



Contactor, AC-3, 95 A/45 kW/400 V, S3, 4-pole, 230 V AC/50 Hz, 1 NO+1 NC, screw terminal

|                                                                               |                              |
|-------------------------------------------------------------------------------|------------------------------|
| product brand name                                                            | SIRIUS                       |
| product designation                                                           | Contactor                    |
| product type designation                                                      | 3RT23                        |
| <b>General technical data</b>                                                 |                              |
| size of contactor                                                             | S3                           |
| product extension                                                             |                              |
| • function module for communication                                           | No                           |
| • auxiliary switch                                                            | Yes                          |
| insulation voltage                                                            |                              |
| • of main circuit with degree of pollution 3 rated value                      | 690 V                        |
| • of the auxiliary and control circuit with degree of pollution 3 rated value | 690 V                        |
| surge voltage resistance                                                      |                              |
| • of main circuit rated value                                                 | 8 kV                         |
| • of auxiliary circuit rated value                                            | 6 kV                         |
| shock resistance at rectangular impulse                                       |                              |
| • at AC                                                                       | 6.7 g / 5 ms, 4.0 g / 10 ms  |
| shock resistance with sine pulse                                              |                              |
| • at AC                                                                       | 10.6 g / 5 ms, 6.3 g / 10 ms |
| mechanical service life (switching cycles)                                    |                              |
| • of contactor typical                                                        | 10 000 000                   |
| • of the contactor with added auxiliary switch block typical                  | 10 000 000                   |
| reference code acc. to IEC 81346-2                                            | Q                            |
| Substance Prohibitive (Date)                                                  | 01.09.2017                   |
| <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 acc. to IEC 60068-2-30 maximum                     | 95 %                         |
| <b>Main circuit</b>                                                           |                              |
| number of poles for main current circuit                                      | 4                            |
| number of NO contacts for main contacts                                       | 4                            |
| operational current                                                           |                              |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value                   | 110 A                        |
| • at AC-1                                                                     |                              |

|                                                                                       |                                                             |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------|
| — up to 690 V at ambient temperature 40 °C rated value                                | 110 A                                                       |
| — up to 690 V at ambient temperature 60 °C rated value                                | 100 A                                                       |
| • at AC-3                                                                             |                                                             |
| — at 400 V rated value                                                                | 95 A                                                        |
| — at 690 V rated value                                                                | 58 A                                                        |
| — at 750 V rated value                                                                | 78 A; minimum Electrical Lifetime -50% according to 690V    |
| • at AC-4 at 400 V rated value                                                        | 80 A                                                        |
| <b>operational current at AC-6a up to 750 V</b>                                       |                                                             |
| • for current peak value n=20 rated value                                             | 58 A                                                        |
| • for current peak value n=30 rated value                                             | 56.3 A                                                      |
| minimum cross-section in main circuit at maximum AC-1 rated value                     | 35 mm <sup>2</sup>                                          |
| <b>operating power</b>                                                                |                                                             |
| • at AC-3 at 400 V rated value                                                        | 45 kW                                                       |
| • at AC-4 at 400 V rated value                                                        | 45 kW                                                       |
| operating apparent power at AC-6a up to 750 V for current peak value n=20 rated value | 75 kV·A                                                     |
| operating apparent power at AC-6a up to 750 V for current peak value n=30 rated value | 73.1 kV·A                                                   |
| <b>short-time withstand current in cold operating state up to 40 °C</b>               |                                                             |
| • limited to 1 s switching at zero current maximum                                    | 1 511 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 5 s switching at zero current maximum                                    | 1 511 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 10 s switching at zero current maximum                                   | 1 511 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 30 s switching at zero current maximum                                   | 610 A; Use minimum cross-section acc. to AC-1 rated value   |
| • limited to 60 s switching at zero current maximum                                   | 486 A; Use minimum cross-section acc. to AC-1 rated value   |
| <b>no-load switching frequency</b>                                                    |                                                             |
| • at AC                                                                               | 5 000 1/h                                                   |
| operating frequency at AC-1 maximum                                                   | 900 1/h                                                     |
| <b>Control circuit/ Control</b>                                                       |                                                             |
| <b>type of voltage</b>                                                                | AC                                                          |
| <b>type of voltage of the control supply voltage</b>                                  | AC                                                          |
| <b>control supply voltage at AC</b>                                                   |                                                             |
| • at 50 Hz rated value                                                                | 230 V                                                       |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> |                                                             |
| • at 50 Hz                                                                            | 0.8 ... 1.1                                                 |
| <b>apparent pick-up power of magnet coil at AC</b>                                    |                                                             |
| • at 50 Hz                                                                            | 296 V·A                                                     |
| <b>inductive power factor with closing power of the coil</b>                          |                                                             |
| • at 50 Hz                                                                            | 0.61                                                        |
| <b>apparent holding power of magnet coil at AC</b>                                    |                                                             |
| • at 50 Hz                                                                            | 19 V·A                                                      |
| <b>inductive power factor with the holding power of the coil</b>                      |                                                             |
| • at 50 Hz                                                                            | 0.38                                                        |
| <b>closing delay</b>                                                                  |                                                             |
| • at AC                                                                               | 13 ... 50 ms                                                |
| <b>opening delay</b>                                                                  |                                                             |
| • at AC                                                                               | 10 ... 21 ms                                                |
| <b>arcing time</b>                                                                    | 10 ... 20 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>                                   | 1                                                           |
| • attachable                                                                          | 2                                                           |
| • instantaneous contact                                                               | 1                                                           |
| <b>number of NO contacts for auxiliary contacts</b>                                   | 1                                                           |
| • attachable                                                                          | 2                                                           |
| • instantaneous contact                                                               | 1                                                           |
| 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 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                                                                                                                                |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required | gG: 10 A (230 V, 400 A)                                                                                                              |
| <b>contact reliability of auxiliary contacts</b>                                                      | 1 faulty switching per 100 million (17 V, 1 mA)                                                                                      |
| <b>UL/CSA ratings</b>                                                                                 |                                                                                                                                      |
| <b>contact rating of auxiliary contacts according to UL</b>                                           | A600 / P600                                                                                                                          |
| <b>Short-circuit protection</b>                                                                       |                                                                                                                                      |
| <b>product function short circuit protection</b>                                                      | No                                                                                                                                   |
| <b>design of the fuse link</b>                                                                        |                                                                                                                                      |
| • for short-circuit protection of the main circuit                                                    |                                                                                                                                      |
| — required                                                                                            | gB: 200 A (750 V, 25 kA)                                                                                                             |
| — with type of coordination 1 required                                                                | gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)                                                     |
| — with type of assignment 2 required                                                                  | gG: 160 A (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, 80 kA)                                                     |
| • for short-circuit protection of the auxiliary switch required                                       | gG: 10 A (690 V, 1 kA)                                                                                                               |
| <b>Installation/ mounting/ dimensions</b>                                                             |                                                                                                                                      |
| <b>mounting position</b>                                                                              | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| <b>fastening method</b>                                                                               | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715                                               |
| • side-by-side mounting                                                                               | Yes                                                                                                                                  |
| <b>height</b>                                                                                         | 140 mm                                                                                                                               |
| <b>width</b>                                                                                          | 70 mm                                                                                                                                |
| <b>depth</b>                                                                                          | 152 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> <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>                                                                                    | screw-type terminals<br>screw-type terminals<br>Screw-type terminals<br>Screw-type terminals                                                                                                                                                                                                                                                   |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— stranded</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG cables for main contacts</li> </ul>        | 2x (6 ... 16 mm <sup>2</sup> ), 2x (10 ... 50 mm <sup>2</sup> ), 1x (10 ... 70 mm <sup>2</sup> )<br>2x (2.5 ... 16 mm <sup>2</sup> ), 2x (6 ... 16 mm <sup>2</sup> ), 2x (10 ... 50 mm <sup>2</sup> ), 1x (10 ... 70 mm <sup>2</sup> )<br>2x (2.5 ... 35 mm <sup>2</sup> ), 1x (2.5 ... 50 mm <sup>2</sup> )<br>2x (10 ... 1/0), 1x (10 ... 2) |
| <b>connectable conductor cross-section for main contacts</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• solid or stranded</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> </ul>                                                                                                | 2.5 ... 16 mm <sup>2</sup><br>4 ... 70 mm <sup>2</sup><br>6 ... 70 mm <sup>2</sup><br>2.5 ... 50 mm <sup>2</sup>                                                                                                                                                                                                                               |
| <b>connectable conductor cross-section for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>                                                                                                                                | 0.5 ... 2.5 mm <sup>2</sup><br>0.5 ... 2.5 mm <sup>2</sup>                                                                                                                                                                                                                                                                                     |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG cables for auxiliary contacts</li> </ul> | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 16), 2x (18 ... 14)                                                                                      |
| <b>AWG number as coded connectable conductor cross section</b> <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary contacts</li> </ul>                                                                                                                                                     | 10 ... 2<br>20 ... 14                                                                                                                                                                                                                                                                                                                          |
| Safety related data                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                |
| <b>proportion of dangerous failures</b> <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> <li>• with high demand rate acc. to SN 31920</li> </ul>                                                                                                                                        | 40 %<br>73 %                                                                                                                                                                                                                                                                                                                                   |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b>                                                                                                                                                                                                                                                  | 20 y                                                                                                                                                                                                                                                                                                                                           |
| <b>protection class IP on the front acc. to IEC 60529</b>                                                                                                                                                                                                                                                                  | IP20                                                                                                                                                                                                                                                                                                                                           |
| <b>touch protection on the front acc. to IEC 60529</b>                                                                                                                                                                                                                                                                     | finger-safe, for vertical contact from the front                                                                                                                                                                                                                                                                                               |
| Communication/ Protocol                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                |
| <b>product function bus communication</b>                                                                                                                                                                                                                                                                                  | No                                                                                                                                                                                                                                                                                                                                             |
| Certificates/ approvals                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                |
| General Product Approval                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |



[Confirmation](#)



[KC](#)



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



[Type Examination Certificate](#)



[UK Declaration of Conformity](#)

[Type Test Certificates/Test Report](#)




[Confirmation](#)
[Vibration and Shock](#)

## Dangerous Good

[Transport Information](#)

## 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=3RT2346-1AP00-4AA0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2346-1AP00-4AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2346-1AP00-4AA0>

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

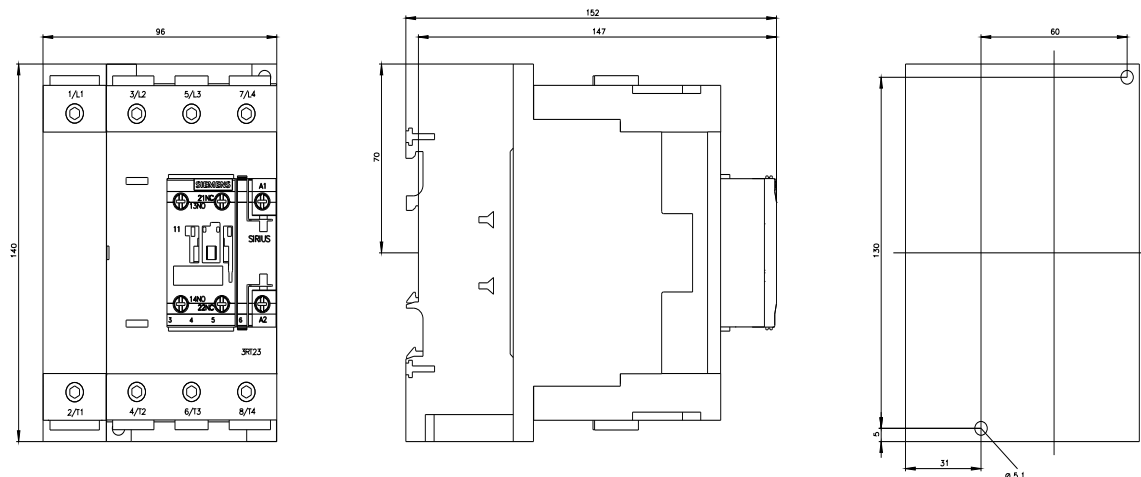
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2346-1AP00-4AA0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2346-1AP00-4AA0&lang=en)

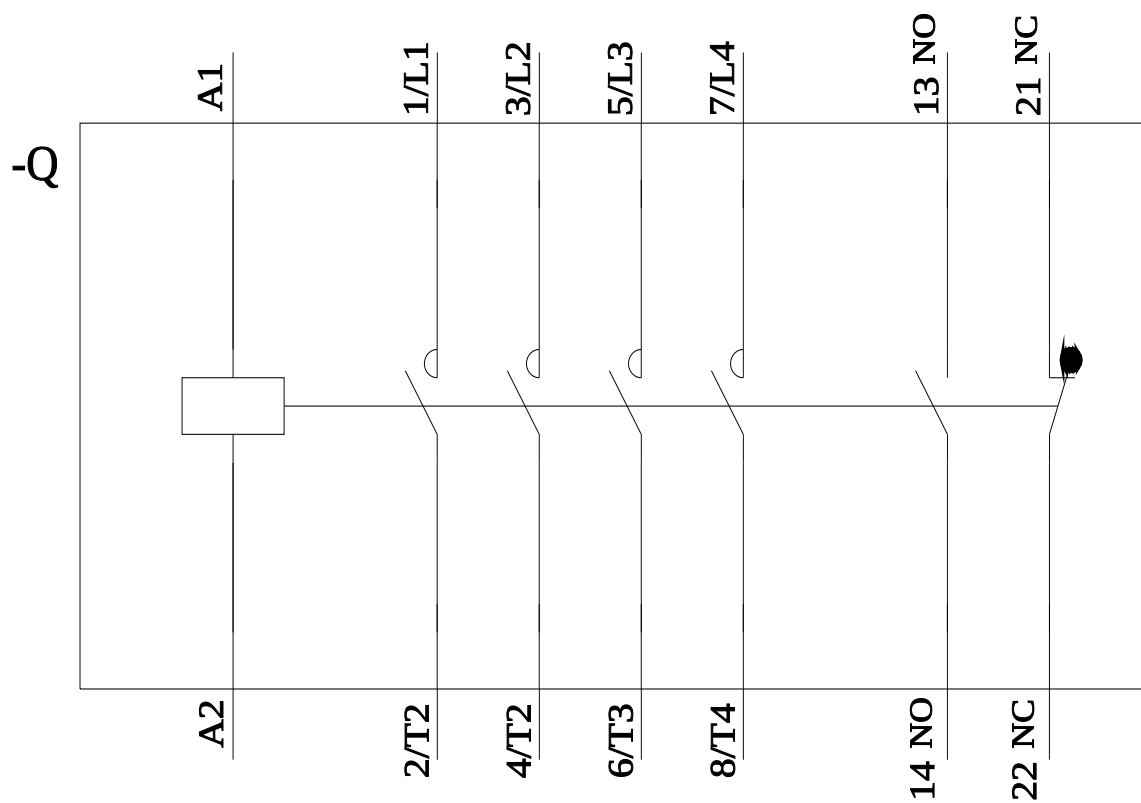
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2346-1AP00-4AA0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2346-1AP00-4AA0&objecttype=14&gridview=view1>





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