



SIRIUS SOFT STARTER, VALUES WITH 500 V, 40 DEG., STANDARD: 93A, 55KW, INSIDE-DELTA CIRCUIT 3: 161A, 110KW, 400-600 V AC, 230 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 | 93  |
| <ul style="list-style-type: none"> <li>at 50 °C Rated value</li> </ul>    | A | 82  |
| <ul style="list-style-type: none"> <li>at 60 °C Rated value</li> </ul>    | A | 72  |
| <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 | 161   |

|   |    |             |
|---|----|-------------|
| • at 50 °C Rated value  | A  | 142         |
| • at 60 °C Rated value  | A  | 125         |
| <b>Mechanical power output for three-phase motors</b>                                 |    |             |
| • at 400 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 500 V  |    |             |
| — at standard circuit at 40 °C Rated value  | W  | 55 000      |
| — at 3-phase root switching at 40 °C Rated value                                      | W  | 110 000     |
| 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  | 400 ... 600 |
| <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  | 400 ... 600 |
| <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  | 18          |
| <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  | 55          |

#### Control electronics:

|  |    |     |
|--|----|-----|
| <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  | 230 |
| • at 60 Hz Rated value   | V  | 230 |

|  |   |         |
|--|---|---------|
| 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 | 192   |
| 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  |  | box terminals              |
| • 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 |  |                            |
| • solid   |  | 2.5 ... 16 mm <sup>2</sup> |
| • finely stranded with core end processing  |  | 2.5 ... 35 mm <sup>2</sup> |
| • finely stranded without core end processing   |  | 4 ... 50 mm <sup>2</sup>   |
| • stranded  |  | 4 ... 70 mm <sup>2</sup>   |
| Type of connectable conductor cross-section for main contacts for box terminal using the back clamping point  |  |                            |
| • solid   |  | 2,5 ... 16 mm <sup>2</sup> |
| • finely stranded with core end processing  |  | 2.5 ... 50 mm <sup>2</sup> |
| • finely stranded without core end processing   |  | 10 ... 50 mm <sup>2</sup>  |
| • stranded  |  | 10 ... 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>• solid</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> <li>• stranded</li> </ul> |  | 2x (2.5 ... 16 mm <sup>2</sup> )<br>2x (2.5 ... 35 mm <sup>2</sup> )<br>2x (4 ... 35 mm <sup>2</sup> )<br>2x (4 ... 50 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>                                |  | 10 ... 2/0<br>10 ... 2/0<br>2x (10 ... 1/0)  |
| <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 auxiliary contacts</li> <li>• for auxiliary contacts finely stranded with core end processing</li> </ul>  |  | 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 | 60          |
|  | °C | -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                                  |
| <br>CSA | <br>UL |  | <br>C-TICK | <br>EG-Konf. | <a href="#">Type Test Certificates/Test Report</a> |

|  |  |   |  |   |  |
|--|--|---|--|---|--|
| Test Certificates                        | Shipping Approval  |   |  |   |  |
| <a href="#">Special Test Certificate</a> | <br>ABS | <br>BUREAU VERITAS | <br>DNV | <br>GL | <br>LRS |

|  |   |
|--|---|
| Shipping Approval  | other                                       |
| <br>PRS | <a href="#">Environmental Confirmations</a> |

#### UL/CSA ratings:

|  |              |             |
|--|--------------|-------------|
| <b>yielded mechanical performance [hp] for three-phase AC motor</b>  |              |             |
| <ul style="list-style-type: none"> <li>• at 460/480 V <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C Rated value</li> <li>— at 3-phase root switching at 50 °C Rated value</li> </ul> </li> <li>• at 575/600 V <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C Rated value</li> <li>— at 3-phase root switching at 50 °C Rated value</li> </ul> </li> </ul> | metric<br>hp | 60          |
|  | metric<br>hp | 100         |
|  | metric<br>hp | 75          |
|  | metric<br>hp | 125         |
| <b>Contact rating of the auxiliary contacts acc. to UL</b>   |              | B300 / R300 |

#### Further information

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

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

**Industry Mall (Online ordering system)**

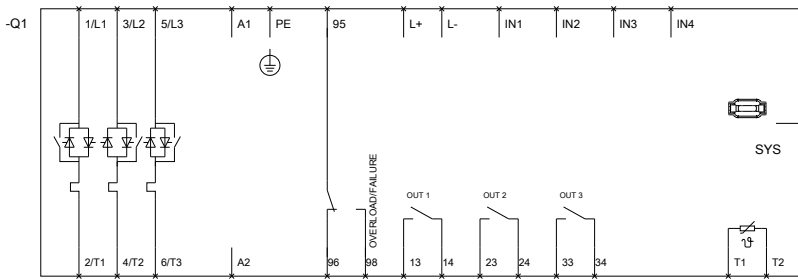
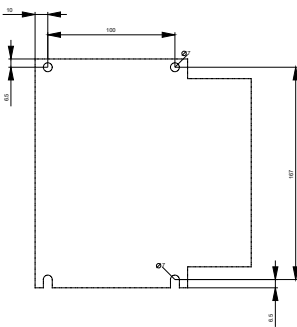
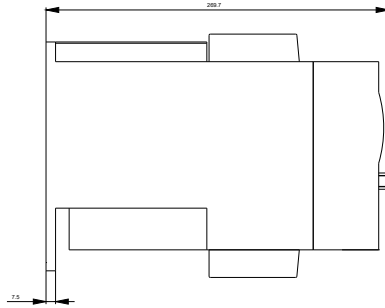
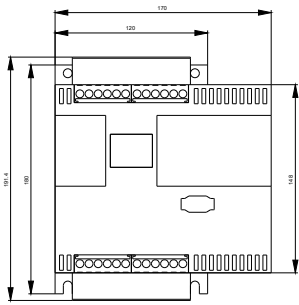
<http://www.siemens.com/industrymall>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW44271BC45>

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

<http://support.automation.siemens.com/WW/view/en/3RW44271BC45/all>



last modified:

15.01.2015