



SIRIUS soft starter 200-600 V 210 A, 24 V AC/DC spring-type terminals  
Analog output

|   |   |
|---|---|
| <b>product brand name</b>                               | SIRIUS  |
| <b>product category</b>                                 | Hybrid switching devices  |
| <b>product designation</b>                              | Soft starter  |
| <b>product type designation</b>                         | 3RW52   |
| <b>manufacturer's article number</b>                    | <ul style="list-style-type: none"> <li>• of standard HMI module usable</li> <li>• of high feature HMI module usable</li> <li>• of communication module PROFINET standard usable</li> <li>• of communication module PROFIBUS usable</li> <li>• of communication module Modbus TCP usable</li> <li>• of communication module Modbus RTU usable</li> <li>• of communication module Ethernet/IP</li> <li>• of circuit breaker usable at 400 V</li> <li>• of circuit breaker usable at 500 V</li> <li>• of circuit breaker usable at 400 V at inside-delta circuit</li> <li>• of circuit breaker usable at 500 V at inside-delta circuit</li> <li>• of the gG fuse usable up to 690 V</li> <li>• of the gG fuse usable at inside-delta circuit up to 500 V</li> <li>• of full range R fuse link for semiconductor protection usable up to 690 V</li> <li>• of back-up R fuse link for semiconductor protection usable up to 690 V</li> </ul> |
| <b>General technical data</b>                           |   |
| <b>starting voltage [%]</b>                             | 30 ... 100 %  |
| <b>stopping voltage [%]</b>                             | 50 ... 50 %   |
| <b>start-up ramp time of soft starter</b>               | 0 ... 20 s  |
| <b>current limiting value [%] adjustable</b>            | 130 ... 700 %   |
| <b>certificate of suitability</b>                       | <ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> </ul>   |
| <b>product component is supported</b>                   | <ul style="list-style-type: none"> <li>• HMI-Standard</li> <li>• HMI-High Feature</li> </ul>  |
| <b>product feature integrated bypass contact system</b> |   |

[3RW5980-0HS00](#)

[3RW5980-0HF00](#)

[3RW5980-0CS00](#)

[3RW5980-0CP00](#)

[3RW5980-0CT00](#)

[3RW5980-0CR00](#)

[3RW5980-0CE00](#)

[3VA2325-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10](#)

[3VA2325-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10](#)

[3VA2440-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10](#)

[3VA2440-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10](#)

2x3NA3354-6; Type of coordination 1, Iq = 65 kA

2x3NA3354-6; Type of coordination 1, Iq = 65 kA

[3NE1230-2: Type of coordination 2, Iq = 65 kA](#)

[3NE3333: Type of coordination 2, Iq = 65 kA](#)

|   |   |
|---|---|
| <b>number of controlled phases</b>  | 3   |
| <b>trip class</b>   | CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2                          |
| <b>buffering time in the event of power failure</b>                                 |   |
| • for main current circuit  | 100 ms  |
| • for control circuit   | 100 ms  |
| <b>insulation voltage rated value</b>   | 600 V   |
| <b>degree of pollution</b>  | 3, acc. to IEC 60947-4-2  |
| <b>impulse voltage rated value</b>  | 6 kV  |
| <b>blocking voltage of the thyristor maximum</b>                                    | 1 600 V   |
| <b>service factor</b>   | 1   |
| <b>surge voltage resistance rated value</b>   | 6 kV  |
| <b>maximum permissible voltage for safe isolation</b>                               |   |
| • between main and auxiliary circuit  | 600 V   |
| <b>shock resistance</b>   | 15 g / 11 ms, from 12 g / 11 ms with potential contact lifting                  |
| <b>vibration resistance</b>   | 15 mm to 6 Hz; 2g to 500 Hz   |
| <b>utilization category acc. to IEC 60947-4-2</b>                                   | AC 53a  |
| <b>reference code acc. to IEC 81346-2</b>   | Q   |
| <b>Substance Prohibitance (Date)</b>  | 15.02.2018 00:00:00   |
| <b>product function</b>   |   |
| • ramp-up (soft starting)   | Yes   |
| • ramp-down (soft stop)   | Yes   |
| • Soft Torque   | Yes   |
| • adjustable current limitation   | Yes   |
| • pump ramp down  | Yes   |
| • intrinsic device protection   | Yes   |
| • motor overload protection   | Yes; Electronic motor overload protection                                       |
| • evaluation of thermistor motor protection   | No  |
| • inside-delta circuit  | Yes   |
| • auto-RESET  | Yes   |
| • manual RESET  | Yes   |
| • remote reset  | Yes; By turning off the control supply voltage                                  |
| • communication function  | Yes   |
| • operating measured value display  | Yes; Only in conjunction with special accessories                               |
| • error logbook   | Yes; Only in conjunction with special accessories                               |
| • via software parameterizable  | No  |
| • via software configurable   | Yes   |
| • <b>PROFInergy</b>   | Yes; in connection with the PROFINET Standard communication module              |
| • <b>firmware update</b>  | Yes   |
| • <b>removable terminal for control circuit</b>                                     | Yes   |
| • torque control  | No  |
| • analog output   | Yes; 4 ... 20 mA (default) / 0 ... 10 V (parameterizable with High Feature HMI) |
| <b>Power Electronics</b>  |   |
| <b>operational current</b>  |   |
| • at 40 °C rated value  | 210 A   |
| • at 50 °C rated value  | 186 A   |
| • at 60 °C rated value  | 170 A   |
| <b>operational current at inside-delta circuit</b>                                  |   |
| • at 40 °C rated value  | 364 A   |
| • at 50 °C rated value  | 322 A   |
| • at 60 °C rated value  | 294 A   |
| <b>operating voltage</b>  |   |
| • rated value   | 200 ... 600 V   |
| • at inside-delta circuit rated value   | 200 ... 600 V   |
| <b>relative negative tolerance of the operating voltage</b>                         | -15 %   |
| <b>relative positive tolerance of the operating voltage</b>                         | 10 %  |
| <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>operating power for 3-phase motors</b>   |        |
| • at 230 V at 40 °C rated value   | 55 kW  |
| • at 230 V at inside-delta circuit at 40 °C rated value                             | 110 kW |
| • at 400 V at 40 °C rated value   | 110 kW |
| • at 400 V at inside-delta circuit at 40 °C rated value                             | 200 kW |
| • at 500 V at 40 °C rated value   | 132 kW |
| • at 500 V at inside-delta circuit at 40 °C rated value                             | 250 kW |
| <b>Operating frequency 1 rated value</b>  | 50 Hz  |
| <b>Operating frequency 2 rated value</b>  | 60 Hz  |
| <b>relative negative tolerance of the operating frequency</b>                       | -10 %  |
| <b>relative positive tolerance of the operating frequency</b>                       | 10 %   |
| <b>adjustable motor current</b>   |        |
| • at rotary coding switch on switch position 1                                      | 90 A   |
| • at rotary coding switch on switch position 2                                      | 98 A   |
| • at rotary coding switch on switch position 3                                      | 106 A  |
| • at rotary coding switch on switch position 4                                      | 114 A  |
| • at rotary coding switch on switch position 5                                      | 122 A  |
| • at rotary coding switch on switch position 6                                      | 130 A  |
| • at rotary coding switch on switch position 7                                      | 138 A  |
| • at rotary coding switch on switch position 8                                      | 146 A  |
| • at rotary coding switch on switch position 9                                      | 154 A  |
| • at rotary coding switch on switch position 10                                     | 162 A  |
| • at rotary coding switch on switch position 11                                     | 170 A  |
| • at rotary coding switch on switch position 12                                     | 178 A  |
| • at rotary coding switch on switch position 13                                     | 186 A  |
| • at rotary coding switch on switch position 14                                     | 194 A  |
| • at rotary coding switch on switch position 15                                     | 202 A  |
| • at rotary coding switch on switch position 16                                     | 210 A  |
| • minimum   | 90 A   |
| <b>adjustable motor current</b>   |        |
| • for inside-delta circuit at rotary coding switch on switch position 1             | 156 A  |
| • for inside-delta circuit at rotary coding switch on switch position 2             | 170 A  |
| • for inside-delta circuit at rotary coding switch on switch position 3             | 184 A  |
| • for inside-delta circuit at rotary coding switch on switch position 4             | 197 A  |
| • for inside-delta circuit at rotary coding switch on switch position 5             | 211 A  |
| • for inside-delta circuit at rotary coding switch on switch position 6             | 225 A  |
| • for inside-delta circuit at rotary coding switch on switch position 7             | 239 A  |
| • for inside-delta circuit at rotary coding switch on switch position 8             | 253 A  |
| • for inside-delta circuit at rotary coding switch on switch position 9             | 267 A  |
| • for inside-delta circuit at rotary coding switch on switch position 10            | 281 A  |
| • for inside-delta circuit at rotary coding switch on switch position 11            | 294 A  |
| • for inside-delta circuit at rotary coding switch on switch position 12            | 308 A  |
| • for inside-delta circuit at rotary coding switch on switch position 13            | 322 A  |
| • for inside-delta circuit at rotary coding switch on switch position 14            | 336 A  |
| • for inside-delta circuit at rotary coding switch on switch position 15            | 350 A  |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 16</li> <li>• at inside-delta circuit minimum</li> </ul>                                     | 364 A<br>156 A   |
| <b>minimum load [%]</b>   | 15 %; Relative to smallest settable I <sub>e</sub>   |
| <b>power loss [W] for rated value of the current at AC</b> <ul style="list-style-type: none"> <li>• at 40 °C after startup</li> <li>• at 50 °C after startup</li> <li>• at 60 °C after startup</li> </ul> | 75 W<br>68 W<br>63 W   |
| <b>power loss [W] at AC at current limitation 350 %</b> <ul style="list-style-type: none"> <li>• at 40 °C during startup</li> <li>• at 50 °C during startup</li> <li>• at 60 °C during startup</li> </ul> | 3 562 W<br>2 979 W<br>2 617 W  |
| <b>Control circuit/ Control</b>   |  |
| <b>type of voltage of the control supply voltage</b>  | AC/DC  |
| <b>control supply voltage at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>  | 24 V<br>24 V   |
| <b>relative negative tolerance of the control supply voltage at AC at 50 Hz</b>   | -20 %  |
| <b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b>   | 20 %   |
| <b>relative negative tolerance of the control supply voltage at AC at 60 Hz</b>   | -20 %  |
| <b>relative positive tolerance of the control supply voltage at AC at 60 Hz</b>   | 20 %   |
| <b>control supply voltage frequency</b>   | 50 ... 60 Hz   |
| <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</b> <ul style="list-style-type: none"> <li>• at DC rated value</li> </ul>   | 24 V   |
| <b>relative negative tolerance of the control supply voltage at DC</b>  | -20 %  |
| <b>relative positive tolerance of the control supply voltage at DC</b>  | 20 %   |
| <b>control supply current in standby mode rated value</b>   | 160 mA   |
| <b>holding current in bypass operation rated value</b>  | 470 mA   |
| <b>locked-rotor current at close of bypass contact maximum</b>  | 7.6 A  |
| <b>inrush current peak at application of control supply voltage maximum</b>   | 3.3 A  |
| <b>duration of inrush current peak at application of control supply voltage</b>   | 12.1 ms  |
| <b>design of the overvoltage protection</b>   | Varistor   |
| <b>design of short-circuit protection for control circuit</b>   | 4 A gG fuse (I <sub>cu</sub> =1 kA), 6 A quick-acting fuse (I <sub>cu</sub> =1 kA), C1 miniature circuit breaker (I <sub>cu</sub> = 600 A), C6 miniature circuit breaker (I <sub>cu</sub> = 300 A); Is not part of scope of supply |
| <b>Inputs/ Outputs</b>  |  |
| <b>number of digital inputs</b>   | 1  |
| <b>number of inputs for thermistor connection</b>   | 0  |
| <b>number of digital outputs</b> <ul style="list-style-type: none"> <li>• not parameterizable</li> </ul>  | 3<br>2   |
| <b>digital output version</b>   | 2 normally-open contacts (NO) / 1 changeover contact (CO)  |
| <b>number of analog outputs</b>   | 1  |
| <b>switching capacity current of the relay outputs</b> <ul style="list-style-type: none"> <li>• at AC-15 at 250 V rated value</li> <li>• at DC-13 at 24 V rated value</li> </ul>                          | 3 A<br>1 A   |
| <b>Installation/ mounting/ dimensions</b>   |  |
| <b>mounting position</b>  | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back   |
| <b>fastening method</b>   | screw fixing   |

|  |   |
|--|---|
| <b>height</b>  | 393 mm  |
| <b>width</b>   | 210 mm  |
| <b>depth</b>   | 203 mm  |
| required spacing with side-by-side mounting                                  |   |
| • forwards   | 10 mm   |
| • backwards  | 0 mm  |
| • upwards  | 100 mm  |
| • downwards  | 75 mm   |
| • at the side  | 5 mm  |
| <b>weight without packaging</b>  | 9.9 kg  |
| <b>Connections/ Terminals</b>  |   |
| <b>type of electrical connection</b>   |   |
| • for main current circuit   | busbar connection   |
| • for control circuit  | spring-loaded terminals   |
| <b>width of connection bar maximum</b>                                       | 45 mm   |
| <b>type of connectable conductor cross-sections</b>                          |   |
| • for DIN cable lug for main contacts stranded                               | 2x (50 ... 240 mm <sup>2</sup> )  |
| • for DIN cable lug for main contacts finely stranded                        | 2x (70 ... 240 mm <sup>2</sup> )  |
| <b>type of connectable conductor cross-sections</b>                          |   |
| • for control circuit solid  | 2x (0.25 ... 1.5 mm <sup>2</sup> )  |
| • for control circuit finely stranded with core end processing               | 2x (0.25 ... 1.5 mm <sup>2</sup> )  |
| • at AWG cables for control circuit solid                                    | 2x (24 ... 16)  |
| • at AWG cables for control circuit finely stranded with core end processing | 2x (24 ... 16)  |
| <b>wire length</b>   |   |
| • between soft starter and motor maximum                                     | 800 m   |
| • at the digital inputs at AC maximum  | 100 m   |
| • at the digital inputs at DC maximum  | 1 000 m   |
| <b>tightening torque</b>   |   |
| • for main contacts with screw-type terminals                                | 14 ... 24 N·m   |
| • for auxiliary and control contacts with screw-type terminals               | 0.8 ... 1.2 N·m   |
| <b>tightening torque [lbf·in]</b>  |   |
| • for main contacts with screw-type terminals                                | 124 ... 210 lbf·in  |
| • for auxiliary and control contacts with screw-type terminals               | 7 ... 10.3 lbf·in   |
| <b>Ambient conditions</b>  |   |
| installation altitude at height above sea level maximum                      | 5 000 m; Derating as of 1000 m, see catalog   |
| <b>ambient temperature</b>   |   |
| • during operation   | -25 ... +60 °C; Please observe derating at temperatures of 40 °C or above   |
| • during storage and transport   | -40 ... +80 °C  |
| <b>environmental category</b>  |   |
| • during operation acc. to IEC 60721   | 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 |
| • during storage acc. to IEC 60721   | 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4                 |
| • during transport acc. to IEC 60721   | 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)   |
| <b>EMC emitted interference</b>  | acc. to IEC 60947-4-2: Class A  |
| <b>Communication/ Protocol</b>   |   |
| <b>communication module is supported</b>                                     |   |
| • PROFINET standard  | Yes   |
| • EtherNet/IP  | Yes   |
| • Modbus RTU   | Yes   |
| • Modbus TCP   | Yes   |
| • PROFIBUS   | Yes   |
| <b>UL/CSA ratings</b>  |   |
| <b>manufacturer's article number</b>   |   |

● of circuit breaker

- usable for Standard Faults at 460/480 V according to UL
- usable for High Faults at 460/480 V according to UL
- usable for Standard Faults at 460/480 V at inside-delta circuit according to UL
- usable for High Faults at 460/480 V at inside-delta circuit according to UL
- usable for Standard Faults at 575/600 V according to UL
- usable for Standard Faults at 575/600 V at inside-delta circuit according to UL

● of the fuse

- usable for Standard Faults up to 575/600 V according to UL
- usable for High Faults up to 575/600 V according to UL
- usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL
- usable for High Faults at inside-delta circuit up to 575/600 V according to UL

Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; I<sub>q</sub> = 10 kA

Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; I<sub>q</sub> max = 65 kA

Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; I<sub>q</sub> = 10 kA

Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; I<sub>q</sub> max = 65 kA

Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; I<sub>q</sub> = 10 kA

Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; I<sub>q</sub> = 10 kA

Type: Class J / L, max. 700 A; I<sub>q</sub> = 10 kA

Type: Class J / L, max. 700 A; I<sub>q</sub> = 100 kA

Type: Class J / L, max. 700 A; I<sub>q</sub> = 10 kA

Type: Class J / L, max. 700 A; I<sub>q</sub> = 100 kA

**operating power [hp] for 3-phase motors**

- at 200/208 V at 50 °C rated value
- at 220/230 V at 50 °C rated value
- at 460/480 V at 50 °C rated value
- at 575/600 V at 50 °C rated value
- at 200/208 V at inside-delta circuit at 50 °C rated value
- at 220/230 V at inside-delta circuit at 50 °C rated value
- at 460/480 V at inside-delta circuit at 50 °C rated value
- at 575/600 V at inside-delta circuit at 50 °C rated value

60 hp  
60 hp  
150 hp  
150 hp  
100 hp  
125 hp  
250 hp  
300 hp

**contact rating of auxiliary contacts according to UL**

R300-B300

**Safety related data**

**protection class IP on the front acc. to IEC 60529**

IP00; IP20 with cover

**touch protection on the front acc. to IEC 60529**

finger-safe, for vertical contact from the front with cover

**electromagnetic compatibility**

in accordance with IEC 60947-4-2

**Certificates/ approvals**

**General Product Approval**

**EMC**

**Declaration of Conformity**



**Test Certificates**

**Marine / Shipping**

[Type Test Certificates/Test Report](#)



**other**

[Confirmation](#)

## Further information

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=3RW5243-2AC05>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5243-2AC05>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5243-2AC05>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5243-2AC05&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5243-2AC05&lang=en)

Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5243-2AC05/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5243-2AC05&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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



