



SIRIUS SOFT STARTER, VALUES WITH 460 V, 50 DEG., STANDARD: 145A, 100HP, INSIDE-DELTA CIRCUIT 3: 251A, 200HP, 200-460 V AC, 115 V AC, SCREW TERMINALS

### General technical data:

|                                                                                             |  |        |
|---------------------------------------------------------------------------------------------|--|--------|
| <b>product brand name</b>                                                                   |  | SIRIUS |
| <b>Product feature</b>                                                                      |  |        |
| <ul style="list-style-type: none"> <li>integrated bypass contact system</li> </ul>          |  | Yes    |
| <ul style="list-style-type: none"> <li>Thyristors</li> </ul>                                |  | Yes    |
| <b>Product function</b>                                                                     |  |        |
| <ul style="list-style-type: none"> <li>Intrinsic device protection</li> </ul>               |  | Yes    |
| <ul style="list-style-type: none"> <li>motor overload protection</li> </ul>                 |  | Yes    |
| <ul style="list-style-type: none"> <li>Evaluation of thermistor motor protection</li> </ul> |  | Yes    |
| <ul style="list-style-type: none"> <li>External reset</li> </ul>                            |  | Yes    |
| <ul style="list-style-type: none"> <li>Adjustable current limitation</li> </ul>             |  | Yes    |
| <ul style="list-style-type: none"> <li>inside-delta circuit</li> </ul>                      |  | Yes    |
| <b>Product component Motor brake output</b>                                                 |  | Yes    |
| <b>Equipment marking acc. to DIN EN 61346-2</b>                                             |  | Q      |
| <b>Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>  |  | G      |

### Power Electronics:

|                                                                           |   |                                             |
|---------------------------------------------------------------------------|---|---------------------------------------------|
| <b>Product designation</b>                                                |   | soft starters for high feature applications |
| <b>Operating current</b>                                                  |   |                                             |
| <ul style="list-style-type: none"> <li>at 40 °C Rated value</li> </ul>    | A | 162                                         |
| <ul style="list-style-type: none"> <li>at 50 °C Rated value</li> </ul>    | A | 145                                         |
| <ul style="list-style-type: none"> <li>at 60 °C Rated value</li> </ul>    | A | 125                                         |
| <b>Operating current for three-phase motors at 3-phase root switching</b> |   |                                             |
| <ul style="list-style-type: none"> <li>at 40 °C Rated value</li> </ul>    | A | 281                                         |

|                                                                                                                           |              |             |
|---------------------------------------------------------------------------------------------------------------------------|--------------|-------------|
| • at 50 °C Rated value                                                                                                    | A            | 251         |
| • at 60 °C Rated value                                                                                                    | A            | 217         |
| <b>Mechanical power output for three-phase motors</b>                                                                     |              |             |
| • at 230 V                                                                                                                |              |             |
| — at standard circuit at 40 °C Rated value                                                                                | W            | 45 000      |
| — at 3-phase root switching at 40 °C Rated value                                                                          | W            | 90 000      |
| • at 400 V                                                                                                                |              |             |
| — at standard circuit at 40 °C Rated value                                                                                | W            | 90 000      |
| — at 3-phase root switching at 40 °C Rated value                                                                          | W            | 160 000     |
| <b>yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C Rated value</b> | metric<br>hp | 40          |
| Operating frequency Rated value                                                                                           | Hz           | 50 ... 60   |
| <b>Relative negative tolerance of the operating frequency</b>                                                             | %            | -10         |
| <b>Relative positive tolerance of the operating frequency</b>                                                             | %            | 10          |
| <b>Operating voltage at standard circuit Rated value</b>                                                                  | V            | 200 ... 460 |
| <b>Relative negative tolerance of the operating voltage at standard circuit</b>                                           | %            | -15         |
| <b>Relative positive tolerance of the operating voltage at standard circuit</b>                                           | %            | 10          |
| <b>Operating voltage at 3-phase root switching Rated value</b>                                                            | V            | 200 ... 460 |
| <b>Relative negative tolerance of the operating voltage at 3-phase root switching</b>                                     | %            | -15         |
| <b>Relative positive tolerance of the operating voltage at 3-phase root switching</b>                                     | %            | 10          |
| <b>Minimum load in % of I<sub>M</sub></b>                                                                                 | %            | 8           |
| <b>Adjustable motor current for motor overload protection minimum rated value</b>                                         | A            | 32          |
| <b>Continuous operating current in % of I<sub>e</sub> at 40 °C</b>                                                        | %            | 115         |
| <b>Active power loss at operating current at 40 °C during operation typical</b>                                           | W            | 95          |
| <b>Control electronics:</b>                                                                                               |              |             |
| <b>Type of voltage of the control supply voltage</b>                                                                      |              | AC          |
| <b>Control supply voltage frequency 1 Rated value</b>                                                                     | Hz           | 50          |
| <b>Control supply voltage frequency 2 Rated value</b>                                                                     | Hz           | 60          |
| <b>Relative negative tolerance of the control supply voltage frequency</b>                                                | %            | -10         |
| <b>Relative positive tolerance of the control supply voltage frequency</b>                                                | %            | 10          |
| <b>Control supply voltage 1 with AC</b>                                                                                   |              |             |
| • at 50 Hz Rated value                                                                                                    | V            | 115         |

|                                                                            |   |         |
|----------------------------------------------------------------------------|---|---------|
| • at 60 Hz Rated value                                                     | V | 115     |
| Relative negative tolerance of the control supply voltage with AC at 60 Hz | % | -15     |
| Relative positive tolerance of the control supply voltage with AC at 60 Hz | % | 10      |
| Display version for fault signal                                           |   | Display |

| Mechanical data:                                |    |                                                                                                                   |
|-------------------------------------------------|----|-------------------------------------------------------------------------------------------------------------------|
| Width                                           | mm | 170                                                                                                               |
| Height                                          | mm | 200                                                                                                               |
| Depth                                           | mm | 270                                                                                                               |
| Mounting type                                   |    | screw fixing                                                                                                      |
| mounting position                               |    | bei senkrechter Montageebene +/-90° drehbar, bei senkrechter Montageebene +/- 22,5° nach vorne und hinten kippbar |
| Required spacing with side-by-side mounting     |    |                                                                                                                   |
| • upwards                                       | mm | 100                                                                                                               |
| • at the side                                   | mm | 5                                                                                                                 |
| • downwards                                     | mm | 75                                                                                                                |
| Installation altitude at height above sea level | m  | 5 000                                                                                                             |
| Cable length maximum                            | m  | 500                                                                                                               |
| Number of poles for main current circuit        |    | 3                                                                                                                 |

| Connections/ Terminals:                                                                                       |  |                           |
|---------------------------------------------------------------------------------------------------------------|--|---------------------------|
| Type of electrical connection                                                                                 |  |                           |
| • for main current circuit                                                                                    |  | busbar connection         |
| • for auxiliary and control current circuit                                                                   |  | screw-type terminals      |
| Number of NC contacts for auxiliary contacts                                                                  |  | 0                         |
| Number of NO contacts for auxiliary contacts                                                                  |  | 3                         |
| Number of CO contacts for auxiliary contacts                                                                  |  | 1                         |
| Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point |  |                           |
| • finely stranded with core end processing                                                                    |  | 16 ... 70 mm <sup>2</sup> |
| • finely stranded without core end processing                                                                 |  | 16 ... 70 mm <sup>2</sup> |
| • stranded                                                                                                    |  | 16 ... 70 mm <sup>2</sup> |
| Type of connectable conductor cross-section for main contacts for box terminal using the back clamping point  |  |                           |
| • finely stranded with core end processing                                                                    |  | 16 ... 70 mm <sup>2</sup> |
| • finely stranded without core end processing                                                                 |  | 16 ... 70 mm <sup>2</sup> |
| • stranded                                                                                                    |  | 16 ... 70 mm <sup>2</sup> |
| Type of connectable conductor cross-section for main contacts for box terminal using both clamping points     |  |                           |

|                                                                                                                                                                                                                                                                     |  |                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> <li>• stranded</li> </ul>                                                                                             |  | max. 1x 50 mm <sup>2</sup> , 1x 70 mm <sup>2</sup><br>max. 1x 50 mm <sup>2</sup> , 1x 70 mm <sup>2</sup><br>max. 2x 70 mm <sup>2</sup> |
| Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal <ul style="list-style-type: none"> <li>• using the back clamping point</li> <li>• using the front clamping point</li> <li>• using both clamping points</li> </ul> |  | 6 ... 2/0<br>6 ... 2/0<br>max. 2x 1/0                                                                                                  |
| Type of connectable conductor cross-section for DIN cable lug for main contacts <ul style="list-style-type: none"> <li>• finely stranded</li> <li>• stranded</li> </ul>                                                                                             |  | 16 ... 95 mm <sup>2</sup><br>25 ... 120 mm <sup>2</sup>                                                                                |
| <b>Type of connectable conductor cross-section for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>                                                                             |  | 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )                                                                 |
| <b>Type of connectable conductor cross-section for AWG conductors</b> <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary contacts</li> <li>• for auxiliary contacts finely stranded with core end processing</li> </ul>            |  | 4 ... 250 kcmil<br>2x (20 ... 14)<br>2x (20 ... 16)                                                                                    |

#### Ambient conditions:

|                                                                                                                           |          |                   |
|---------------------------------------------------------------------------------------------------------------------------|----------|-------------------|
| <b>Ambient temperature</b> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul> | °C<br>°C | 60<br>-25 ... +80 |
| <b>Derating temperature</b>                                                                                               | °C       | 40                |
| <b>Protection class IP</b>                                                                                                |          | IP00              |

#### Certificates/ approvals:

|                          |     |                           |
|--------------------------|-----|---------------------------|
| General Product Approval | EMC | Declaration of Conformity |
|--------------------------|-----|---------------------------|



|                   |                   |
|-------------------|-------------------|
| Test Certificates | Shipping Approval |
|-------------------|-------------------|

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



|                   |       |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



[Environmental Confirmations](#)

#### UL/CSA ratings:

yielded mechanical performance [hp] for three-phase AC motor

- at 200/208 V

- at 3-phase root switching at 50 °C Rated value

metric hp 75

- at 220/230 V

- at standard circuit at 50 °C Rated value

metric hp 50

- at 3-phase root switching at 50 °C Rated value

metric hp 100

- at 460/480 V

- at standard circuit at 50 °C Rated value

metric hp 100

- at 3-phase root switching at 50 °C Rated value

metric hp 200

Contact rating of the auxiliary contacts acc. to UL

B300 / R300

#### Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrymall>

Cax online generator

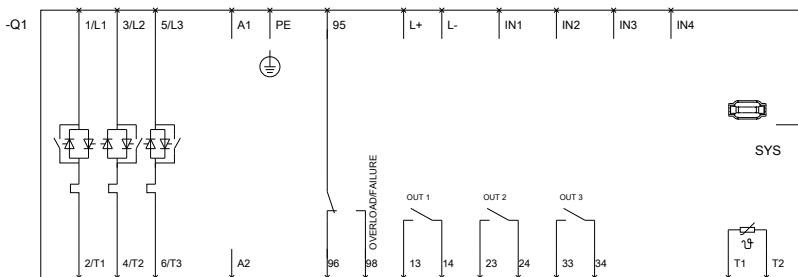
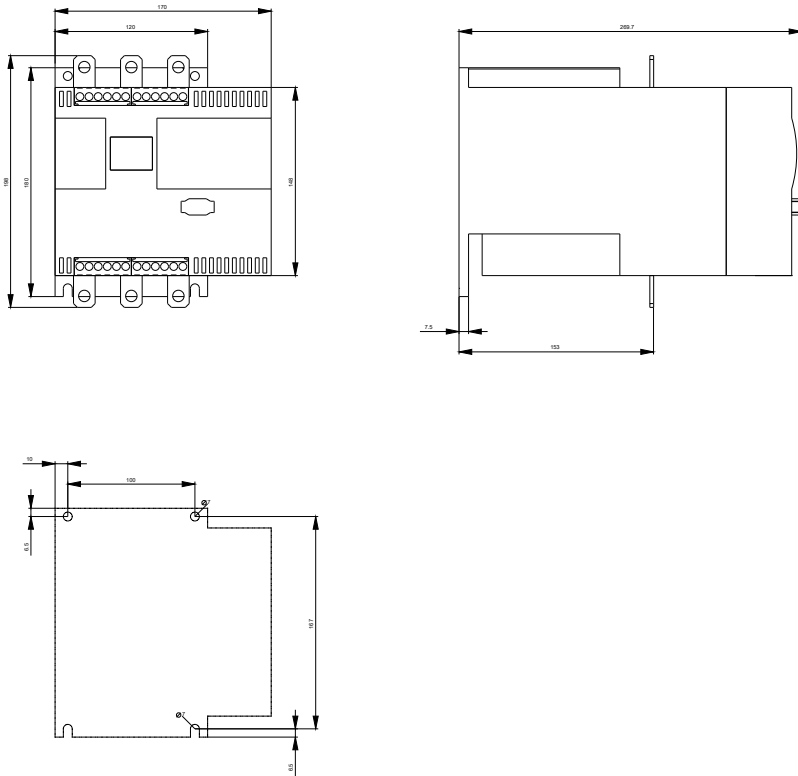
<http://support.automation.siemens.com/WW/CAxorder/default.aspx?lang=en&mlfb=3RW44366BC34>

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

<http://support.automation.siemens.com/WW/view/en/3RW44366BC34/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RW44366BC34&lang=en>



last modified:

15.01.2015