



SIRIUS SOFT STARTER, VALUES WITH 690 V, 40 DEG., STANDARD: 113A, 110KW, INSIDE-DELTA  
CIRCUIT 3: ONLY UP TO 600V, 400-690 V AC, 230 V AC, SCREW TERMINALS

| General technical data:                                                             |  |                                             |
|-------------------------------------------------------------------------------------|--|---------------------------------------------|
| product brand name                                                                  |  | SIRIUS                                      |
| • Product equipment Integrated bypass contact system                                |  | Yes                                         |
| • Product feature Thyristors                                                        |  | Yes                                         |
| Product function                                                                    |  |                                             |
| • Intrinsic device protection                                                       |  | Yes                                         |
| • motor overload protection                                                         |  | Yes                                         |
| • Evaluation of thermistor motor protection                                         |  | Yes                                         |
| • External reset                                                                    |  | Yes                                         |
| • Adjustable current limitation                                                     |  | Yes                                         |
| • Inside-delta circuit                                                              |  | Yes                                         |
| Product component Motor brake output                                                |  | Yes                                         |
| Equipment marking acc. to DIN EN 61346-2                                            |  | Q                                           |
| Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 |  | G                                           |
| Power Electronics:                                                                  |  |                                             |
| Product designation                                                                 |  | soft starters for high feature applications |

|                                                                              |    |             |
|------------------------------------------------------------------------------|----|-------------|
| <b>Operating current</b>                                                     |    |             |
| • at 40 °C rated value                                                       | A  | 113         |
| • at 50 °C rated value                                                       | A  | 100         |
| • at 60 °C rated value                                                       | A  | 88          |
| <b>Operating current for three-phase motors at inside-delta circuit</b>      |    |             |
| • at 40 °C rated value                                                       | A  | 196         |
| • at 50 °C rated value                                                       | A  | 173         |
| • at 60 °C rated value                                                       | A  | 152         |
| <b>Mechanical power output for three-phase motors</b>                        |    |             |
| • at 400 V                                                                   |    |             |
| — at standard circuit at 40 °C rated value                                   | W  | 55 000      |
| — at inside-delta circuit at 40 °C rated value                               | W  | 110 000     |
| • at 500 V                                                                   |    |             |
| — at standard circuit at 40 °C rated value                                   | W  | 75 000      |
| — at inside-delta circuit at 40 °C rated value                               | W  | 132 000     |
| • at 690 V at standard circuit at 40 °C rated value                          | W  | 110 000     |
| Operating frequency rated value                                              | Hz | 50 ... 60   |
| Relative negative tolerance of the operating frequency                       | %  | -10         |
| Relative positive tolerance of the operating frequency                       | %  | 10          |
| Operating voltage at standard circuit rated value                            | V  | 400 ... 690 |
| Relative negative tolerance of the operating voltage at standard circuit     | %  | -15         |
| Relative positive tolerance of the operating voltage at standard circuit     | %  | 10          |
| Operating voltage at inside-delta circuit rated value                        | V  | 400 ... 600 |
| Relative negative tolerance of the operating voltage at inside-delta circuit | %  | -15         |
| Relative positive tolerance of the operating voltage at inside-delta circuit | %  | 10          |
| Minimum load [% of IM]                                                       | %  | 8           |
| Adjustable motor current for motor overload protection minimum rated value   | A  | 22          |
| Continuous operating current [% of I <sub>e</sub> ] at 40 °C                 | %  | 115         |
| Power loss [W] at operating current at 40 °C during operation typical        | W  | 64          |
| <b>Control electronics:</b>                                                  |    |             |
| Type of voltage of the control supply voltage                                |    | AC          |
| Control supply voltage frequency 1 rated value                               | Hz | 50          |
| Control supply voltage frequency 2 rated value                               | Hz | 60          |
| Relative negative tolerance of the control supply voltage frequency          | %  | -10         |

|                                                                                 |   |         |
|---------------------------------------------------------------------------------|---|---------|
| <b>Relative positive tolerance of the control supply voltage frequency</b>      | % | 10      |
| Control supply voltage 1 at AC                                                  |   |         |
| • at 50 Hz rated value                                                          | V | 230     |
| • at 60 Hz rated value                                                          | V | 230     |
| <b>Relative negative tolerance of the control supply voltage at AC at 60 Hz</b> | % | -15     |
| <b>Relative positive tolerance of the control supply voltage at AC at 60 Hz</b> | % | 10      |
| <b>Display version for fault signal</b>                                         |   | Display |

#### Mechanical data:

|                                                        |    |                                                                                                                           |
|--------------------------------------------------------|----|---------------------------------------------------------------------------------------------------------------------------|
| <b>Width</b>                                           | mm | 170                                                                                                                       |
| <b>Height</b>                                          | mm | 200                                                                                                                       |
| <b>Depth</b>                                           | mm | 270                                                                                                                       |
| <b>Mounting type</b>                                   |    | screw fixing                                                                                                              |
| <b>Mounting position</b>                               |    | with vertical mounting surface +/- 90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| <b>Required spacing with side-by-side mounting</b>     |    |                                                                                                                           |
| • upwards                                              | mm | 100                                                                                                                       |
| • at the side                                          | mm | 5                                                                                                                         |
| • downwards                                            | mm | 75                                                                                                                        |
| <b>Installation altitude at height above sea level</b> | m  | 5 000                                                                                                                     |
| <b>Wire length maximum</b>                             | m  | 500                                                                                                                       |
| <b>Number of poles for main current circuit</b>        |    | 3                                                                                                                         |

#### Connections/ Terminals:

|                                                                                                                |  |                           |
|----------------------------------------------------------------------------------------------------------------|--|---------------------------|
| <b>Type of electrical connection</b>                                                                           |  |                           |
| • for main current circuit                                                                                     |  | busbar connection         |
| • for auxiliary and control current circuit                                                                    |  | screw-type terminals      |
| <b>Number of NC contacts for auxiliary contacts</b>                                                            |  | 0                         |
| <b>Number of NO contacts for auxiliary contacts</b>                                                            |  | 3                         |
| <b>Number of CO contacts for auxiliary contacts</b>                                                            |  | 1                         |
| Type of connectable conductor cross-sections 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-sections 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> |

|                                                                                                                                                                                                                                                                                    |  |                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• stranded</li> </ul>                                                                                                                                                                                                                       |  | 16 ... 70 mm <sup>2</sup>                                                                                                              |
| Type of connectable conductor cross-sections 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-sections at 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-sections 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-sections 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-sections at 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> </ul> | °C | 60          |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>   | °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 | Shipping Approval |
|-------------------|-------------------|
|-------------------|-------------------|

[spezielle Prüfbescheinigungen](#)

[Typprüfbescheinigung/Werkszeugnis](#)



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



[Umweltbestätigung](#)

[Bestätigungen](#)

#### UL/CSA ratings:

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

- at 460/480 V

- at standard circuit at 50 °C rated value
- at inside-delta circuit at 50 °C rated value

|    |     |
|----|-----|
| hp | 75  |
| hp | 125 |

- at 575/600 V

- at standard circuit at 50 °C rated value
- at inside-delta circuit at 50 °C rated value

|    |     |
|----|-----|
| hp | 75  |
| hp | 150 |

Contact rating of auxiliary contacts according to UL

B300 / R300

#### Further information

**Simulation Tool for Soft Starters (STS)**

<https://support.industry.siemens.com/cs/ww/en/view/101494917>

**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**

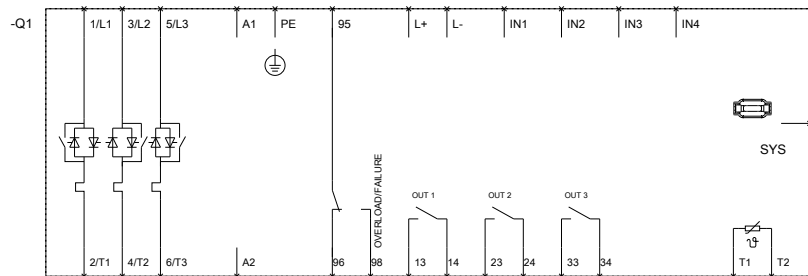
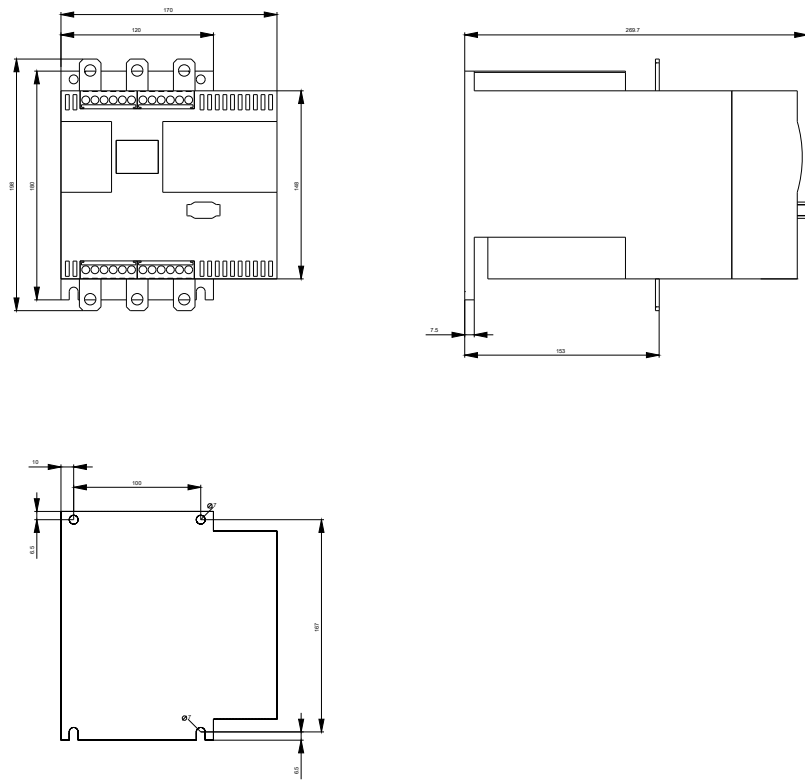
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4434-6BC46>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4434-6BC46>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4434-6BC46&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4434-6BC46&lang=en)



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