



SIRIUS soft starter 200-600 V 143 A, 24 V AC/DC spring-type terminals Thermistor input

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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 400 V at inside-delta circuit</li><li>• of the gG fuse usable up to 690 V</li><li>• of the gG fuse usable at inside-delta circuit up to 500 V</li><li>• of full range R fuse link for semiconductor protection usable up to 690 V</li><li>• of back-up R fuse link for semiconductor protection usable up to 690 V</li></ul> | <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="#">3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a><br><a href="#">3VA2325-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a><br><a href="#">3NA3244-6; Type of coordination 1, Iq = 65 kA</a><br><a href="#">3NA3244-6; Type of coordination 1, Iq = 65 kA</a><br><a href="#">3NE1227-0; Type of coordination 2, Iq = 65 kA</a><br><a href="#">3NE3334-0B; 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"><li>• for main current circuit</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 100 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • for control circuit                                        | 100 ms                                                                                                                                                                                                                                                                                                                                                                                |
| <b>insulation voltage rated value</b>                        | 600 V                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>degree of pollution</b>                                   | 3, acc. to IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                              |
| <b>impulse voltage rated value</b>                           | 6 kV                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>blocking voltage of the thyristor maximum</b>             | 1 800 V                                                                                                                                                                                                                                                                                                                                                                               |
| <b>service factor</b>                                        | 1                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>surge voltage resistance rated value</b>                  | 6 kV                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>maximum permissible voltage for protective separation</b> |                                                                                                                                                                                                                                                                                                                                                                                       |
| • between main and auxiliary circuit                         | 600 V                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>shock resistance</b>                                      | 15 g / 11 ms, from 12 g / 11 ms with potential contact lifting                                                                                                                                                                                                                                                                                                                        |
| <b>vibration resistance</b>                                  | 15 mm to 6 Hz; 2 g 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 (day/month/year)</b>               | 02/15/2018                                                                                                                                                                                                                                                                                                                                                                            |
| <b>SVHC substance name</b>                                   | Lead CAS-No. 7439-92-1<br>Lead monoxide (lead oxide) CAS-No. 1317-36-8<br>2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol CAS-No. 79-94-7<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5<br>Melamine CAS-No. 108-78-1<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1<br>Dibutylbis(pentane-2,4-dionato-O,O')tin CAS-No. 22673-19-4 |
| <b>Net Weight</b>                                            | 7.62 kg                                                                                                                                                                                                                                                                                                                                                                               |
| <b>product function</b>                                      |                                                                                                                                                                                                                                                                                                                                                                                       |
| • ramp-up (soft starting)                                    | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • soft stopping                                              | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • Soft Torque                                                | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • adjustable current limitation                              | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • pump stop                                                  | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • intrinsic device protection                                | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • motor overload protection                                  | Yes; Full motor protection (thermistor motor protection and electronic motor overload protection)                                                                                                                                                                                                                                                                                     |
| • evaluation of thermistor motor protection                  | Yes; Type A PTC or Klaxon / Thermoclick                                                                                                                                                                                                                                                                                                                                               |
| • inside-delta circuit                                       | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • auto-RESET                                                 | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • manual RESET                                               | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • remote reset                                               | Yes; By turning off the control supply voltage                                                                                                                                                                                                                                                                                                                                        |
| • communication function                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • operating measured value display                           | Yes; Only in conjunction with special accessories                                                                                                                                                                                                                                                                                                                                     |
| • error logbook                                              | Yes; Only in conjunction with special accessories                                                                                                                                                                                                                                                                                                                                     |
| • via software parameterizable                               | No                                                                                                                                                                                                                                                                                                                                                                                    |
| • via software configurable                                  | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • <b>PROFInergy</b>                                          | Yes; in connection with the PROFINET Standard communication module                                                                                                                                                                                                                                                                                                                    |
| • <b>firmware update</b>                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • <b>removable terminal for control circuit</b>              | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| • torque control                                             | No                                                                                                                                                                                                                                                                                                                                                                                    |
| • analog output                                              | No                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Power Electronics</b>                                     |                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>operational current</b>                                   |                                                                                                                                                                                                                                                                                                                                                                                       |
| • at 40 °C rated value                                       | 143 A                                                                                                                                                                                                                                                                                                                                                                                 |
| • at 50 °C rated value                                       | 128 A                                                                                                                                                                                                                                                                                                                                                                                 |
| • at 60 °C rated value                                       | 118 A                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>operational current at inside-delta circuit</b>           |                                                                                                                                                                                                                                                                                                                                                                                       |
| • at 40 °C rated value                                       | 248 A                                                                                                                                                                                                                                                                                                                                                                                 |
| • at 50 °C rated value                                       | 222 A                                                                                                                                                                                                                                                                                                                                                                                 |
| • at 60 °C rated value                                       | 204 A                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>operating voltage</b>                                     |                                                                                                                                                                                                                                                                                                                                                                                       |
| • rated value                                                | 200 ... 600 V                                                                                                                                                                                                                                                                                                                                                                         |
| • at inside-delta circuit rated value                        | 200 ... 600 V                                                                                                                                                                                                                                                                                                                                                                         |
| <b>relative negative tolerance of the operating voltage</b>  | -15 %                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>relative positive tolerance of the operating voltage</b>  | 10 %                                                                                                                                                                                                                                                                                                                                                                                  |

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| <b>relative negative tolerance of the operating voltage at inside-delta circuit</b> | -15 %  |
| <b>relative positive tolerance of the operating voltage at inside-delta circuit</b> | 10 %   |
| <b>operating power for 3-phase motors</b>                                           |        |
| • at 230 V at 40 °C rated value                                                     | 37 kW  |
| • at 230 V at inside-delta circuit at 40 °C rated value                             | 75 kW  |
| • at 400 V at 40 °C rated value                                                     | 75 kW  |
| • at 400 V at inside-delta circuit at 40 °C rated value                             | 132 kW |
| • at 500 V at 40 °C rated value                                                     | 90 kW  |
| • at 500 V at inside-delta circuit at 40 °C rated value                             | 160 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                                      | 68 A   |
| • at rotary coding switch on switch position 2                                      | 73 A   |
| • at rotary coding switch on switch position 3                                      | 78 A   |
| • at rotary coding switch on switch position 4                                      | 83 A   |
| • at rotary coding switch on switch position 5                                      | 88 A   |
| • at rotary coding switch on switch position 6                                      | 93 A   |
| • at rotary coding switch on switch position 7                                      | 98 A   |
| • at rotary coding switch on switch position 8                                      | 103 A  |
| • at rotary coding switch on switch position 9                                      | 108 A  |
| • at rotary coding switch on switch position 10                                     | 113 A  |
| • at rotary coding switch on switch position 11                                     | 118 A  |
| • at rotary coding switch on switch position 12                                     | 123 A  |
| • at rotary coding switch on switch position 13                                     | 128 A  |
| • at rotary coding switch on switch position 14                                     | 133 A  |
| • at rotary coding switch on switch position 15                                     | 138 A  |
| • at rotary coding switch on switch position 16                                     | 143 A  |
| • minimum                                                                           | 68 A   |
| <b>adjustable motor current</b>                                                     |        |
| • for inside-delta circuit at rotary coding switch on switch position 1             | 118 A  |
| • for inside-delta circuit at rotary coding switch on switch position 2             | 126 A  |
| • for inside-delta circuit at rotary coding switch on switch position 3             | 135 A  |
| • for inside-delta circuit at rotary coding switch on switch position 4             | 144 A  |
| • for inside-delta circuit at rotary coding switch on switch position 5             | 152 A  |
| • for inside-delta circuit at rotary coding switch on switch position 6             | 161 A  |
| • for inside-delta circuit at rotary coding switch on switch position 7             | 170 A  |
| • for inside-delta circuit at rotary coding switch on switch position 8             | 178 A  |
| • for inside-delta circuit at rotary coding switch on switch position 9             | 187 A  |
| • for inside-delta circuit at rotary coding switch on switch position 10            | 196 A  |
| • for inside-delta circuit at rotary coding switch on switch position 11            | 204 A  |
| • for inside-delta circuit at rotary coding switch on switch position 12            | 213 A  |
| • for inside-delta circuit at rotary coding switch on switch position 13            | 222 A  |
| • for inside-delta circuit at rotary coding switch on switch position 14            | 230 A  |
| • for inside-delta circuit at rotary coding switch on switch position 15            | 239 A  |

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| <ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 16</li> </ul> | 248 A                                                                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• at inside-delta circuit minimum</li> </ul>                                        | 118 A                                                                                                                                                                                                                              |
| <b>minimum load [%]</b>                                                                                                    | 15 %; Relative to smallest settable I <sub>e</sub>                                                                                                                                                                                 |
| <b>power loss [W] for rated value of the current at AC</b>                                                                 |                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 40 °C after startup</li> </ul>                                                 | 55 W                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• at 50 °C after startup</li> </ul>                                                 | 50 W                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• at 60 °C after startup</li> </ul>                                                 | 47 W                                                                                                                                                                                                                               |
| <b>power loss [W] at AC at current limitation 350 %</b>                                                                    |                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 40 °C during startup</li> </ul>                                                | 2 127 W                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• at 50 °C during startup</li> </ul>                                                | 1 807 W                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• at 60 °C during startup</li> </ul>                                                | 1 605 W                                                                                                                                                                                                                            |
| <b>Control circuit/ Control</b>                                                                                            |                                                                                                                                                                                                                                    |
| <b>type of voltage of the control supply voltage</b>                                                                       | AC/DC                                                                                                                                                                                                                              |
| <b>control supply voltage at AC</b>                                                                                        |                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul>                                                   | 24 V                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• at 60 Hz rated value</li> </ul>                                                   | 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 (I <sub>cu</sub> =1 kA), 6 A quick-acting fuse (I <sub>cu</sub> =1 kA), C1 miniature circuit breaker (I <sub>cu</sub> = 600 A), C6 miniature circuit breaker (I <sub>cu</sub> = 300 A); Is not part of scope of supply |
| <b>Inputs/ Outputs</b>                                                                                                     |                                                                                                                                                                                                                                    |
| <b>number of digital inputs</b>                                                                                            | 1                                                                                                                                                                                                                                  |
| <b>number of digital outputs</b>                                                                                           | 3                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• not parameterizable</li> </ul>                                                    | 2                                                                                                                                                                                                                                  |
| <b>digital output version</b>                                                                                              | 2 normally-open contacts (NO) / 1 changeover contact (CO)                                                                                                                                                                          |
| <b>number of analog outputs</b>                                                                                            | 0                                                                                                                                                                                                                                  |
| <b>switching capacity current of the relay outputs</b>                                                                     |                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at AC-15 at 250 V rated value</li> </ul>                                          | 3 A                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at DC-13 at 24 V rated value</li> </ul>                                           | 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                                                                                |                                                                                                                                                                                                                                    |

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| <ul style="list-style-type: none"> <li>• forwards</li> <li>• backwards</li> <li>• upwards</li> <li>• downwards</li> <li>• at the side</li> </ul>                                                                                                                                                 | 10 mm<br>0 mm<br>100 mm<br>75 mm<br>5 mm                                                                                                                                                                                                                                          |
| <b>weight without packaging</b>                                                                                                                                                                                                                                                                  | 6.6 kg                                                                                                                                                                                                                                                                            |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                   |
| <b>type of electrical connection</b>                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for control circuit</li> </ul>                                                                                                                                                                                      | busbar connection<br>spring-loaded terminals                                                                                                                                                                                                                                      |
| <b>width of connection bar maximum</b>                                                                                                                                                                                                                                                           | 25 mm                                                                                                                                                                                                                                                                             |
| <b>wire length for thermistor connection</b>                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• with conductor cross-section = 0.5 mm<sup>2</sup> maximum</li> <li>• with conductor cross-section = 1.5 mm<sup>2</sup> maximum</li> <li>• with conductor cross-section = 2.5 mm<sup>2</sup> maximum</li> </ul>                                          | 50 m<br>150 m<br>250 m                                                                                                                                                                                                                                                            |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• for DIN cable lug for main contacts stranded</li> <li>• for DIN cable lug for main contacts finely stranded</li> </ul>                                                                                                                                  | 2x (16 ... 95 mm <sup>2</sup> )<br>2x (25 ... 120 mm <sup>2</sup> )                                                                                                                                                                                                               |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• for control circuit solid</li> <li>• for control circuit finely stranded with core end processing</li> <li>• for AWG cables for control circuit solid</li> <li>• for AWG cables for control circuit finely stranded with core end processing</li> </ul> | 2x (0.25 ... 1.5 mm <sup>2</sup> )<br>2x (0.25 ... 1.5 mm <sup>2</sup> )<br>2x (24 ... 16)<br>2x (24 ... 16)                                                                                                                                                                      |
| <b>wire length</b>                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• between soft starter and motor maximum</li> <li>• at the digital inputs at AC maximum</li> <li>• at the digital inputs at DC maximum</li> </ul>                                                                                                         | 800 m<br>100 m<br>1 000 m                                                                                                                                                                                                                                                         |
| <b>tightening torque</b>                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>                                                                                                                          | 10 ... 14 N·m<br>0.8 ... 1.2 N·m                                                                                                                                                                                                                                                  |
| <b>tightening torque [lbf·in]</b>                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>                                                                                                                          | 89 ... 124 lbf·in<br>7 ... 10.3 lbf·in                                                                                                                                                                                                                                            |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                   |
| installation altitude at height above sea level maximum                                                                                                                                                                                                                                          | 5 000 m                                                                                                                                                                                                                                                                           |
| <b>ambient temperature</b>                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage and transport</li> </ul>                                                                                                                                                                                     | -25 ... +60 °C; Please observe derating at temperatures of 40 °C or above<br>-40 ... +80 °C                                                                                                                                                                                       |
| <b>environmental category</b>                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• during operation according to IEC 60721</li> <li>• during storage according to IEC 60721</li> <li>• during transport according to IEC 60721</li> </ul>                                                                                                  | 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6<br>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4<br>2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) |
| <b>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>                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• PROFINET standard</li> <li>• EtherNet/IP</li> <li>• Modbus RTU</li> <li>• Modbus TCP</li> <li>• PROFIBUS</li> </ul>                                                                                                                                     | Yes<br>Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                   |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                   |
| <b>manufacturer's article number</b>                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• of circuit breaker usable for Standard Faults</li> </ul> — at 460/480 V according to UL                                                                                                                                                                 | Siemens type: 3VA52, max. 250 A; Iq = 10 kA                                                                                                                                                                                                                                       |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>— 60/480 V according to UL</li><li>— at 460/480 V at inside-delta circuit according to UL</li><li>— 60/480 V at inside-delta circuit according to UL</li><li>— at 575/600 V according to UL</li><li>— at 575/600 V at inside-delta circuit according to UL</li></ul>                                                                                                                                                                                                                                                       | Siemens type: 3VA52, max. 250 A; Iq max = 65 kA<br>Siemens type: 3VA52, max. 250 A; Iq = 10 kA<br>Siemens type: 3VA52, max. 250 A; Iq max = 65 kA<br>Siemens type: 3VA52, max. 250 A; Iq = 10 kA<br>Siemens type: 3VA52, max. 250 A; Iq = 10 kA |
| <ul style="list-style-type: none"><li>• of the fuse<ul style="list-style-type: none"><li>— usable for Standard Faults up to 575/600 V according to UL</li><li>— usable for High Faults up to 575/600 V according to UL</li><li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</li><li>— usable for High Faults at inside-delta circuit up to 575/600 V according to UL</li></ul></li></ul>                                                                                                                                 | Type: Class RK5 / K5, max. 350 A; Iq = 10 kA<br><br>Type: Class J / L, max. 350 A; Iq = 100 kA<br><br>Type: Class RK5 / K5, max. 350 A; Iq = 10 kA<br><br>Type: Class J / L, max. 350 A; Iq = 100 kA                                            |
| <b>operating power [hp] for 3-phase motors</b> <ul style="list-style-type: none"><li>• at 200/208 V at 50 °C rated value</li><li>• at 220/230 V at 50 °C rated value</li><li>• at 460/480 V at 50 °C rated value</li><li>• at 575/600 V at 50 °C rated value</li><li>• at 200/208 V at inside-delta circuit at 50 °C rated value</li><li>• at 220/230 V at inside-delta circuit at 50 °C rated value</li><li>• at 460/480 V at inside-delta circuit at 50 °C rated value</li><li>• at 575/600 V at inside-delta circuit at 50 °C rated value</li></ul>           | 40 hp<br>40 hp<br>100 hp<br>125 hp<br>75 hp<br>75 hp<br>150 hp<br>200 hp                                                                                                                                                                        |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | R300-B300                                                                                                                                                                                                                                       |
| Electrical Safety                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                 |
| <b>protection class IP on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | IP00; IP20 with cover                                                                                                                                                                                                                           |
| <b>touch protection on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | finger-safe, for vertical contact from the front with cover                                                                                                                                                                                     |
| Approvals Certificates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                 |
| Environmental Product Declaration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"><li>• global warming potential [CO2 eq] / during manufacturing</li><li>• global warming potential [CO2 eq] / during sales</li><li>• global warming potential [CO2 eq] / during operation</li><li>• global warming potential [CO2 eq] / after end of life</li><li>• global warming potential [CO2 eq] / total</li></ul>                                                                                                                                                                                                         | 67.7 kg<br>1.84 kg<br>242 kg<br>-15.7 kg<br>296 kg                                                                                                                                                                                              |
| Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                 |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                 |
| <div><div><a href="#">Environmental Confirmations</a></div><div></div><div></div><div></div><div></div><div></div></div>      |                                                                                                                                                                                                                                                 |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                 |
| EMV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |
| Test Certificates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                 |
| Maritime application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                 |
| <div><div></div><div></div><div></div><div></div><div><a href="#">Type Test Certificates/Test Report</a></div><div></div></div> |                                                                                                                                                                                                                                                 |
| Maritime application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                 |
| other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                 |
| <div><div></div><div></div><div></div><div></div><div><a href="#">Confirmation</a></div><div><a href="#">Confirmation</a></div></div>                                                                                |                                                                                                                                                                                                                                                 |
| other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                 |
| <div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 |

## 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=3RW5235-2TC05>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5235-2TC05>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5235-2TC05&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5235-2TC05&lang=en)

### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5235-2TC05>

### Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5235-2TC05/char>

### Characteristic: Installation altitude

[https://www.automation.siemens.com/bilddb/index.aspx?gridview=view2&objkey=G\\_NSB0\\_XX\\_01704&showdetail=true&view=Search](https://www.automation.siemens.com/bilddb/index.aspx?gridview=view2&objkey=G_NSB0_XX_01704&showdetail=true&view=Search)

### Simulation Tool for Soft Starters (STS)

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







