

Contactor, AC-1, 140 A, 92 kW / 400 V, 230 V AC, 50 Hz, 4-pole,  
Size S3, Screw terminal !!! Phased-out product !!! Successor is  
SIRIUS 3RT2 Preferred successor type is >>3RT2346-1AP00<<



|                                                                                                                                                      |                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Product brand name                                                                                                                                   | SIRIUS                                                    |
| Product designation                                                                                                                                  | power contactor                                           |
| General technical data                                                                                                                               |                                                           |
| Size of contactor                                                                                                                                    | S3                                                        |
| Insulation voltage <ul style="list-style-type: none"> <li>• rated value</li> </ul>                                                                   | 1 000 V                                                   |
| Degree of pollution                                                                                                                                  | 3                                                         |
| Surge voltage resistance rated value                                                                                                                 | 6 kV                                                      |
| maximum permissible voltage for safe isolation <ul style="list-style-type: none"> <li>• between coil and main contacts acc. to EN 60947-1</li> </ul> | 690 V                                                     |
| Protection class IP <ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>                                      | IP20; IP20 on the front with cover / box terminal<br>IP00 |
| Shock resistance at rectangular impulse <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                    | 6,8g / 5 ms, 4g / 10 ms                                   |
| Shock resistance with sine pulse <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                           | 10,6g / 5 ms, 6,2g / 10 ms                                |
| Mechanical service life (switching cycles)                                                                                                           |                                                           |

|                                                                                     |            |
|-------------------------------------------------------------------------------------|------------|
| • of contactor typical                                                              | 10 000 000 |
| • of the contactor with added electronics-compatible auxiliary switch block typical | 5 000 000  |
| • of the contactor with added auxiliary switch block typical                        | 10 000 000 |
| <b>Reference code acc. to DIN EN 81346-2</b>                                        | Q          |

#### Ambient conditions

|                                                        |                |
|--------------------------------------------------------|----------------|
| <b>Installation altitude at height above sea level</b> |                |
| • maximum                                              | 2 000 m        |
| <b>Ambient temperature</b>                             |                |
| • during operation                                     | -25 ... +60 °C |
| • during storage                                       | -55 ... +80 °C |

#### Main circuit

|                                                                     |        |
|---------------------------------------------------------------------|--------|
| <b>Number of poles for main current circuit</b>                     | 4      |
| <b>Number of NO contacts for main contacts</b>                      | 4      |
| <b>Number of NC contacts for main contacts</b>                      | 0      |
| <b>Operating current</b>                                            |        |
| • at AC-1 at 400 V<br>— at ambient temperature 40 °C rated value    | 140 A  |
| • at AC-1<br>— up to 690 V at ambient temperature 40 °C rated value | 140 A  |
| — up to 690 V at ambient temperature 60 °C rated value              | 120 A  |
| <b>Connectable conductor cross-section in main circuit at AC-1</b>  |        |
| • at 60 °C minimum permissible                                      | 35 mm² |
| • at 40 °C minimum permissible                                      | 50 mm² |
| <b>Operating current</b>                                            |        |
| • at 1 current path at DC-1<br>— at 24 V rated value                | 80 A   |
| — at 110 V rated value                                              | 9 A    |
| • with 2 current paths in series at DC-1<br>— at 24 V rated value   | 80 A   |
| — at 110 V rated value                                              | 80 A   |
| • with 3 current paths in series at DC-1<br>— at 24 V rated value   | 80 A   |
| — at 110 V rated value                                              | 80 A   |
| <b>Operating current</b>                                            |        |
| • at 1 current path at DC-3 at DC-5<br>— at 24 V rated value        | 20 A   |
| — at 110 V rated value                                              | 2.5 A  |

|                                                                                                                                                                                                                                                                                                                                                                                |                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <ul style="list-style-type: none"> <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 110 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 110 V rated value</li> </ul> </li> </ul> | 80 A<br>80 A<br>80 A<br>80 A |
| <b>Operating power</b> <ul style="list-style-type: none"> <li>• at AC-1 <ul style="list-style-type: none"> <li>— at 230 V at 60 °C rated value</li> <li>— at 400 V rated value</li> </ul> </li> </ul>                                                                                                                                                                          | 53 kW<br>92 kW               |
| <b>Thermal short-time current limited to 10 s</b>                                                                                                                                                                                                                                                                                                                              | 600 A                        |
| <b>No-load switching frequency</b> <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                                                                                                                                                                                                                                   | 5 000 1/h                    |
| <b>Operating frequency</b> <ul style="list-style-type: none"> <li>• at AC-1 maximum</li> </ul>                                                                                                                                                                                                                                                                                 | 1 000 1/h                    |

| Control circuit/ Control                                                                                                                           |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Type of voltage of the control supply voltage</b>                                                                                               | AC           |
| <b>Control supply voltage at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul>                                       | 230 V        |
| <b>Control supply voltage frequency</b> <ul style="list-style-type: none"> <li>• 1 rated value</li> </ul>                                          | 50 Hz        |
| <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> </ul> | 0.8 ... 1.1  |
| <b>Apparent pick-up power of magnet coil at AC</b>                                                                                                 | 270 V·A      |
| <b>Inductive power factor with closing power of the coil</b>                                                                                       | 0.68         |
| <b>Apparent holding power of magnet coil at AC</b>                                                                                                 | 22 V·A       |
| <b>Inductive power factor with the holding power of the coil</b>                                                                                   | 0.27         |
| <b>Closing delay</b> <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                     | 20 ... 50 ms |
| <b>Opening delay</b> <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                     | 10 ... 25 ms |
| <b>Arcing time</b>                                                                                                                                 | 10 ... 15 ms |

| Auxiliary circuit                                                                                                             |      |
|-------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Number of NC contacts for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul> | 0    |
| <b>Number of NO contacts for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul> | 0    |
| <b>Operating current at AC-12 maximum</b>                                                                                     | 10 A |
| <b>Operating current at AC-15</b> <ul style="list-style-type: none"> <li>• at 230 V rated value</li> </ul>                    | 6 A  |

|                                                  |                                                 |
|--------------------------------------------------|-------------------------------------------------|
| • at 400 V rated value                           | 3 A                                             |
| <b>Operating current at DC-12</b>                |                                                 |
| • at 60 V rated value                            | 6 A                                             |
| • at 110 V rated value                           | 3 A                                             |
| • at 220 V rated value                           | 1 A                                             |
| <b>Operating current at DC-13</b>                |                                                 |
| • at 24 V rated value                            | 10 A                                            |
| • at 60 V rated value                            | 2 A                                             |
| • at 110 V rated value                           | 1 A                                             |
| • at 220 V rated value                           | 0.3 A                                           |
| <b>Contact reliability of auxiliary contacts</b> | 1 faulty switching per 100 million (17 V, 1 mA) |

#### UL/CSA ratings

|                                                             |             |
|-------------------------------------------------------------|-------------|
| <b>Contact rating of auxiliary contacts according to UL</b> | A600 / Q600 |
|-------------------------------------------------------------|-------------|

#### Short-circuit protection

|                                                                 |                   |
|-----------------------------------------------------------------|-------------------|
| <b>Design of the fuse link</b>                                  |                   |
| • for short-circuit protection of the main circuit              |                   |
| — with type of coordination 1 required                          | fuse gL/gG: 250 A |
| — with type of assignment 2 required                            | fuse gL/gG: 160 A |
| • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A  |

#### Installation/ mounting/ dimensions

|                         |                                                                        |
|-------------------------|------------------------------------------------------------------------|
| <b>Mounting type</b>    | screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail |
| • Side-by-side mounting | Yes                                                                    |
| <b>Height</b>           | 146 mm                                                                 |
| <b>Width</b>            | 93 mm                                                                  |
| <b>Depth</b>            | 139 mm                                                                 |
| <b>Required spacing</b> |                                                                        |
| • for grounded parts    |                                                                        |
| — at the side           | 6 mm                                                                   |

#### Connections/ Terminals

|                                                     |                                  |
|-----------------------------------------------------|----------------------------------|
| <b>Type of electrical connection</b>                |                                  |
| • for main current circuit                          | screw-type terminals             |
| • for auxiliary and control current circuit         | screw-type terminals             |
| <b>Type of connectable conductor cross-sections</b> |                                  |
| • for main contacts                                 |                                  |
| — solid                                             | 2x (2.5 ... 16 mm <sup>2</sup> ) |
| — stranded                                          | 2x (10 ... 50 mm <sup>2</sup> )  |
| — single or multi-stranded                          | 2x (2,5 ... 16 mm <sup>2</sup> ) |
| — finely stranded with core end processing          | 2x (2.5 ... 35 mm <sup>2</sup> ) |

|                                                     |                                                                                                              |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| — finely stranded without core end processing       | 2x (10 ... 35 mm <sup>2</sup> )                                                                              |
| • at AWG conductors for main contacts               | 2x (10 ... 1/0)                                                                                              |
| <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> ) |
| — 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 conductors for auxiliary contacts          | 2x (20 ... 16), 2x (18 ... 14), 1x 12                                                                        |

#### Certificates/ approvals

| General Product Approval | EMC | Functional Safety/Safety of Machinery |
|--------------------------|-----|---------------------------------------|
|--------------------------|-----|---------------------------------------|



[Type Examination Certificate](#)

| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|
|---------------------------|-------------------|-------------------|



EG-Konf.

[Miscellaneous](#)

[Special Test Certificate](#)



ABS



LRS



RINA

| Marine / Shipping | other | Railway |
|-------------------|-------|---------|
|-------------------|-------|---------|



RMRS



DNVGL.COM/AF

[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=3RT1346-1AP00>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1346-1AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1346-1AP00>

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

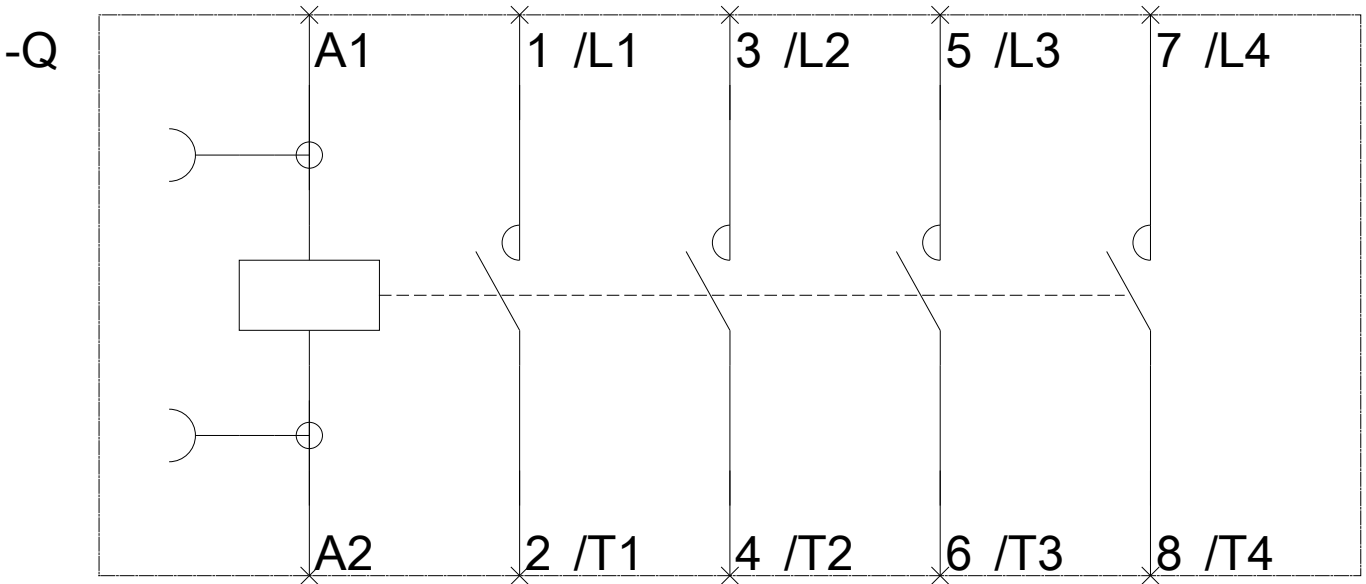
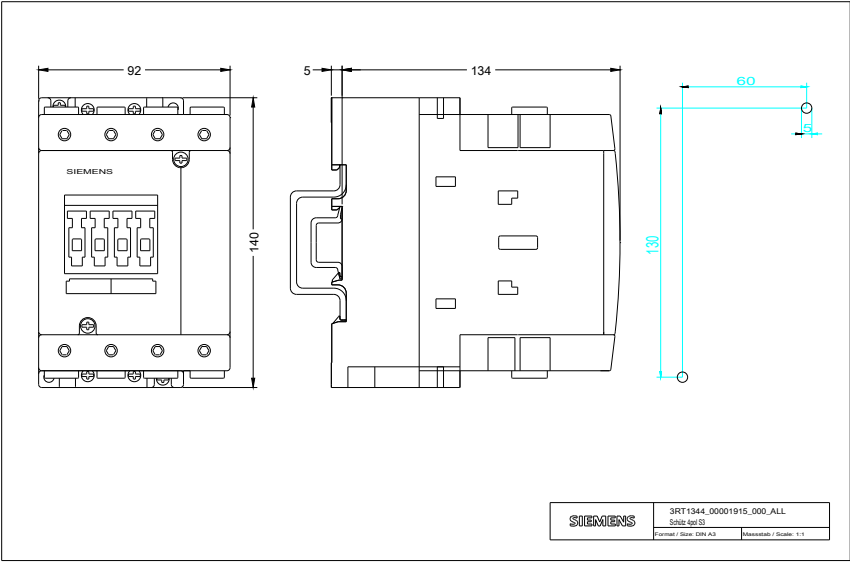
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1346-1AP00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1346-1AP00&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1346-1AP00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1346-1AP00&objecttype=14&gridview=view1>



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