



SIRIUS soft starter Values at 690 V, 40 °C standard: 615 A, 630 kW Inside-delta: only up to 600 V 400-690 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5552-6HA16<<

| General technical data   |                          |
|--|--------------------------|
| product brand name   | SIRIUS                   |
| product designation  | Soft starter             |
| product feature  |                          |
| <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                      |
| product function   |                          |
| <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                      |
| product component motor brake output   | Yes                      |
| insulation voltage rated value   | 690 V                    |
| 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  |                          |
| operational current  |                          |
| <ul style="list-style-type: none"> <li>at 40 °C rated value</li> </ul>   | 615 A                    |
| <ul style="list-style-type: none"> <li>at 50 °C rated value</li> </ul>   | 551 A                    |
| <ul style="list-style-type: none"> <li>at 60 °C rated value</li> </ul>   | 489 A                    |
| operational current for 3-phase motors at inside-delta circuit   |                          |
| <ul style="list-style-type: none"> <li>at 40 °C rated value</li> </ul>   | 1 065 A                  |
| <ul style="list-style-type: none"> <li>at 50 °C rated value</li> </ul>   | 954 A                    |
| <ul style="list-style-type: none"> <li>at 60 °C rated value</li> </ul>   | 847 A                    |
| 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> </ul> </li> </ul>     | 355 kW                   |
| <ul style="list-style-type: none"> <li>at 400 V                             <ul style="list-style-type: none"> <li>at inside-delta circuit at 40 °C rated value</li> </ul> </li> </ul> | 630 kW                   |
| <ul style="list-style-type: none"> <li>at 500 V                             <ul style="list-style-type: none"> <li>at standard circuit at 40 °C rated value</li> </ul> </li> </ul>     | 400 kW                   |
| <ul style="list-style-type: none"> <li>at 500 V                             <ul style="list-style-type: none"> <li>at inside-delta circuit at 40 °C rated value</li> </ul> </li> </ul> | 710 kW                   |
| <ul style="list-style-type: none"> <li>at 690 V at standard circuit at 40 °C rated value</li> </ul>  | 630 kW                   |
| operating frequency rated value  | 50 ... 60 Hz             |
| relative negative tolerance of the operating frequency   | -10 %                    |
| relative positive tolerance of the operating frequency   | 10 %                     |

|  |  |
|--|--|
| operating voltage at standard circuit rated value                                | 400 ... 690 V  |
| 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                            | 400 ... 600 V  |
| 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       | 123 A  |
| continuous operating current [% of I <sub>e</sub> ] at 40 °C                     | 115 %  |
| power loss [W] at operational current at 40 °C during operation typical          | 186 W  |
| <b>Control circuit/ Control</b>  |  |
| type of voltage of the control supply voltage                                    | AC   |
| control supply voltage frequency 1 rated value                                   | 50 Hz  |
| control supply voltage frequency 2 rated value                                   | 60 Hz  |
| 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   | 230 V  |
| • at 60 Hz rated value   | 230 V  |
| 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  | 510 mm   |
| height   | 640 mm   |
| depth  | 290 mm   |
| 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  | 100 mm   |
| • at the side  | 5 mm   |
| • downwards  | 75 mm  |
| wire length maximum  | 500 m  |
| 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 DIN cable lug for main contacts |  |
| • finely stranded  | 50 ... 240 mm <sup>2</sup>   |
| • stranded   | 70 ... 240 mm <sup>2</sup>   |
| type of connectable conductor cross-sections for auxiliary contacts              |  |
| • solid  | 2x (0.5 ... 2.5 mm <sup>2</sup> )  |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>  | 2x (0.5 ... 1.5 mm <sup>2</sup> )                     |
| <b>type of connectable conductor cross-sections for 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> | 2/0 ... 500 kcmil<br>2x (20 ... 14)<br>2x (20 ... 16) |

### Ambient conditions

|   |   |
|---|---|
| <b>installation altitude at height above sea level</b>  | 5 000 m   |
| <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>   | 60 °C<br>-25 ... +80 °C   |
| <b>derating temperature</b>   | 40 °C   |
| <b>protection class IP on the front according to IEC 60529</b>  | IP00  |

### UL/CSA ratings

|  |  |
|--|--|
| <b>yielded mechanical performance [hp] for 3-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 inside-delta circuit 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 inside-delta circuit at 50 °C rated value</li> </ul> </li> </ul> | 450 hp<br>850 hp<br>600 hp<br>1 050 hp |
| <b>contact rating of auxiliary contacts according to UL</b>  | B300 / R300                            |

### Approvals Certificates

|             |                          |
|-------------|--------------------------|
| Environment | General Product Approval |
|-------------|--------------------------|

[Environmental Confirmations](#)



|     |                   |                      |
|-----|-------------------|----------------------|
| EMV | Test Certificates | Maritime application |
|-----|-------------------|----------------------|



[Special Test Certificate](#)



### other

[Confirmation](#)

[Confirmation](#)



### Further information

- Simulation Tool for Soft Starters (STS)  
<https://support.industry.siemens.com/cs/ww/en/view/101494917>
- Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>
- Information for data generation and storage  
<https://support.industry.siemens.com/cs/ww/en/view/109995012>
- 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?mlfb=3RW4454-6BC46>





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