

Siemens  
EcoTech



SIRIUS soft starter 200-480 V 93 A, 24 V AC/DC Screw terminals Analog output



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| product brand name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SIRIUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| product category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Hybrid switching devices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| product designation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Soft starter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| product type designation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3RW52                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| manufacturer's article number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"><li>• of standard HMI module usable</li><li>• of high feature HMI module usable</li><li>• of communication module PROFINET standard usable</li><li>• of communication module PROFIBUS usable</li><li>• of communication module Modbus TCP usable</li><li>• of communication module Modbus RTU usable</li><li>• of communication module Ethernet/IP</li><li>• of circuit breaker usable at 400 V</li><li>• of circuit breaker usable at 500 V</li><li>• of circuit breaker usable at 400 V at inside-delta circuit</li><li>• of circuit breaker usable at 500 V at inside-delta circuit</li><li>• of the gG fuse usable up to 690 V</li><li>• of the gG fuse usable at inside-delta circuit up to 500 V</li><li>• of full range R fuse link for semiconductor protection usable up to 690 V</li><li>• of back-up R fuse link for semiconductor protection usable up to 690 V</li></ul> | <a href="#">3RW5980-0HS00</a><br><a href="#">3RW5980-0HF00</a><br><a href="#">3RW5980-0CS00</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="#">3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 15 kA, CLASS 10</a><br><a href="#">3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 10 kA, CLASS 10</a><br><a href="#">3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 15 kA, CLASS 10</a><br><a href="#">3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 10 kA, CLASS 10</a><br><a href="#">3NA3136-6; Type of coordination 1, Iq = 65 kA</a><br><a href="#">3NA3136-6; Type of coordination 1, Iq = 65 kA</a><br><a href="#">3NE1224-0; Type of coordination 2, Iq = 65 kA</a><br><a href="#">3NE4124; Type of coordination 2, Iq = 65 kA</a> |
| General technical data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| starting voltage [%]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 30 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| stopping voltage [%]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 50 %; non-adjustable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| start-up ramp time of soft starter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0 ... 20 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| current limiting value [%] adjustable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 130 ... 700 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| certificate of suitability                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"><li>• CE marking</li><li>• UL approval</li><li>• CSA approval</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| product component                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"><li>• HMI-High Feature</li><li>• is supported HMI-Standard</li><li>• is supported HMI-High Feature</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| product feature integrated bypass contact system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| number of controlled phases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| buffering time in the event of power failure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for control circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 100 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>insulation voltage rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 600 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>degree of pollution</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3, acc. to IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>impulse voltage rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 6 kV                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>blocking voltage of the thyristor maximum</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1 400 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>service factor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>surge voltage resistance rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6 kV                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>maximum permissible voltage for protective separation</b> <ul style="list-style-type: none"> <li>• between main and auxiliary circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 600 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>shock resistance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 15 g / 11 ms, from 12 g / 11 ms with potential contact lifting                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>vibration resistance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 15 mm to 6 Hz; 2g to 500 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| utilization category according to IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | AC 53a                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>reference code according to IEC 81346-2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Q                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Substance Prohibitance (Date)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 02/15/2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>SVHC substance name</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8<br>2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1<br>Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4                                                                                                                                                        |
| <b>Weight</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 7.748 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>product function</b> <ul style="list-style-type: none"> <li>• ramp-up (soft starting)</li> <li>• ramp-down (soft stop)</li> <li>• Soft Torque</li> <li>• adjustable current limitation</li> <li>• pump ramp down</li> <li>• intrinsic device protection</li> <li>• motor overload protection</li> <li>• evaluation of thermistor motor protection</li> <li>• inside-delta circuit</li> <li>• auto-RESET</li> <li>• manual RESET</li> <li>• remote reset</li> <li>• communication function</li> <li>• operating measured value display</li> <li>• error logbook</li> <li>• via software parameterizable</li> <li>• via software configurable</li> <li>• <b>PROFInergy</b></li> <li>• <b>firmware update</b></li> <li>• <b>removable terminal for control circuit</b></li> <li>• torque control</li> <li>• analog output</li> </ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes; Electronic motor overload protection<br>No<br>Yes<br>Yes<br>Yes<br>Yes; By turning off the control supply voltage<br>Yes<br>Yes; Only in conjunction with special accessories<br>Yes; Only in conjunction with special accessories<br>No<br>Yes<br>Yes; in connection with the PROFINET Standard communication module<br>Yes<br>Yes<br>No<br>Yes; 4 ... 20 mA (default) / 0 ... 10 V (parameterizable with High Feature HMI) |
| <b>Power Electronics</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>operational current</b> <ul style="list-style-type: none"> <li>• at 40 °C rated value</li> <li>• at 50 °C rated value</li> <li>• at 60 °C rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 93 A<br>82.5 A<br>75.5 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 161 A<br>143 A<br>131 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 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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|--------------------------------------------------------------------------|----------------------------------------|
| <b>operating power for 3-phase motors</b>                                |                                        |
| • at 230 V at 40 °C rated value                                          | 22 kW                                  |
| • at 230 V at inside-delta circuit at 40 °C rated value                  | 45 kW                                  |
| • at 400 V at 40 °C rated value                                          | 45 kW                                  |
| • at 400 V at inside-delta circuit at 40 °C rated value                  | 90 kW                                  |
| <b>Operating frequency 1 rated value</b>                                 | 50 Hz                                  |
| <b>Operating frequency 2 rated value</b>                                 | 60 Hz                                  |
| <b>relative negative tolerance of the operating frequency</b>            | -10 %                                  |
| <b>relative positive tolerance of the operating frequency</b>            | 10 %                                   |
| <b>adjustable motor current</b>                                          |                                        |
| • at rotary coding switch on switch position 1                           | 40.5 A                                 |
| • at rotary coding switch on switch position 2                           | 44 A                                   |
| • at rotary coding switch on switch position 3                           | 47.5 A                                 |
| • at rotary coding switch on switch position 4                           | 51 A                                   |
| • at rotary coding switch on switch position 5                           | 54.5 A                                 |
| • at rotary coding switch on switch position 6                           | 58 A                                   |
| • at rotary coding switch on switch position 7                           | 61.5 A                                 |
| • at rotary coding switch on switch position 8                           | 65 A                                   |
| • at rotary coding switch on switch position 9                           | 68.5 A                                 |
| • at rotary coding switch on switch position 10                          | 72 A                                   |
| • at rotary coding switch on switch position 11                          | 75.5 A                                 |
| • at rotary coding switch on switch position 12                          | 79 A                                   |
| • at rotary coding switch on switch position 13                          | 82.5 A                                 |
| • at rotary coding switch on switch position 14                          | 86 A                                   |
| • at rotary coding switch on switch position 15                          | 89.5 A                                 |
| • at rotary coding switch on switch position 16                          | 93 A                                   |
| • minimum                                                                | 40.5 A                                 |
| <b>adjustable motor current</b>                                          |                                        |
| • for inside-delta circuit at rotary coding switch on switch position 1  | 70.1 A                                 |
| • for inside-delta circuit at rotary coding switch on switch position 2  | 76.2 A                                 |
| • for inside-delta circuit at rotary coding switch on switch position 3  | 82.3 A                                 |
| • for inside-delta circuit at rotary coding switch on switch position 4  | 88.3 A                                 |
| • for inside-delta circuit at rotary coding switch on switch position 5  | 94.4 A                                 |
| • for inside-delta circuit at rotary coding switch on switch position 6  | 100 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 7  | 107 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 8  | 113 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 9  | 119 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 10 | 125 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 11 | 131 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 12 | 137 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 13 | 143 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 14 | 149 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 15 | 155 A                                  |
| • for inside-delta circuit at rotary coding switch on switch position 16 | 161 A                                  |
| • at inside-delta circuit minimum                                        | 70.1 A                                 |
| <b>minimum load [%]</b>                                                  | 15 %; Relative to smallest settable Ie |
| <b>power loss [W] for rated value of the current at AC</b>               |                                        |
| • at 40 °C after startup                                                 | 40 W                                   |
| • at 50 °C after startup                                                 | 37 W                                   |
| • at 60 °C after startup                                                 | 35 W                                   |

|                                                                                 |                                                                                                                                                                                |
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| <b>power loss [W] at AC at current limitation 350 %</b>                         |                                                                                                                                                                                |
| • at 40 °C during startup                                                       | 1 270 W                                                                                                                                                                        |
| • at 50 °C during startup                                                       | 1 077 W                                                                                                                                                                        |
| • at 60 °C during startup                                                       | 959 W                                                                                                                                                                          |
| <b>Control circuit/ Control</b>                                                 |                                                                                                                                                                                |
| <b>type of voltage of the control supply voltage</b>                            | AC/DC                                                                                                                                                                          |
| <b>control supply voltage at AC</b>                                             |                                                                                                                                                                                |
| • at 50 Hz rated value                                                          | 24 V                                                                                                                                                                           |
| • at 60 Hz rated value                                                          | 24 V                                                                                                                                                                           |
| <b>relative negative tolerance of the control supply voltage at AC at 50 Hz</b> | -20 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b> | 20 %                                                                                                                                                                           |
| <b>relative negative tolerance of the control supply voltage at AC at 60 Hz</b> | -20 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage at AC at 60 Hz</b> | 20 %                                                                                                                                                                           |
| <b>control supply voltage frequency</b>                                         | 50 ... 60 Hz                                                                                                                                                                   |
| <b>relative negative tolerance of the control supply voltage frequency</b>      | -10 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage frequency</b>      | 10 %                                                                                                                                                                           |
| <b>control supply voltage at DC rated value</b>                                 | 24 V                                                                                                                                                                           |
| <b>relative negative tolerance of the control supply voltage at DC</b>          | -20 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage at DC</b>          | 20 %                                                                                                                                                                           |
| <b>control supply current in standby mode rated value</b>                       | 160 mA                                                                                                                                                                         |
| <b>holding current in bypass operation rated value</b>                          | 380 mA                                                                                                                                                                         |
| <b>inrush current by closing the bypass contacts maximum</b>                    | 7.6 A                                                                                                                                                                          |
| inrush current peak at application of control supply voltage maximum            | 3.3 A                                                                                                                                                                          |
| duration of inrush current peak at application of control supply voltage        | 12.1 ms                                                                                                                                                                        |
| <b>design of the overvoltage protection</b>                                     | Varistor                                                                                                                                                                       |
| <b>design of short-circuit protection for control circuit</b>                   | 4 A gG fuse (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>                                                 | 1                                                                                                                                                                              |
| <b>number of digital outputs</b>                                                | 3                                                                                                                                                                              |
| • not parameterizable                                                           | 2                                                                                                                                                                              |
| <b>digital output version</b>                                                   | 2 normally-open contacts (NO) / 1 changeover contact (CO)                                                                                                                      |
| <b>number of analog outputs</b>                                                 | 1                                                                                                                                                                              |
| <b>switching capacity current of the relay outputs</b>                          |                                                                                                                                                                                |
| • at AC-15 at 250 V rated value                                                 | 3 A                                                                                                                                                                            |
| • at DC-13 at 24 V rated value                                                  | 1 A                                                                                                                                                                            |
| <b>Installation/ mounting/ dimensions</b>                                       |                                                                                                                                                                                |
| <b>mounting position</b>                                                        | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back                                                       |
| <b>fastening method</b>                                                         | screw fixing                                                                                                                                                                   |
| <b>height</b>                                                                   | 306 mm                                                                                                                                                                         |
| <b>width</b>                                                                    | 185 mm                                                                                                                                                                         |
| <b>depth</b>                                                                    | 203 mm                                                                                                                                                                         |
| required spacing with side-by-side mounting                                     |                                                                                                                                                                                |
| • forwards                                                                      | 10 mm                                                                                                                                                                          |
| • backwards                                                                     | 0 mm                                                                                                                                                                           |
| • upwards                                                                       | 100 mm                                                                                                                                                                         |
| • downwards                                                                     | 75 mm                                                                                                                                                                          |
| • at the side                                                                   | 5 mm                                                                                                                                                                           |
| <b>weight without packaging</b>                                                 | 6.9 kg                                                                                                                                                                         |
| <b>Connections/ Terminals</b>                                                   |                                                                                                                                                                                |
| <b>type of electrical connection</b>                                            |                                                                                                                                                                                |
| • for main current circuit                                                      | box terminal                                                                                                                                                                   |

|                                                                                        |                                                                                                                         |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| • for control circuit                                                                  | screw-type terminals                                                                                                    |
| <b>width of connection bar maximum</b>                                                 | 25 mm                                                                                                                   |
| <b>type of connectable conductor cross-sections for main contacts for box terminal</b> |                                                                                                                         |
| • using the front clamping point solid                                                 | 1x (2.5 ... 16 mm <sup>2</sup> )                                                                                        |
| • using the front clamping point finely stranded with core end processing              | 1x (2.5 ... 50 mm <sup>2</sup> )                                                                                        |
| • using the front clamping point stranded                                              | 1x (10 ... 70 mm <sup>2</sup> )                                                                                         |
| • using the back clamping point solid                                                  | 1x (2.5 ... 16 mm <sup>2</sup> )                                                                                        |
| • r box terminal using the back clamping point                                         | 1x (10 ... 2/0)                                                                                                         |
| • using both clamping points solid                                                     | 2x (2.5 ... 16 mm <sup>2</sup> )                                                                                        |
| • using both clamping points finely stranded with core end processing                  | 2x (2.5 ... 35 mm <sup>2</sup> )                                                                                        |
| • using both clamping points stranded                                                  | 2x (6 ... 16 mm <sup>2</sup> ), 2x (10 ... 50 mm <sup>2</sup> )                                                         |
| • using the back clamping point finely stranded with core end processing               | 1x (2.5 ... 50 mm <sup>2</sup> )                                                                                        |
| • using the back clamping point stranded                                               | 1x (10 ... 70 mm <sup>2</sup> )                                                                                         |
| <b>type of connectable conductor cross-sections</b>                                    |                                                                                                                         |
| • for control circuit solid                                                            | 1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )                                                    |
| • for control circuit finely stranded with core end processing                         | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )                                                    |
| • for AWG cables for control circuit solid                                             | 1x (20 ... 12), 2x (20 ... 14)                                                                                          |
| <b>wire length</b>                                                                     |                                                                                                                         |
| • between soft starter and motor maximum                                               | 800 m                                                                                                                   |
| • at the digital inputs at AC maximum                                                  | 100 m                                                                                                                   |
| • at the digital inputs at DC maximum                                                  | 1 000 m                                                                                                                 |
| <b>tightening torque</b>                                                               |                                                                                                                         |
| • for main contacts with screw-type terminals                                          | 4.5 ... 6 N·m                                                                                                           |
| • for auxiliary and control contacts with screw-type terminals                         | 0.8 ... 1.2 N·m                                                                                                         |
| <b>tightening torque [lbf·in]</b>                                                      |                                                                                                                         |
| • for main contacts with screw-type terminals                                          | 40 ... 53 lbf·in                                                                                                        |
| • for auxiliary and control contacts with screw-type terminals                         | 7 ... 10.3 lbf·in                                                                                                       |
| <b>Ambient conditions</b>                                                              |                                                                                                                         |
| installation altitude at height above sea level maximum                                | 5 000 m; Derating as of 1000 m, see catalog                                                                             |
| <b>ambient temperature</b>                                                             |                                                                                                                         |
| • during operation                                                                     | -25 ... +60 °C; Please observe derating at temperatures of 40 °C or above                                               |
| • during storage and transport                                                         | -40 ... +80 °C                                                                                                          |
| <b>environmental category</b>                                                          |                                                                                                                         |
| • during operation according to IEC 60721                                              | 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 |
| • during storage according to IEC 60721                                                | 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4                 |
| • during transport according to IEC 60721                                              | 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)                                                                             |
| <b>Environmental footprint</b>                                                         |                                                                                                                         |
| global warming potential [CO2 eq] total                                                | 296 kg                                                                                                                  |
| global warming potential [CO2 eq] during manufacturing                                 | 67.7 kg                                                                                                                 |
| global warming potential [CO2 eq] during sales                                         | 1.84 kg                                                                                                                 |
| global warming potential [CO2 eq] during operation                                     | 242 kg                                                                                                                  |
| global warming potential [CO2 eq] after end of life                                    | -15.7 kg                                                                                                                |
| Siemens Eco Profile (SEP)                                                              | Siemens EcoTech                                                                                                         |
| <b>Electromagnetic compatibility</b>                                                   |                                                                                                                         |
| <b>EMC emitted interference</b>                                                        | acc. to IEC 60947-4-2: Class A                                                                                          |
| <b>Communication/ Protocol</b>                                                         |                                                                                                                         |
| <b>communication module is supported</b>                                               |                                                                                                                         |
| • PROFINET standard                                                                    | Yes                                                                                                                     |
| • EtherNet/IP                                                                          | Yes                                                                                                                     |
| • Modbus RTU                                                                           | Yes                                                                                                                     |
| • Modbus TCP                                                                           | Yes                                                                                                                     |
| • PROFIBUS                                                                             | Yes                                                                                                                     |
| <b>UL/CSA ratings</b>                                                                  |                                                                                                                         |
| <b>manufacturer's article number</b>                                                   |                                                                                                                         |
| • of circuit breaker usable for Standard Faults                                        |                                                                                                                         |

- at 460/480 V according to UL
- 60/480 V according to UL
- at 460/480 V at inside-delta circuit according to UL
- 60/480 V at inside-delta circuit according to UL
- at 575/600 V according to UL
- at 575/600 V at inside-delta circuit according to UL

• of the fuse

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

Siemens type: 3VA51, max. 125 A; I<sub>q</sub> = 10 kA  
 Siemens type: 3VA51, max. 125 A; I<sub>q</sub> max = 65 kA  
 Siemens type: 3VA51, max. 125 A; I<sub>q</sub> = 10 kA  
 Siemens type: 3VA51, max. 125 A; I<sub>q</sub> max = 65 kA  
 Siemens type: 3VA51, max. 125 A; I<sub>q</sub> = 10 kA  
 Siemens type: 3VA51, max. 125 A; I<sub>q</sub> = 10 kA

Type: Class RK5 / K5, max. 300 A; I<sub>q</sub> = 10 kA

Type: Class J / L, max. 250 A; I<sub>q</sub> = 100 kA

Type: Class RK5 / K5, max. 300 A; I<sub>q</sub> = 10 kA

Type: Class J / L, max. 250 A; I<sub>q</sub> = 100 kA

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

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

25 hp  
 30 hp  
 60 hp  
 40 hp  
 50 hp  
 100 hp

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

R300-B300

**Electrical Safety**

**protection class IP on the front according to IEC 60529**

IP00; IP20 with cover

**touch protection on the front according to IEC 60529**

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

**Approvals Certificates**

**General Product Approval**

EMV



**EMV**

**Test Certificates**

**Maritime application**

[KC](#)

[Type Test Certificates/Test Report](#)



**other**

**Environment**



[Confirmation](#)



[Environmental Confirmations](#)

**Further information**

**Information on the packaging**

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

**Information for data generation and storage**

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<https://www.siemens.com/ic10>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5227-1AC04>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5227-1AC04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5227-1AC04>

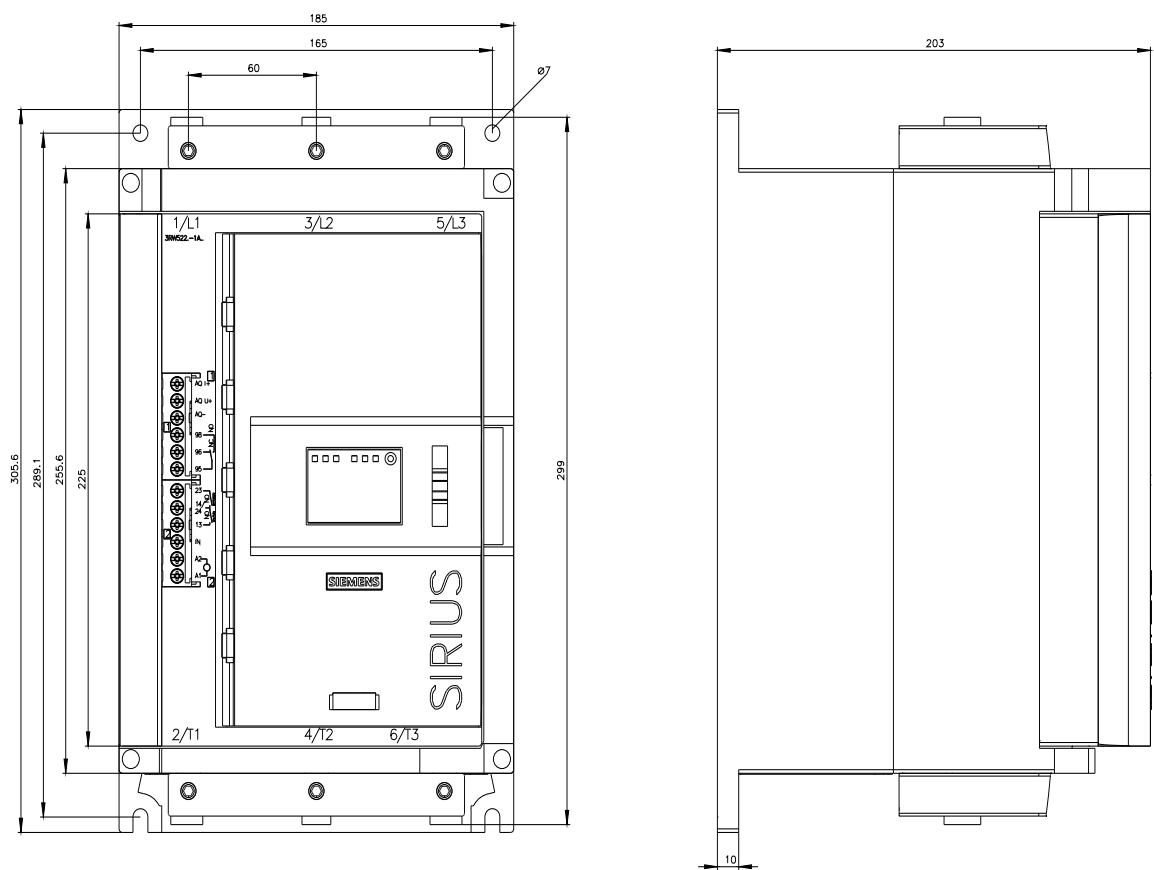
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

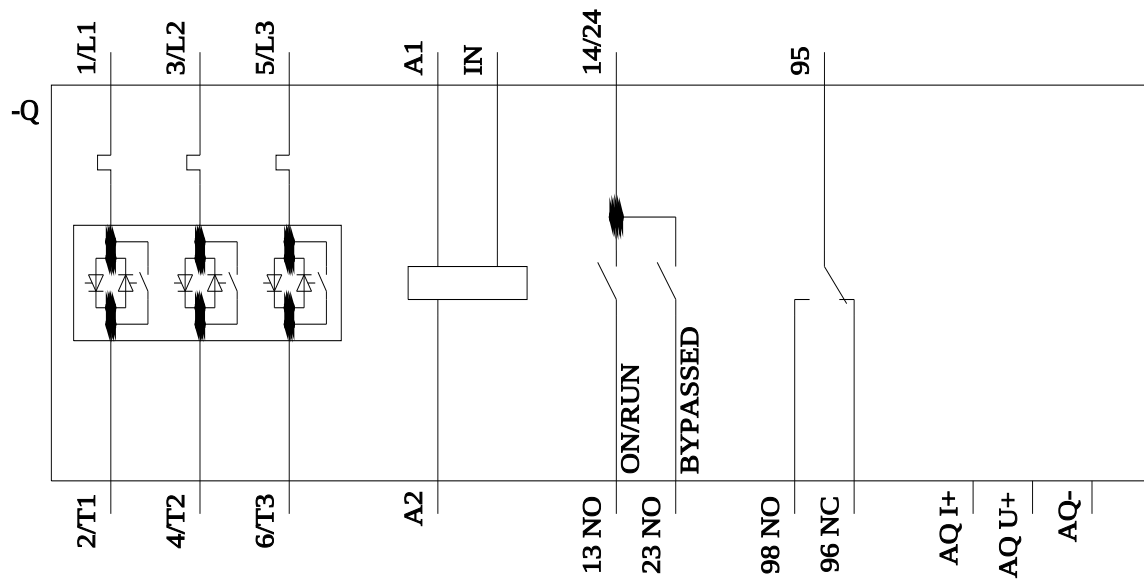
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5227-1AC04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5227-1AC04&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5227-1AC04/char>

Characteristic: Installation altitude  
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5227-1AC04&objecttype=14&gridview=view1>  
Simulation Tool for Soft Starters (STS)  
<https://support.industry.siemens.com/cs/ww/en/view/101494917>





last modified:

4/2/2025

