 kVA       |
| • up to 500 V for current peak value n=20 rated value                                 | 190 kVA       |
| • up to 690 V for current peak value n=20 rated value                                 | 260 kVA       |
| • up to 1000 V for current peak value n=20 rated value                                | 390 kVA       |
| <b>operating apparent power at AC-6a</b>                                              |               |
| • up to 230 V for current peak value n=30 rated value                                 | 80 kVA        |
| • up to 400 V for current peak value n=30 rated value                                 | 140 kVA       |
| • up to 500 V for current peak value n=30 rated value                                 | 180 kVA       |
| • up to 690 V for current peak value n=30 rated value                                 | 250 kVA       |
| • up to 1000 V for current peak value n=30 rated value                                | 360 kVA       |
| <b>no-load switching frequency</b>                                                    |               |
| • at AC                                                                               | 2 000 1/h     |
| • at DC                                                                               | 2 000 1/h     |
| <b>operating frequency</b>                                                            |               |
| • at AC-1 maximum                                                                     | 800 1/h       |
| • at AC-2 maximum                                                                     | 300 1/h       |
| • at AC-3 maximum                                                                     | 750 1/h       |
| • at AC-3e maximum                                                                    | 750 1/h       |
| • at AC-4 maximum                                                                     | 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>                                                   |               |
| • at 50 Hz rated value                                                                | 110 ... 127 V |
| • at 60 Hz rated value                                                                | 110 ... 127 V |
| <b>control supply voltage at DC rated value</b>                                       | 110 ... 127 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                                                                            | 530 VA        |
| — at 60 Hz                                                                            | 530 VA        |
| • at maximum rated control supply voltage at AC                                       |               |
| — at 60 Hz                                                                            | 630 VA        |
| — at 50 Hz                                                                            | 630 VA        |
| <b>apparent pick-up power of magnet coil at AC</b>                                    |               |
| • at 50 Hz                                                                            | 590 VA        |
| • at 60 Hz                                                                            | 590 VA        |
| <b>inductive power factor with closing power of the coil</b>                          |               |
| • at 50 Hz                                                                            | 0.9           |
| • at 60 Hz                                                                            | 0.9           |
| <b>apparent holding power</b>                                                         |               |
| • at minimum rated control supply voltage at DC                                       | 6.8 VA        |
| • at maximum rated control supply voltage at DC                                       | 8.2 VA        |
| <b>apparent holding power</b>                                                         |               |
| • at minimum rated control supply voltage at AC                                       |               |
| — at 50 Hz                                                                            | 6.1 VA        |
| — at 60 Hz                                                                            | 6.1 VA        |
| • at maximum rated control supply voltage at AC                                       |               |

|                                                                                                           |                                                                                 |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| — at 50 Hz                                                                                                | 7.4 VA                                                                          |
| — at 60 Hz                                                                                                | 7.4 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 instantaneous contact                                        | 2                                                                               |
| number of NO contacts for auxiliary contacts 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>                                                                           |                                                                                 |
| 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>                                                                            |                                                                                 |
| • 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)                                                                                                                |
| <b>Installation/ mounting/ dimensions</b>                         |                                                                                                                                       |
| <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 |
| fastening method side-by-side mounting                            | Yes                                                                                                                                   |
| <b>fastening method</b>                                           | screw fixing                                                                                                                          |
| <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                                                                                                                                 |
| <b>Connections/ Terminals</b>                                     |                                                                                                                                       |
| <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>               |                                                                                                                                       |
| • for AWG cables for main contacts                                | 2/0 ... 500 kcmil                                                                                                                     |
| <b>connectable conductor cross-section for main contacts</b>      |                                                                                                                                       |
| • stranded                                                        | 70 ... 240 mm²                                                                                                                        |
| <b>connectable conductor cross-section for auxiliary contacts</b> |                                                                                                                                       |
| • solid or stranded                                               | 0.5 ... 4 mm²                                                                                                                         |
| • finely stranded with core end processing                        | 0.5 ... 2.5 mm²                                                                                                                       |
| <b>type of connectable conductor cross-sections</b>               |                                                                                                                                       |
| • for auxiliary contacts                                          |                                                                                                                                       |
| — solid                                                           | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)                                                                 |
| — solid or stranded                                               | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)                                                                 |
| — finely stranded with core end processing                        | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)                                                                                           |
| • for 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                                                                                                                             |
| <b>Safety related data</b>                                        |                                                                                                                                       |
| <b>product function</b>                                           |                                                                                                                                       |
| • mirror contact according to IEC 60947-4-1                       | Yes                                                                                                                                   |
| • positively driven operation according to IEC 60947-5-1          | No                                                                                                                                    |
| <b>Electrical Safety</b>                                          |                                                                                                                                       |
| <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>Approvals Certificates</b>                                     |                                                                                                                                       |
| <b>General Product Approval</b>                                   |                                                                                                                                       |



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| EMV | Functional Safety | Test Certificates |  | Marine / Shipping |  |
|-----|-------------------|-------------------|--|-------------------|--|
|-----|-------------------|-------------------|--|-------------------|--|

[Type Examination Certificate](#)[Special Test Certificate](#)[Type Test Certificates/Test Report](#)

| Marine / Shipping | other |  |  |  |  |
|-------------------|-------|--|--|--|--|
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[Confirmation](#)[Confirmation](#)[Miscellaneous](#)

| Railway | Environment |
|---------|-------------|
|---------|-------------|

[Special Test Certificate](#)[Environmental Confirmations](#)

#### 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=3RT1264-6AF36>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1264-6AF36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1264-6AF36>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1264-6AF36&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1264-6AF36&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1264-6AF36/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1264-6AF36&objecttype=14&gridview=view1>



