

## Data sheet

## 3RW4436-6BC45



SIRIUS soft starter Values at 500 V, 40 °C standard: 162 A, 110 kW Inside-delta: 281 A, 200 kW 400-600 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5536-6HA16<<

| General technical data   |                      |  |
|--|----------------------|--|
| product brand name   |                      | SIRIUS                                 |
| product feature  |                      |  |
| <ul style="list-style-type: none"> <li>integrated bypass contact system</li> <li>thyristors</li> </ul>   |                      | Yes<br>Yes                             |
| product function   |                      |  |
| <ul style="list-style-type: none"> <li>intrinsic device protection</li> <li>motor overload protection</li> <li>evaluation of thermistor motor protection</li> <li>external reset</li> <li>adjustable current limitation</li> <li>inside-delta circuit</li> </ul>   |                      | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes |
| product component motor brake output   |                      | Yes                                    |
| insulation voltage rated value   | V                    | 690                                    |
| degree of pollution  |                      | 3, acc. to IEC 60947-4-2               |
| reference code according to EN 61346-2   |                      | Q                                      |
| reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750   |                      | G                                      |
| Power Electronics  |                      |  |
| product designation  |                      | Soft starter                           |
| operational current  |                      |  |
| <ul style="list-style-type: none"> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> </ul>   | A<br>A<br>A          | 162<br>145<br>125                      |
| operational current for 3-phase motors at inside-delta circuit   |                      |  |
| <ul style="list-style-type: none"> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> </ul>   | A<br>A<br>A          | 281<br>251<br>217                      |
| yielded mechanical performance for 3-phase motors  |                      |  |
| <ul style="list-style-type: none"> <li>at 400 V <ul style="list-style-type: none"> <li>at standard circuit at 40 °C rated value</li> <li>at inside-delta circuit at 40 °C rated value</li> </ul> </li> <li>at 500 V <ul style="list-style-type: none"> <li>at standard circuit at 40 °C rated value</li> <li>at inside-delta circuit at 40 °C rated value</li> </ul> </li> </ul> | kW<br>kW<br>kW<br>kW | 90<br>160<br>110<br>200                |
| 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 ... 600                            |



|  |    |  |
|--|----|--|
| 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 [%]   | %  | 8  |
| adjustable motor current for motor overload protection minimum rated value                                     | A  | 32   |
| continuous operating current [% of I <sub>e</sub> ] at 40 °C   | %  | 115  |
| power loss [W] at operational current at 40 °C during operation typical  | W  | 95   |
| <b>Control circuit/ Control</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  |
| relative positive tolerance of the control supply voltage frequency  | %  | 10   |
| control supply voltage 1 at AC   |    |  |
| • at 50 Hz rated value   | V  | 230  |
| • at 60 Hz rated value   | V  | 230  |
| relative negative tolerance of the control supply voltage at AC at 50 Hz                                       | %  | -15  |
| relative positive tolerance of the control supply voltage at AC at 50 Hz                                       | %  | 10   |
| relative negative tolerance of the control supply voltage at AC at 60 Hz                                       | %  | -15  |
| relative positive tolerance of the control supply voltage at AC at 60 Hz                                       | %  | 10   |
| display version for fault signal   |    | Display  |
| <b>Mechanical data</b>   |    |  |
| width  | mm | 170  |
| height   | mm | 200  |
| depth  | mm | 270  |
| fastening method   |    | screw fixing   |
| mounting position  |    | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| required spacing with side-by-side mounting  |    |  |
| • upwards  | mm | 100  |
| • at the side  | mm | 5  |
| • downwards  | mm | 75   |
| wire length maximum  | m  | 500  |
| number of poles for main current circuit   |    | 3  |
| <b>Connections/ Terminals</b>  |    |  |
| type of electrical connection  |    |  |
| • for main current circuit   |    | busbar connection  |
| • for auxiliary and control 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-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                 |    |  |



|   |  |  |
|---|--|--|
| <b>clamping point</b> <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>   |  | 16 ... mm <sup>2</sup><br>16 ...<br>16 ... 70  |
| <b>type of connectable conductor cross-sections for main contacts for box terminal using both clamping points</b> <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> |
| <b>type of connectable conductor cross-sections at AWG cables for main contacts for box terminal</b> <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  |
| <b>type of connectable conductor cross-sections for DIN cable lug for main contacts</b> <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 cables</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>installation altitude at height above sea level</b>  | m        | 5 000   |
| <b>environmental category</b> <ul style="list-style-type: none"> <li>during transport according to IEC 60721</li> <li>during storage according to IEC 60721</li> <li>during operation according to IEC 60721</li> </ul> |          | 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)<br>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4<br>3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 |
| <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 on the front according to IEC 60529</b>  |          | IP00; IP20 with box terminal/cover  |
| <b>touch protection on the front according to IEC 60529</b>   |          | finger-safe, for vertical contact from the front with box terminal/cover  |

| Certificates/ approvals  |     |
|--------------------------|-----|
| General Product Approval | EMC |



[Confirmation](#)



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



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)





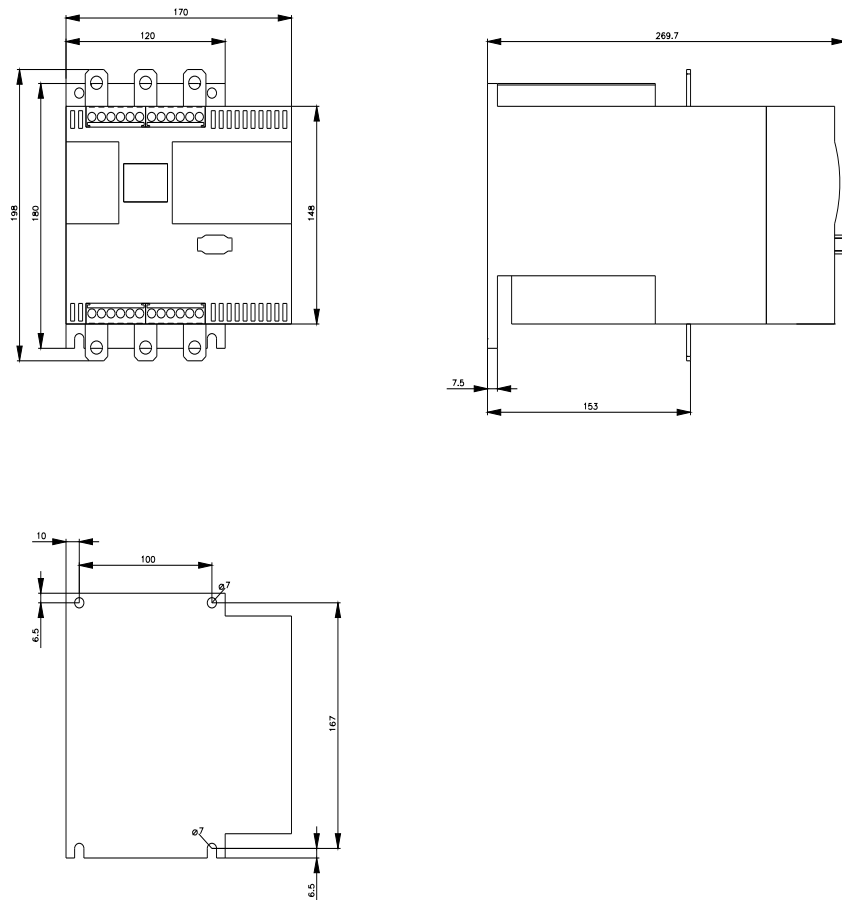
[Confirmation](#)

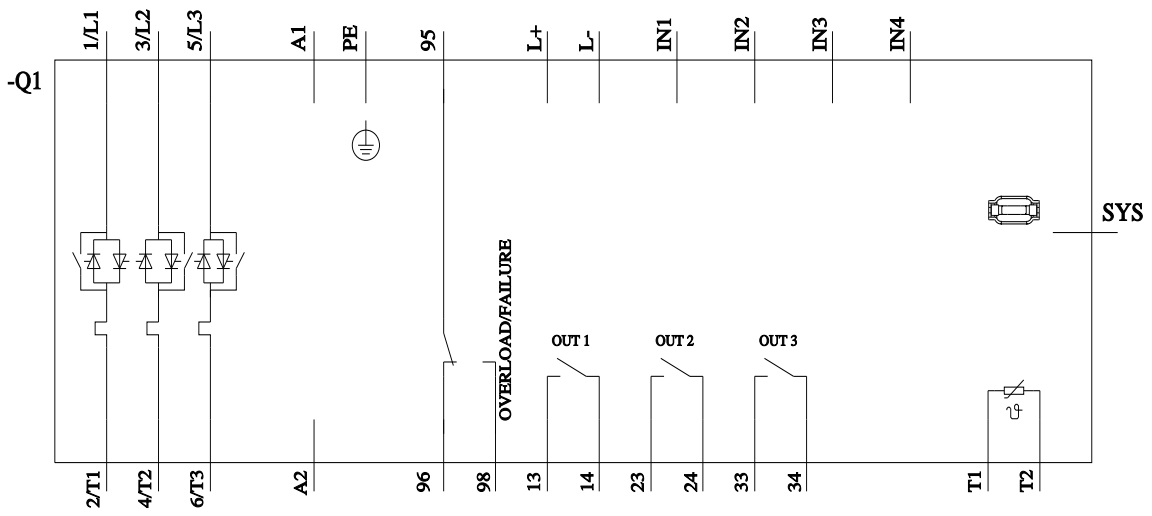
**UL/CSA ratings**

|   |    |             |
|---|----|-------------|
| <b>yielded mechanical performance [hp] for 3-phase AC motor</b><br><ul style="list-style-type: none"> <li>● <b>at 460/480 V</b> <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> <li>— at inside-delta circuit at 50 °C rated value</li> </ul> </li> <li>● <b>at 575/600 V</b> <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> <li>— at inside-delta circuit at 50 °C rated value</li> </ul> </li> </ul> |    |             |
|   | hp | 100         |
|   | hp | 200         |
|   | hp | 250         |
| <b>contact rating of auxiliary contacts according to UL</b>   |    | 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,...)**  
<https://www.siemens.com/ic10>
- Industry Mall (Online ordering system)**  
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3RW4436-6BC45>
- Cax online generator**  
<http://support.automation.siemens.com/WWW/CAXorder/default.aspx?lang=en&mfb=3RW4436-6BC45>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RW4436-6BC45>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RW4436-6BC45&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RW4436-6BC45&lang=en)





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