



SIRIUS soft starter Values at 500 V, 40 °C standard: 36 A, 22 kW Inside-delta: 62 A, 37 kW 400-600 V AC, 230 V AC Screw terminals !!! Phased-out product !!!  
Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5517-1HA15<<

### General technical data

|                                                                                  |   |                          |
|----------------------------------------------------------------------------------|---|--------------------------|
| Product brand name                                                               |   | SIRIUS                   |
| Product feature                                                                  |   |                          |
| • integrated bypass contact system                                               |   | Yes                      |
| • 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                      |
| Insulation voltage rated value                                                   | V | 690                      |
| Degree of pollution                                                              |   | 3, acc. to IEC 60947-4-2 |
| Reference code acc. to DIN EN 61346-2                                            |   | Q                        |
| Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 |   | G                        |

## Power Electronics

|                                                                                     |    |              |
|-------------------------------------------------------------------------------------|----|--------------|
| <b>Product designation</b>                                                          |    | Soft starter |
| <b>Operating current</b>                                                            |    |              |
| • at 40 °C rated value                                                              | A  | 36           |
| • at 50 °C rated value                                                              | A  | 32.2         |
| • at 60 °C rated value                                                              | A  | 29           |
| <b>Operating current for three-phase motors at inside-delta circuit</b>             |    |              |
| • at 40 °C rated value                                                              | A  | 62           |
| • at 50 °C rated value                                                              | A  | 55           |
| • at 60 °C rated value                                                              | A  | 50           |
| <b>Mechanical power output for three-phase motors</b>                               |    |              |
| • at 400 V                                                                          |    |              |
| — at standard circuit at 40 °C rated value                                          | W  | 18 500       |
| — at inside-delta circuit at 40 °C rated value                                      | W  | 30 000       |
| • at 500 V                                                                          |    |              |
| — at standard circuit at 40 °C rated value                                          | W  | 22 000       |
| — at inside-delta circuit at 40 °C rated value                                      | W  | 37 000       |
| <b>Operating frequency rated value</b>                                              | 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 inside-delta circuit rated value</b>                        | V  | 400 ... 600  |
| <b>Relative negative tolerance of the operating voltage at inside-delta circuit</b> | %  | -15          |
| <b>Relative positive tolerance of the operating voltage at inside-delta circuit</b> | %  | 10           |
| <b>Minimum load [%]</b>                                                             | %  | 8            |
| <b>Adjustable motor current for motor overload protection minimum rated value</b>   | A  | 7            |
| <b>Continuous operating current [% of I<sub>e</sub>] at 40 °C</b>                   | %  | 115          |
| <b>Power loss [W] at operating current at 40 °C during operation typical</b>        | W  | 10           |

## Control circuit/ Control

|                                                                            |    |     |
|----------------------------------------------------------------------------|----|-----|
| <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 |

|                                                                          |   |         |
|--------------------------------------------------------------------------|---|---------|
| 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 |

| Mechanical data                             |    |                                                                                                                          |
|---------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------------|
| Width                                       | mm | 170                                                                                                                      |
| Height                                      | mm | 192                                                                                                                      |
| Depth                                       | mm | 270                                                                                                                      |
| Mounting type                               |    | 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                                                                                                                        |

| Connections/ Terminals                                                                                         |  |                            |
|----------------------------------------------------------------------------------------------------------------|--|----------------------------|
| Type of electrical connection                                                                                  |  |                            |
| • for main current circuit                                                                                     |  | box terminal               |
| • 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-sections 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>   |

|                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point</b> <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> |  | 2,5 ... 16 mm <sup>2</sup><br>2.5 ... 50 mm <sup>2</sup><br>10 ... 50 mm <sup>2</sup><br>10 ... 70 mm <sup>2</sup>                       |
| <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>• 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> ) |
| <b>Type of connectable conductor cross-sections at AWG conductors 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>                                    |  | 10 ... 2/0<br>10 ... 2/0<br>2x (10 ... 1/0)                                                                                              |
| <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 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>Installation altitude at height above sea level</b>                                                                                                                                                         | m        | 5 000                                                                                                                                                                                                                                                                   |
| <b>Environmental category</b> <ul style="list-style-type: none"> <li>• during transport acc. to IEC 60721</li> <li>• during storage acc. to IEC 60721</li> <li>• during operation acc. 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</b>                                                                                                                                                                                     |          | IP00                                                                                                                                                                                                                                                                    |

## Certificates/ approvals

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



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

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



| Marine / Shipping | other |
|-------------------|-------|
|-------------------|-------|



[Confirmation](#)

## 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 20  
hp 40

• **at 575/600 V**

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

hp 25  
hp 50

**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,...)**

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4423-1BC45>

**Cax online generator**

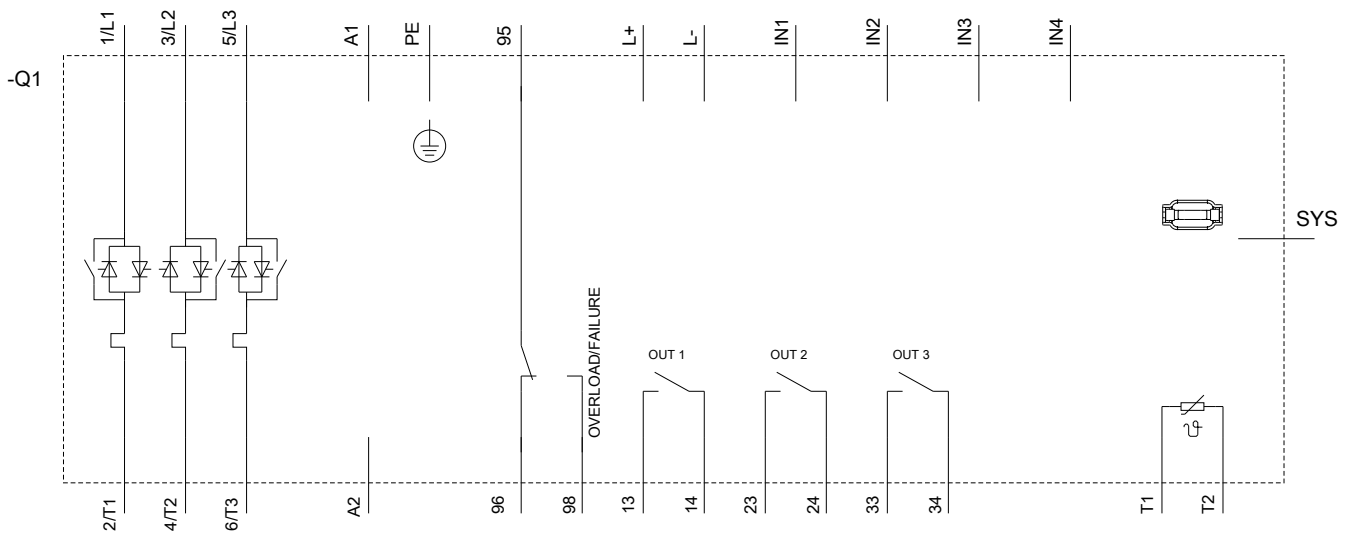
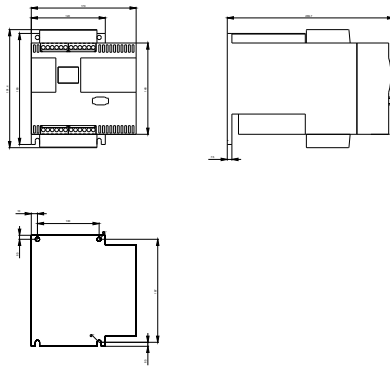
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4423-1BC45>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4423-1BC45>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4423-1BC45&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4423-1BC45&lang=en)



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