



SIRIUS soft starter 200-480 V 77 A, 24 V AC/DC Screw terminals

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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>              | 3RW55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>manufacturer's article number</b>         | <ul style="list-style-type: none"> <li>• of high feature HMI module usable</li> <li>• of communication module PROFINET standard usable</li> <li>• of communication module PROFINET high-feature 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> |
|                                              | <a href="#">3RW5980-0HF00</a><br><a href="#">3RW5980-0CS00</a><br><a href="#">3RW5950-0CH00</a><br><a href="#">3RW5980-0CP00</a><br><a href="#">3RW5980-0CT00</a><br><a href="#">3RW5980-0CR00</a><br><a href="#">3RW5980-0CE00</a><br><a href="#">3VA2110-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10</a><br><a href="#">3VA2110-7MN32-0AA0: Type of coordination 1, Iq = 20 kA, CLASS 10</a><br><a href="#">3VA2216-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10</a><br><a href="#">3VA2216-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10</a><br><a href="#">3NA3132-6: Type of coordination 1, Iq = 65 kA</a><br><a href="#">3NA3132-6: Type of coordination 1, Iq = 65 kA</a><br><a href="#">3NE1224-0: Type of coordination 2, Iq = 65 kA</a><br><a href="#">3NE3227: Type of coordination 2, Iq = 65 kA</a>                                                                                                          |
| <b>General technical data</b>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>starting voltage [%]</b>                  | 20 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>stopping voltage [%]</b>                  | 50 ... 50 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>start-up ramp time of soft starter</b>    | 0 ... 360 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>ramp-down time of soft starter</b>        | 0 ... 360 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>start torque [%]</b>                      | 10 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>stopping torque [%]</b>                   | 10 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>torque limitation [%]</b>                 | 20 ... 200 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>current limiting value [%] adjustable</b> | 125 ... 800 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>breakaway voltage [%] adjustable</b>      | 40 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>breakaway time adjustable</b>             | 0 ... 2 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>number of parameter sets</b>              | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>accuracy class acc. to IEC 61557-12</b>   | 5 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>certificate of suitability</b>            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| <ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                   | Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                              |
| <b>product component</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• HMI-High Feature</li> <li>• is supported HMI-High Feature</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                   | Yes<br>Yes                                                                                                                                                                                                                                                                                                     |
| <b>product feature integrated bypass contact system</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes                                                                                                                                                                                                                                                                                                            |
| <b>number of controlled phases</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3                                                                                                                                                                                                                                                                                                              |
| <b>trip class</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2                                                                                                                                                                                                                                                   |
| <b>current unbalance limiting value [%]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10 ... 60 %                                                                                                                                                                                                                                                                                                    |
| <b>ground-fault monitoring limiting value [%]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 ... 95 %                                                                                                                                                                                                                                                                                                    |
| <b>buffering time in the event of power failure</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for control circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                     | 100 ms<br>100 ms                                                                                                                                                                                                                                                                                               |
| <b>idle time adjustable</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0 ... 255 s                                                                                                                                                                                                                                                                                                    |
| insulation voltage rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 480 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 400 V                                                                                                                                                                                                                                                                                                        |
| <b>service factor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1.15                                                                                                                                                                                                                                                                                                           |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                          | 480 V; does not apply for thermistor connection                                                                                                                                                                                                                                                                |
| <b>shock resistance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 15 g / 11 ms, from 6 g / 11 ms with potential contact lifting                                                                                                                                                                                                                                                  |
| <b>vibration resistance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15 mm up to 6 Hz; 2 g up to 500 Hz                                                                                                                                                                                                                                                                             |
| <b>recovery time after overload trip adjustable</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             | 60 ... 1 800 s                                                                                                                                                                                                                                                                                                 |
| 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                                                                                                                                                                                                                                                                                                     |
| <b>product function</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• ramp-up (soft starting)</li> <li>• ramp-down (soft stop)</li> <li>• breakaway pulse</li> <li>• adjustable current limitation</li> <li>• creep speed in both directions of rotation</li> <li>• pump ramp down</li> <li>• DC braking</li> <li>• motor heating</li> <li>• slave pointer function</li> <li>• trace function</li> <li>• intrinsic device protection</li> <li>• motor overload protection</li> </ul>                                         | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) / When using the motor overload protection according to ATEX, an upstream contactor is required in inside-delta circuit. |
| <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>• event list</li> <li>• error logbook</li> <li>• via software parameterizable</li> <li>• via software configurable</li> <li>• screw terminal</li> <li>• spring-loaded terminal</li> <li>• PROFINergy</li> </ul> | Yes; Type A PTC or Klixon / Thermoclick<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>No                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• <b>firmware update</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes; in connection with the PROFINET Standard and PROFINET High-Feature communication modules<br>Yes                                                                                                                                                                                                           |

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| <ul style="list-style-type: none"> <li>• <b>removable terminal for control circuit</b></li> <li>• voltage ramp</li> <li>• torque control</li> <li>• combined braking</li> <li>• analog output</li> <li>• programmable control inputs/outputs</li> <li>• condition monitoring</li> <li>• automatic parameterisation</li> <li>• application wizards</li> <li>• alternative run-down</li> <li>• emergency operation mode</li> <li>• reversing operation</li> <li>• soft starting at heavy starting conditions</li> </ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes; 4 ... 20 mA (default) / 0 ... 10 V<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes |
| <b>Power Electronics</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                             |
| <b>operational current</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             |
| <ul style="list-style-type: none"> <li>• at 40 °C rated value</li> <li>• at 40 °C rated value minimum</li> <li>• at 50 °C rated value</li> <li>• at 60 °C rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                      | 77 A<br>16 A<br>68 A<br>62 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>                                                                                                                                                                                                                                                                                                                                                                              | 133 A<br>118 A<br>107 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 ... 480 V<br>200 ... 480 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                             |
| <ul style="list-style-type: none"> <li>• at 230 V at 40 °C rated value</li> <li>• at 230 V at inside-delta circuit at 40 °C rated value</li> <li>• at 400 V at 40 °C rated value</li> <li>• at 400 V at inside-delta circuit at 40 °C rated value</li> </ul>                                                                                                                                                                                                                                                          | 22 kW<br>37 kW<br>37 kW<br>75 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>minimum load [%]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 %; Relative to set 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>                                                                                                                                                                                                                                                                                                                                                                        | 23 W<br>20 W<br>19 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>                                                                                                                                                                                                                                                                                                                                                                     | 1 083 W<br>921 W<br>814 W                                                                                                   |
| <b>type of the motor protection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Electronic, tripping in the event of thermal overload of the motor                                                          |
| <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</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -20 %                                                                                                                       |

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| <b>voltage at AC at 60 Hz</b>                                                                                                                                                                            |                                                                                                                                                                                |
| <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><br>• 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>                                                                                                                                                | 440 mA                                                                                                                                                                         |
| <b>holding current in bypass operation rated value</b>                                                                                                                                                   | 870 mA                                                                                                                                                                         |
| <b>locked-rotor current at close of bypass contact maximum</b>                                                                                                                                           | 6.3 A                                                                                                                                                                          |
| <b>inrush current peak at application of control supply voltage maximum</b>                                                                                                                              | 7.5 A                                                                                                                                                                          |
| <b>duration of inrush current peak at application of control supply voltage</b>                                                                                                                          | 20 ms                                                                                                                                                                          |
| <b>design of the overvoltage protection</b>                                                                                                                                                              | Varistor                                                                                                                                                                       |
| <b>design of short-circuit protection for control circuit</b>                                                                                                                                            | 4 A gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply |
| <b>Inputs/ Outputs</b>                                                                                                                                                                                   |                                                                                                                                                                                |
| <b>number of digital inputs</b><br>• parameterizable                                                                                                                                                     | 4<br>4                                                                                                                                                                         |
| • <b>number of digital outputs</b><br>• number of digital outputs parameterizable<br>• number of digital outputs not parameterizable                                                                     | 4<br>3<br>1                                                                                                                                                                    |
| <b>digital output version</b>                                                                                                                                                                            | 3 normally-open contacts (NO) / 1 changeover contact (CO)                                                                                                                      |
| <b>number of analog outputs</b>                                                                                                                                                                          | 1                                                                                                                                                                              |
| <b>switching capacity current of the relay outputs</b><br>• at AC-15 at 250 V rated value<br>• at DC-13 at 24 V rated value                                                                              | 3 A<br>1 A                                                                                                                                                                     |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                |                                                                                                                                                                                |
| <b>mounting position</b>                                                                                                                                                                                 | Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)                                                                                                     |
| <b>fastening method</b>                                                                                                                                                                                  | screw fixing                                                                                                                                                                   |
| <b>height</b>                                                                                                                                                                                            | 306 mm                                                                                                                                                                         |
| <b>width</b>                                                                                                                                                                                             | 185 mm                                                                                                                                                                         |
| <b>depth</b>                                                                                                                                                                                             | 203 mm                                                                                                                                                                         |
| <b>required spacing with side-by-side mounting</b><br>• forwards<br>• backwards<br>• upwards<br>• downwards<br>• at the side                                                                             | 10 mm<br>0 mm<br>100 mm<br>75 mm<br>5 mm                                                                                                                                       |
| <b>weight without packaging</b>                                                                                                                                                                          | 7.15 kg                                                                                                                                                                        |
| <b>Connections/ Terminals</b>                                                                                                                                                                            |                                                                                                                                                                                |
| <b>type of electrical connection</b><br>• for main current circuit<br>• for control circuit                                                                                                              | box terminal<br>screw-type terminals                                                                                                                                           |
| <b>width of connection bar maximum</b>                                                                                                                                                                   | 25 mm                                                                                                                                                                          |
| <b>wire length for thermistor connection</b><br>• with conductor cross-section = 0.5 mm² maximum<br>• with conductor cross-section = 1.5 mm² maximum<br>• with conductor cross-section = 2.5 mm² maximum | 50 m<br>150 m<br>250 m                                                                                                                                                         |
| <b>type of connectable conductor cross-sections</b><br>• for main contacts for box terminal using the front clamping point solid                                                                         | 1x (2.5 ... 16 mm²)                                                                                                                                                            |

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| <ul style="list-style-type: none"> <li>• for main contacts for box terminal using the front clamping point finely stranded with core end processing</li> <li>• for main contacts for box terminal using the front clamping point stranded</li> <li>• at AWG cables for main contacts for box terminal using the front clamping point</li> <li>• for main contacts for box terminal using the back clamping point solid</li> <li>• at AWG cables for main contacts for box terminal using the back clamping point</li> <li>• for main contacts for box terminal using both clamping points solid</li> <li>• for main contacts for box terminal using both clamping points finely stranded with core end processing</li> <li>• for main contacts for box terminal using both clamping points stranded</li> <li>• for main contacts for box terminal using the back clamping point finely stranded with core end processing</li> <li>• for main contacts for box terminal using the back clamping point stranded</li> </ul> | 1x (2.5 ... 50 mm <sup>2</sup> )<br><br>1x (10 ... 70 mm <sup>2</sup> )<br><br>1x (10 ... 2/0)<br><br>1x (2.5 ... 16 mm <sup>2</sup> )<br><br>1x (10 ... 2/0)<br><br>2x (2.5 ... 16 mm <sup>2</sup> )<br><br>2x (2.5 ... 35 mm <sup>2</sup> )<br><br>2x (6 ... 16 mm <sup>2</sup> ), 2x (10 ... 50 mm <sup>2</sup> )<br><br>1x (2.5 ... 50 mm <sup>2</sup> )<br><br>1x (10 ... 70 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> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )<br><br>1x (20 ... 12), 2x (20 ... 14)                                                                                                                                                                                                                  |
| <b>wire length</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• between soft starter and motor maximum</li> <li>• at the digital inputs at DC maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 800 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4.5 ... 6 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 40 ... 53 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>• PROFINET high-feature</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<br>Yes                                                                                                                                                                                                                                                                                                                                                              |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>manufacturer's article number</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• of circuit breaker</li> </ul> — usable for Standard Faults at 460/480 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Siemens type: 3VA51, max. 125 A; I <sub>q</sub> = 10 kA                                                                                                                                                                                                                                                                                                                                             |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>according to UL</p> <p>— usable for High Faults at 460/480 V according to UL</p> <p>— usable for Standard Faults at 460/480 V at inside-delta circuit according to UL</p> <p>— usable for High Faults at 460/480 V at inside-delta circuit according to UL</p> <p>— usable for Standard Faults at 575/600 V according to UL</p> <p>— usable for High Faults at 575/600 V at inside-delta circuit according to UL</p> <p>— usable for Standard Faults at 575/600 V at inside-delta circuit according to UL</p> <p>• of the fuse</p> <p>— usable for Standard Faults up to 575/600 V according to UL</p> <p>— usable for High Faults up to 575/600 V according to UL</p> <p>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</p> <p>— usable for High Faults at inside-delta circuit up to 575/600 V according to UL</p> | <p>Siemens type: 3VA51, max. 125 A; I<sub>q</sub> max = 65 kA</p> <p>Siemens type: 3VA51, max. 125 A; I<sub>q</sub> = 10 kA</p> <p>Siemens type: 3VA51, max. 125 A; I<sub>q</sub> max = 65 kA</p> <p>Siemens type: 3VA51, max. 125 A; I<sub>q</sub> = 10 kA</p> <p>Siemens type: 3VA51, max. 125 A; I<sub>q</sub> max = 65 kA</p> <p>Siemens type: 3VA51, max. 125 A; I<sub>q</sub> = 10 kA</p> <p>Type: Class RK5 / K5, max. 250 A; I<sub>q</sub> = 10 kA</p> <p>Type: Class J / L, max. 250 A; I<sub>q</sub> = 100 kA</p> <p>Type: Class RK5 / K5, max. 250 A; I<sub>q</sub> = 10 kA</p> <p>Type: Class J / L, max. 250 A; I<sub>q</sub> = 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 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> </ul>                                                                                                                                                                                                                                                                                                                                                                                                          | <p>20 hp</p> <p>25 hp</p> <p>50 hp</p> <p>30 hp</p> <p>40 hp</p> <p>75 hp</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | R300-B300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | acc. to IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>certificate of suitability</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• ATEX</li> <li>• IECEx</li> <li>• according to ATEX directive 2014/34/EU</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>Yes</p> <p>Yes</p> <p>BVS 18 ATEX F 003 X</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>type of protection according to ATEX directive 2014/34/EU</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>hardware fault tolerance acc. to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>PFDavg with low demand rate acc. to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.008                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>PFHD with high demand rate acc. to EN 62061 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.0000005 1/h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | SIL1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>T1 value for proof test interval or service life acc. to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3 y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Certificates/ approvals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>General Product Approval</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>EMC</p> <p>For use in hazardous locations</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



| For use in hazardous locations | Declaration of Conformity | Test Certificates | Marine / Shipping |
|--------------------------------|---------------------------|-------------------|-------------------|
|--------------------------------|---------------------------|-------------------|-------------------|



[Type Test Certificates/Test Report](#)



| Marine / Shipping | 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=3RW5526-1HA04>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5526-1HA04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5526-1HA04>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5526-1HA04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5526-1HA04&lang=en)

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

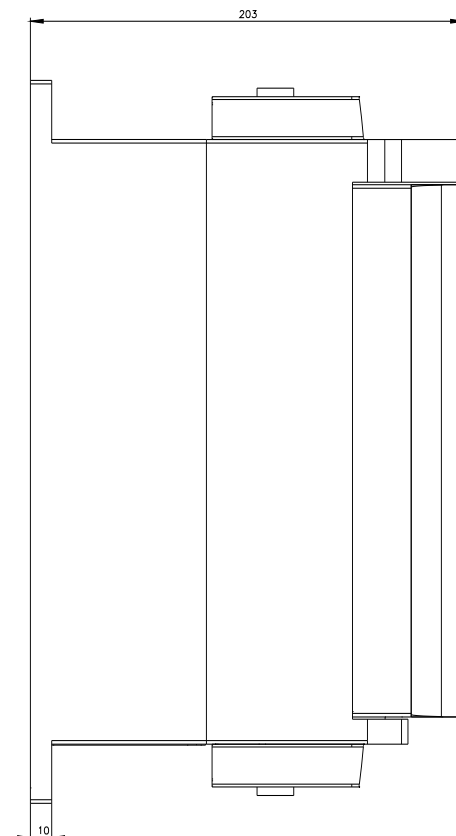
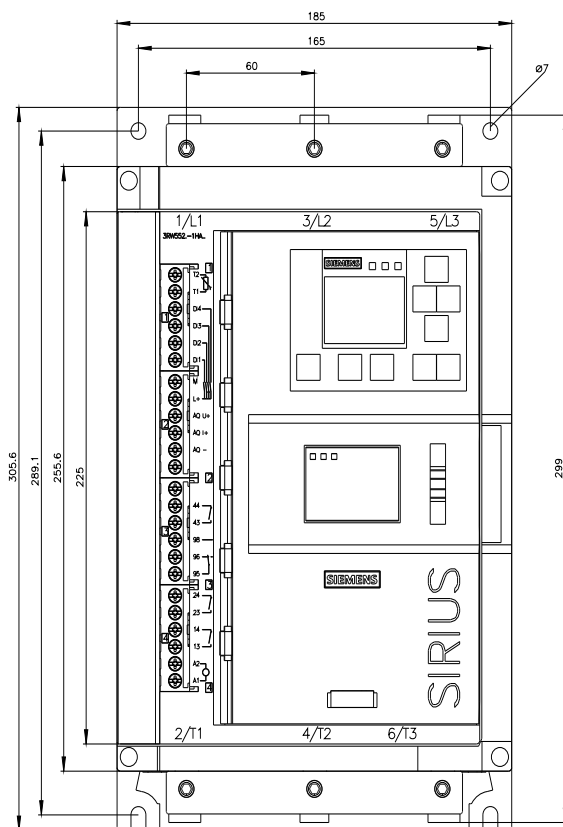
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5526-1HA04/char>

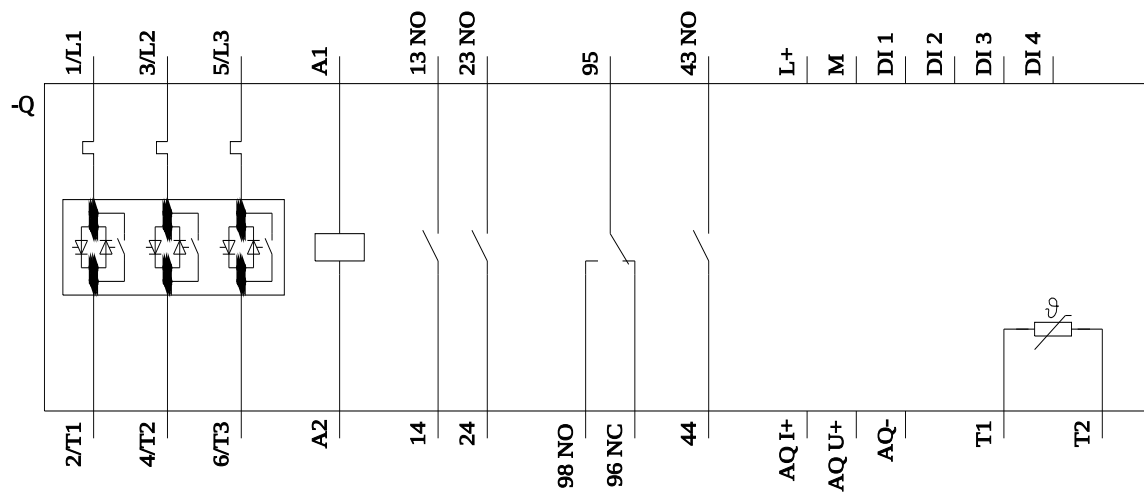
Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5526-1HA04&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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





last modified:

3/9/2021 



