



SIRIUS soft starter 200-600 V 113 A, 24 V AC/DC spring-type terminals  
Thermistor input

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| <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 400 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> | <ul style="list-style-type: none"> <li><a href="#">3RW5980-0HS00</a></li> <li><a href="#">3RW5980-0HF00</a></li> <li><a href="#">3RW5980-0CS00</a></li> <li><a href="#">3RW5980-0CP00</a></li> <li><a href="#">3RW5980-0CT00</a></li> <li><a href="#">3RW5980-0CR00</a></li> <li><a href="#">3RW5980-0CE00</a></li> <li><a href="#">3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li><a href="#">3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li><a href="#">3NA3244-6; Type of coordination 1, Iq = 65 kA</a></li> <li><a href="#">3NA3244-6; Type of coordination 1, Iq = 65 kA</a></li> <li><a href="#">3NE1225-0; Type of coordination 2, Iq = 65 kA</a></li> <li><a href="#">3NE3332-0B; Type of coordination 2, Iq = 65 kA</a></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>   | <ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>  |
| <b>product component is supported</b>   |  |
| <ul style="list-style-type: none"> <li>• HMI-Standard</li> <li>• HMI-High Feature</li> </ul>  | <ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> </ul>   |
| <b>product feature integrated bypass contact system</b>   | Yes  |
| <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>   |  |

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| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for control circuit</li> </ul>  | 100 ms  |
| insulation voltage rated value   | 100 ms  |
| insulation voltage rated value   | 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>   | 1 800 V   |
| <b>service factor</b>  | 1   |
| <b>surge voltage resistance rated value</b>  | 6 kV  |
| <b>maximum permissible voltage for safe isolation</b>  |   |
| <ul style="list-style-type: none"> <li>• between main and auxiliary circuit</li> </ul>   | 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   |
| utilization category acc. to IEC 60947-4-2   | 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>  |   |
| <ul style="list-style-type: none"> <li>• ramp-up (soft starting)</li> <li>• ramp-down (soft stop)</li> <li>• Soft Torque</li> <li>• adjustable current limitation</li> <li>• pump ramp down</li> <li>• intrinsic device protection</li> <li>• motor overload protection</li> </ul>   | Yes   |
|  | Yes   |
|  | Yes   |
|  | Yes   |
|  | Yes   |
|  | Yes   |
|  | Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) |
| <ul style="list-style-type: none"> <li>• evaluation of thermistor motor protection</li> <li>• inside-delta circuit</li> <li>• auto-RESET</li> <li>• manual RESET</li> <li>• remote reset</li> <li>• communication function</li> <li>• operating measured value display</li> <li>• error logbook</li> <li>• via software parameterizable</li> <li>• via software configurable</li> <li>• <b>PROFInergy</b></li> </ul> | Yes; Type A PTC or Klixon / Thermoclick   |
|  | Yes   |
|  | Yes   |
|  | Yes   |
|  | Yes; By turning off the control supply voltage  |
|  | Yes   |
|  | Yes; Only in conjunction with special accessories   |
|  | Yes; Only in conjunction with special accessories   |
|  | No  |
|  | Yes   |
|  | Yes; in connection with the PROFINET Standard communication module                                |
| <ul style="list-style-type: none"> <li>• <b>firmware update</b></li> <li>• <b>removable terminal for control circuit</b></li> <li>• torque control</li> <li>• analog output</li> </ul>   | Yes   |
|  | Yes   |
|  | No  |
|  | No  |
| <b>Power Electronics</b>   |   |
| <b>operational current</b>   |   |
| <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>   | 113 A   |
|  | 101 A   |
|  | 89 A  |
| <b>operational current at inside-delta circuit</b>   |   |
| <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>   | 196 A   |
|  | 175 A   |
|  | 154 A   |
| <b>operating voltage</b>   |   |
| <ul style="list-style-type: none"> <li>• rated value</li> <li>• at inside-delta circuit rated value</li> </ul>   | 200 ... 600 V   |
|  | 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>  |   |

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| • at 230 V at 40 °C rated value  | 30 kW  |
| • at 230 V at inside-delta circuit at 40 °C rated value                  | 55 kW  |
| • at 400 V at 40 °C rated value  | 55 kW  |
| • at 400 V at inside-delta circuit at 40 °C rated value                  | 110 kW |
| • at 500 V at 40 °C rated value  | 75 kW  |
| • at 500 V at inside-delta circuit at 40 °C rated value                  | 132 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                           | 53 A   |
| • at rotary coding switch on switch position 2                           | 57 A   |
| • at rotary coding switch on switch position 3                           | 61 A   |
| • at rotary coding switch on switch position 4                           | 65 A   |
| • at rotary coding switch on switch position 5                           | 69 A   |
| • at rotary coding switch on switch position 6                           | 73 A   |
| • at rotary coding switch on switch position 7                           | 77 A   |
| • at rotary coding switch on switch position 8                           | 81 A   |
| • at rotary coding switch on switch position 9                           | 85 A   |
| • at rotary coding switch on switch position 10                          | 89 A   |
| • at rotary coding switch on switch position 11                          | 93 A   |
| • at rotary coding switch on switch position 12                          | 97 A   |
| • at rotary coding switch on switch position 13                          | 101 A  |
| • at rotary coding switch on switch position 14                          | 105 A  |
| • at rotary coding switch on switch position 15                          | 109 A  |
| • at rotary coding switch on switch position 16                          | 113 A  |
| • minimum  | 53 A   |
| <b>adjustable motor current</b>  |        |
| • for inside-delta circuit at rotary coding switch on switch position 1  | 91.8 A |
| • for inside-delta circuit at rotary coding switch on switch position 2  | 98.7 A |
| • for inside-delta circuit at rotary coding switch on switch position 3  | 106 A  |
| • for inside-delta circuit at rotary coding switch on switch position 4  | 113 A  |
| • for inside-delta circuit at rotary coding switch on switch position 5  | 120 A  |
| • for inside-delta circuit at rotary coding switch on switch position 6  | 126 A  |
| • for inside-delta circuit at rotary coding switch on switch position 7  | 133 A  |
| • for inside-delta circuit at rotary coding switch on switch position 8  | 140 A  |
| • for inside-delta circuit at rotary coding switch on switch position 9  | 147 A  |
| • for inside-delta circuit at rotary coding switch on switch position 10 | 154 A  |
| • for inside-delta circuit at rotary coding switch on switch position 11 | 161 A  |
| • for inside-delta circuit at rotary coding switch on switch position 12 | 168 A  |
| • for inside-delta circuit at rotary coding switch on switch position 13 | 175 A  |
| • for inside-delta circuit at rotary coding switch on switch position 14 | 182 A  |
| • for inside-delta circuit at rotary coding switch on switch position 15 | 189 A  |
| • for inside-delta circuit at rotary coding switch on switch position 16 | 196 A  |
| • at inside-delta circuit minimum  | 91.8 A |

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| <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>                      |  |
| • at 40 °C after startup  | 46 W   |
| • at 50 °C after startup  | 42 W   |
| • at 60 °C after startup  | 39 W   |
| <b>power loss [W] at AC at current limitation 350 %</b>                         |  |
| • at 40 °C during startup   | 1 512 W  |
| • at 50 °C during startup   | 1 291 W  |
| • at 60 °C during startup   | 1 086 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>   |  |
| • at 50 Hz rated value  | 24 V   |
| • at 60 Hz rated value  | 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>   |  |
| • at DC rated value   | 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>                          | 380 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>                               | 1; Type A PTC or Klixon / Thermoclick  |
| <b>number of digital outputs</b>  | 3  |
| • not parameterizable   | 2  |
| <b>digital output version</b>   | 2 normally-open contacts (NO) / 1 changeover contact (CO)  |
| <b>number of analog outputs</b>   | 0  |
| <b>switching capacity current of the relay outputs</b>                          |  |
| • at AC-15 at 250 V rated value   | 3 A  |
| • at DC-13 at 24 V rated value  | 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>   | 306 mm   |
| <b>width</b>  | 185 mm   |

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| <b>depth</b>   | 203 mm  |
| required spacing with side-by-side mounting  |   |
| <ul style="list-style-type: none"> <li>• forwards</li> <li>• backwards</li> <li>• upwards</li> <li>• downwards</li> <li>• at the side</li> </ul>   | 10 mm<br>0 mm<br>100 mm<br>75 mm<br>5 mm  |
| <b>weight without packaging</b>  | 6.6 kg  |
| <b>Connections/ Terminals</b>  |   |
| <b>type of electrical connection</b>   |   |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for control circuit</li> </ul>  | busbar connection<br>spring-loaded terminals  |
| <b>width of connection bar maximum</b>   | 25 mm   |
| <b>wire length for thermistor connection</b>   |   |
| <ul style="list-style-type: none"> <li>• with conductor cross-section = 0.5 mm<sup>2</sup> maximum</li> <li>• with conductor cross-section = 1.5 mm<sup>2</sup> maximum</li> <li>• with conductor cross-section = 2.5 mm<sup>2</sup> maximum</li> </ul>  | 50 m<br>150 m<br>250 m  |
| <b>type of connectable conductor cross-sections</b>  |   |
| <ul style="list-style-type: none"> <li>• for DIN cable lug for main contacts stranded</li> <li>• for DIN cable lug for main contacts finely stranded</li> </ul>  | 2x (16 ... 95 mm <sup>2</sup> )<br>2x (25 ... 120 mm <sup>2</sup> )   |
| <b>type of connectable conductor cross-sections</b>  |   |
| <ul style="list-style-type: none"> <li>• for control circuit solid</li> <li>• for control circuit finely stranded with core end processing</li> <li>• at AWG cables for control circuit solid</li> <li>• at AWG cables for control circuit finely stranded with core end processing</li> </ul> | 2x (0.25 ... 1.5 mm <sup>2</sup> )<br>2x (0.25 ... 1.5 mm <sup>2</sup> )<br>2x (24 ... 16)<br>2x (24 ... 16)  |
| <b>wire length</b>   |   |
| <ul style="list-style-type: none"> <li>• between soft starter and motor maximum</li> <li>• at the digital inputs at AC maximum</li> <li>• at the digital inputs at DC maximum</li> </ul>   | 800 m<br>100 m<br>1 000 m   |
| <b>tightening torque</b>   |   |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>  | 10 ... 14 N·m<br>0.8 ... 1.2 N·m  |
| <b>tightening torque [lbf·in]</b>  |   |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>  | 89 ... 124 lbf·in<br>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>   |   |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage and transport</li> </ul>   | -25 ... +60 °C; Please observe derating at temperatures of 40 °C or above<br>-40 ... +80 °C   |
| <b>environmental category</b>  |   |
| <ul style="list-style-type: none"> <li>• during operation acc. to IEC 60721</li> <li>• during storage acc. to IEC 60721</li> <li>• during transport acc. to IEC 60721</li> </ul>   | 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6<br>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4<br>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>   |   |
| <ul style="list-style-type: none"> <li>• PROFINET standard</li> <li>• EtherNet/IP</li> <li>• Modbus RTU</li> <li>• Modbus TCP</li> <li>• PROFIBUS</li> </ul>   | Yes<br>Yes<br>Yes<br>Yes<br>Yes   |

**UL/CSA ratings**

|   |   |
|---|---|
| <p><b>manufacturer's article number</b></p> <ul style="list-style-type: none"> <li> <p><b>• of circuit breaker</b></p> <ul style="list-style-type: none"> <li>— usable for Standard Faults at 460/480 V according to UL</li> <li>— usable for High Faults at 460/480 V according to UL</li> <li>— usable for Standard Faults at 460/480 V at inside-delta circuit according to UL</li> <li>— usable for High Faults at 460/480 V at inside-delta circuit according to UL</li> <li>— usable for Standard Faults at 575/600 V according to UL</li> <li>— usable for Standard Faults at 575/600 V at inside-delta circuit according to UL</li> </ul> </li> <li> <p><b>• of the fuse</b></p> <ul style="list-style-type: none"> <li>— usable for Standard Faults up to 575/600 V according to UL</li> <li>— usable for High Faults up to 575/600 V according to UL</li> <li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</li> <li>— usable for High Faults at inside-delta circuit up to 575/600 V according to UL</li> </ul> </li> </ul> | <p>Siemens type: 3VA52, max. 250 A; Iq = 10 kA</p> <p>Siemens type: 3VA52, max. 250 A; Iq max = 65 kA</p> <p>Siemens type: 3VA52, max. 250 A; Iq = 10 kA</p> <p>Siemens type: 3VA52, max. 250 A; Iq max = 65 kA</p> <p>Siemens type: 3VA52, max. 250 A; Iq = 10 kA</p> <p>Siemens type: 3VA52, max. 250 A; Iq = 10 kA</p> <p>Type: Class RK5 / K5, max. 350 A; Iq = 10 kA</p> <p>Type: Class J / L, max. 350 A; Iq = 100 kA</p> <p>Type: Class RK5 / K5, max. 350 A; Iq = 10 kA</p> <p>Type: Class J / L, max. 350 A; Iq = 100 kA</p> |
| <p><b>operating power [hp] for 3-phase motors</b></p> <ul style="list-style-type: none"> <li>• at 200/208 V at 50 °C rated value</li> <li>• at 220/230 V at 50 °C rated value</li> <li>• at 460/480 V at 50 °C rated value</li> <li>• at 575/600 V at 50 °C rated value</li> <li>• at 200/208 V at inside-delta circuit at 50 °C rated value</li> <li>• at 220/230 V at inside-delta circuit at 50 °C rated value</li> <li>• at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>• at 575/600 V at inside-delta circuit at 50 °C rated value</li> </ul>  | <p>30 hp</p> <p>30 hp</p> <p>75 hp</p> <p>100 hp</p> <p>50 hp</p> <p>60 hp</p> <p>125 hp</p> <p>150 hp</p>  |
| <p><b>contact rating of auxiliary contacts according to UL</b></p>  | <p>R300-B300</p>  |

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|---|---|
| <b>Safety related data</b>                                |   |
| <b>protection class IP on the front acc. to IEC 60529</b> | IP00; IP20 with cover                                       |
| <b>touch protection on the front acc. to IEC 60529</b>    | finger-safe, for vertical contact from the front with cover |
| <b>electromagnetic compatibility</b>                      | in accordance with IEC 60947-4-2                            |

**Certificates/ approvals**

|                                 |            |                                  |
|---------------------------------|------------|----------------------------------|
| <b>General Product Approval</b> | <b>EMC</b> | <b>Declaration of Conformity</b> |
|---------------------------------|------------|----------------------------------|



**Test Certificates Marine / Shipping**

[Type Test Certificates/Test Report](#)



**other**

**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=3RW5234-2TC05>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5234-2TC05>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5234-2TC05>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5234-2TC05&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5234-2TC05&lang=en)

**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

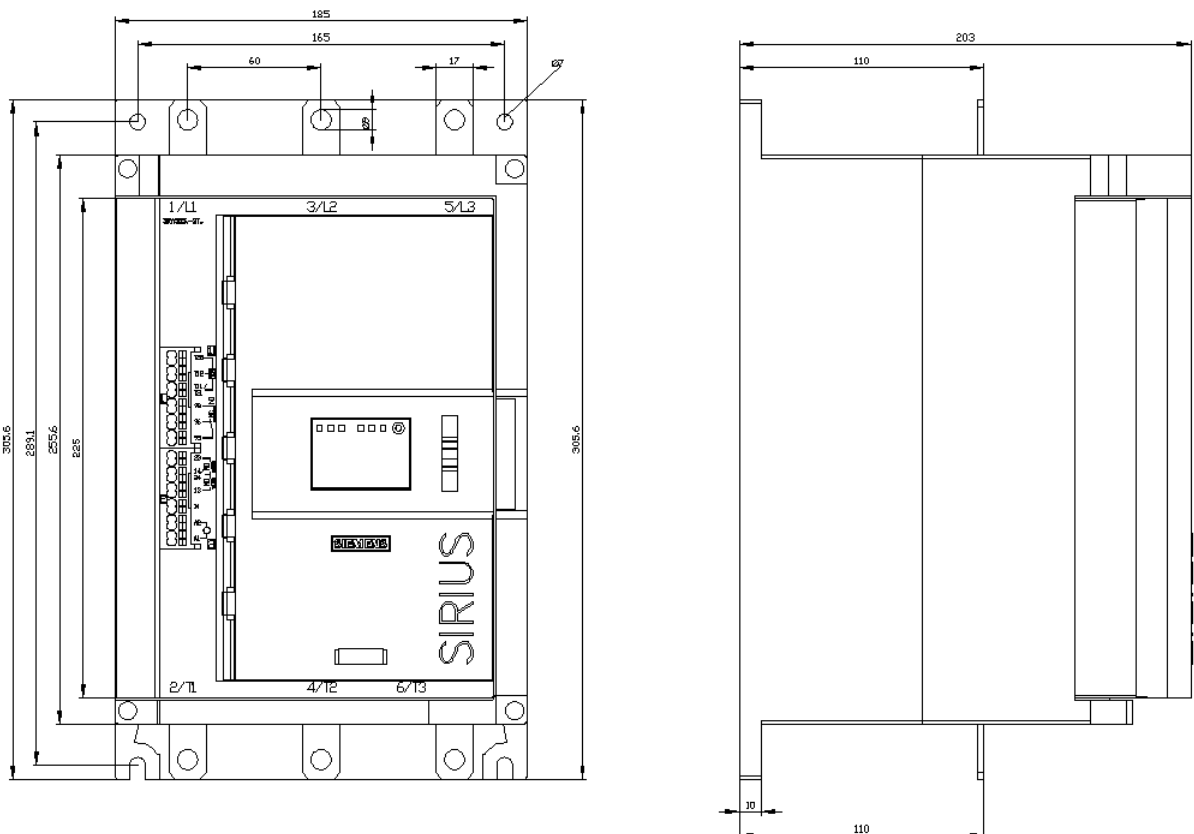
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5234-2TC05/char>

**Characteristic: Installation altitude**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5234-2TC05&objecttype=14&gridview=view1>

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

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





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