

Siemens  
EcoTech



SIRIUS soft starter 200-690 V 1280 A, 24 V AC/DC Screw terminals



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| product brand name                    | SIRIUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| product category                      | Hybrid switching devices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| product designation                   | Soft starter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| product type designation              | 3RW55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| manufacturer's article number         | <ul style="list-style-type: none"> <li>• of high feature HMI module usable <a href="#">3RW5980-0HF00</a></li> <li>• of communication module PROFINET standard usable <a href="#">3RW5980-0CS00</a></li> <li>• of communication module PROFINET high-feature usable <a href="#">3RW5950-0CH00</a></li> <li>• of communication module PROFIBUS usable <a href="#">3RW5980-0CP00</a></li> <li>• of communication module Modbus TCP usable <a href="#">3RW5980-0CT00</a></li> <li>• of communication module Modbus RTU usable <a href="#">3RW5980-0CR00</a></li> <li>• of communication module Ethernet/IP <a href="#">3RW5980-0CE00</a></li> <li>• of circuit breaker usable at 400 V <a href="#">3VA2716-7AB05-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>• of circuit breaker usable at 500 V <a href="#">3VA2716-7AB05-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>• of the gG fuse usable up to 690 V <a href="#">3x3NA3365-6; Type of coordination 1, Iq = 65 kA</a></li> <li>• of full range R fuse link for semiconductor protection usable up to 690 V <a href="#">3NB3357-1KK26; Type of coordination 2, Iq = 65 kA</a></li> <li>• of back-up R fuse link for semiconductor protection usable up to 690 V <a href="#">3x3NE3340-8; Type of coordination 2, Iq = 65 kA</a></li> </ul> |
| General technical data                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| starting voltage [%]                  | 20 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| stopping voltage [%]                  | 50 %; non-adjustable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| start-up ramp time of soft starter    | 0 ... 360 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| ramp-down time of soft starter        | 0 ... 360 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| start torque [%]                      | 10 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| stopping torque [%]                   | 10 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| torque limitation [%]                 | 20 ... 200 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| current limiting value [%] adjustable | 125 ... 800 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| breakaway voltage [%] adjustable      | 40 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| breakaway time adjustable             | 0 ... 2 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| number of parameter sets              | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| accuracy class                        | 5 (based on IEC 61557-12)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| certificate of suitability            | <ul style="list-style-type: none"> <li>• CE marking Yes</li> <li>• UL approval Yes</li> <li>• CSA approval Yes</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| product component                     | <ul style="list-style-type: none"> <li>• HMI-High Feature Yes</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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| • is supported HMI-High Feature                              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>product feature integrated bypass contact system</b>      | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>number of controlled phases</b>                           | 3                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>current unbalance limiting value [%]</b>                  | 10 ... 60 %                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ground-fault monitoring limiting value [%]</b>            | 10 ... 95 %                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>buffering time in the event of power failure</b>          |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| • for main current circuit                                   | 100 ms                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| • for control circuit                                        | 100 ms                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>idle time adjustable</b>                                  | 0 ... 255 s                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>insulation voltage rated value</b>                        | 690 V                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>degree of pollution</b>                                   | 3, acc. to IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>impulse voltage rated value</b>                           | 8 kV                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>blocking voltage of the thyristor maximum</b>             | 1 800 V                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>service factor</b>                                        | 1.15                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>surge voltage resistance rated value</b>                  | 8 kV                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>maximum permissible voltage for protective separation</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| • between main and auxiliary circuit                         | 690 V; does not apply for thermistor connection                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>shock resistance</b>                                      | 15 g / 11 ms, from 6 g / 11 ms with potential contact lifting                                                                                                                                                                                                                                                                                                                                                                          |
| <b>recovery time after overload trip adjustable</b>          | 60 ... 1 800 s                                                                                                                                                                                                                                                                                                                                                                                                                         |
| utilization category according to IEC 60947-4-2              | AC 53a                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>reference code according to IEC 81346-2</b>               | Q                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Substance Prohibitance (Date)</b>                         | 02/11/2019                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>SVHC substance name</b>                                   | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5<br>1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene<br>("Dechlorane Plus"™) covering any of its individual anti- and syn-isomers or any combination thereof - -<br>Dicyclohexyl phthalate (DCHP) - 84-61-7<br>Lead titanium trioxide - 12060-00-3 |
| <b>product function</b>                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| • ramp-up (soft starting)                                    | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • ramp-down (soft stop)                                      | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • breakaway pulse                                            | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • adjustable current limitation                              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • creep speed in both directions of rotation                 | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • pump ramp down                                             | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • DC braking                                                 | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • motor heating                                              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • slave pointer function                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • trace function                                             | 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; Only up to 600 V operating voltage                                                                                                                                                                                                                                                                                                                                                                                                |
| • auto-RESET                                                 | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • manual RESET                                               | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • remote reset                                               | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • communication function                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • operating measured value display                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • event list                                                 | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • error logbook                                              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • via software parameterizable                               | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • via software configurable                                  | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • screw terminal                                             | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • spring-loaded terminal                                     | No                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| • <b>PROFInergy</b>                                          | Yes; in connection with the PROFINET Standard and PROFINET High-Feature communication modules                                                                                                                                                                                                                                                                                                                                          |
| • <b>firmware update</b>                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • <b>removable terminal for control circuit</b>              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • voltage ramp                                               | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • torque control                                             | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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| <ul style="list-style-type: none"> <li>• combined braking</li> <li>• analog output</li> <li>• programmable control inputs/outputs</li> <li>• condition monitoring</li> <li>• automatic parameterisation</li> <li>• application wizards</li> <li>• alternative run-down</li> <li>• emergency operation mode</li> <li>• reversing operation</li> <li>• soft starting at heavy starting conditions</li> </ul>      | Yes<br>Yes; 4 ... 20 mA (default) / 0 ... 10 V<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes |
| <b>Power Electronics</b>                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                        |
| <b>operational current</b>                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 40 °C rated value</li> <li>• at 40 °C rated value minimum</li> <li>• at 50 °C rated value</li> <li>• at 60 °C rated value</li> </ul>                                                                                                                                                                                                                                | 1 280 A<br>256 A<br>1 139 A<br>1 030 A                                                                 |
| <b>operational current at inside-delta circuit</b>                                                                                                                                                                                                                                                                                                                                                              |                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 40 °C rated value</li> <li>• at 50 °C rated value</li> <li>• at 60 °C rated value</li> </ul>                                                                                                                                                                                                                                                                        | 2 217 A<br>1 973 A<br>1 784 A                                                                          |
| <b>operating voltage</b>                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                        |
| <ul style="list-style-type: none"> <li>• rated value</li> <li>• at inside-delta circuit rated value</li> </ul>                                                                                                                                                                                                                                                                                                  | 200 ... 690 V<br>200 ... 600 V                                                                         |
| <b>relative negative tolerance of the operating voltage</b>                                                                                                                                                                                                                                                                                                                                                     | -15 %                                                                                                  |
| <b>relative positive tolerance of the operating voltage</b>                                                                                                                                                                                                                                                                                                                                                     | 10 %                                                                                                   |
| <b>relative negative tolerance of the operating voltage at inside-delta circuit</b>                                                                                                                                                                                                                                                                                                                             | -15 %                                                                                                  |
| <b>relative positive tolerance of the operating voltage at inside-delta circuit</b>                                                                                                                                                                                                                                                                                                                             | 10 %                                                                                                   |
| <b>operating power for 3-phase motors</b>                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 230 V at 40 °C rated value</li> <li>• at 230 V at inside-delta circuit at 40 °C rated value</li> <li>• at 400 V at 40 °C rated value</li> <li>• at 400 V at inside-delta circuit at 40 °C rated value</li> <li>• at 500 V at 40 °C rated value</li> <li>• at 500 V at inside-delta circuit at 40 °C rated value</li> <li>• at 690 V at 40 °C rated value</li> </ul> | 400 kW<br>710 kW<br>710 kW<br>1 200 kW<br>900 kW<br>1 500 kW<br>1 200 kW                               |
| <b>Operating frequency 1 rated value</b>                                                                                                                                                                                                                                                                                                                                                                        | 50 Hz                                                                                                  |
| <b>Operating frequency 2 rated value</b>                                                                                                                                                                                                                                                                                                                                                                        | 60 Hz                                                                                                  |
| <b>relative negative tolerance of the operating frequency</b>                                                                                                                                                                                                                                                                                                                                                   | -10 %                                                                                                  |
| <b>relative positive tolerance of the operating frequency</b>                                                                                                                                                                                                                                                                                                                                                   | 10 %                                                                                                   |
| <b>minimum load [%]</b>                                                                                                                                                                                                                                                                                                                                                                                         | 10 %; Relative to set le                                                                               |
| <b>power loss [W] for rated value of the current at AC</b>                                                                                                                                                                                                                                                                                                                                                      |                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 40 °C after startup</li> <li>• at 50 °C after startup</li> <li>• at 60 °C after startup</li> </ul>                                                                                                                                                                                                                                                                  | 384 W<br>337 W<br>275 W                                                                                |
| <b>power loss [W] at AC at current limitation 350 %</b>                                                                                                                                                                                                                                                                                                                                                         |                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 40 °C during startup</li> <li>• at 50 °C during startup</li> <li>• at 60 °C during startup</li> </ul>                                                                                                                                                                                                                                                               | 23 279 W<br>19 496 W<br>16 778 W                                                                       |
| <b>type of the motor protection</b>                                                                                                                                                                                                                                                                                                                                                                             | Electronic, tripping in the event of thermal overload of the motor                                     |
| <b>Control circuit/ Control</b>                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                        |
| <b>type of voltage of the control supply voltage</b>                                                                                                                                                                                                                                                                                                                                                            | AC/DC                                                                                                  |
| <b>control supply voltage at AC</b>                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>                                                                                                                                                                                                                                                                                                        | 24 V<br>24 V                                                                                           |
| <b>relative negative tolerance of the control supply voltage at AC at 50 Hz</b>                                                                                                                                                                                                                                                                                                                                 | -20 %                                                                                                  |
| <b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b>                                                                                                                                                                                                                                                                                                                                 | 20 %                                                                                                   |
| <b>relative negative tolerance of the control supply voltage at AC at 60 Hz</b>                                                                                                                                                                                                                                                                                                                                 | -20 %                                                                                                  |

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| <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</b><br>• rated value                                                                                                                                                     | 24 V                                                                                                                                                                           |
| <b>relative negative tolerance of the control supply voltage at DC</b>                                                                                                                                   | -20 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage at DC</b>                                                                                                                                   | 20 %                                                                                                                                                                           |
| <b>control supply current in standby mode rated value</b>                                                                                                                                                | 440 mA                                                                                                                                                                         |
| <b>holding current in bypass operation rated value</b>                                                                                                                                                   | 1 100 mA                                                                                                                                                                       |
| <b>inrush current by closing the bypass contacts maximum</b>                                                                                                                                             | 6.7 A                                                                                                                                                                          |
| inrush current peak at application of control supply voltage maximum                                                                                                                                     | 7.5 A                                                                                                                                                                          |
| duration of inrush current peak at application of control supply voltage                                                                                                                                 | 20 ms                                                                                                                                                                          |
| <b>design of the overvoltage protection</b>                                                                                                                                                              | Varistor                                                                                                                                                                       |
| <b>design of short-circuit protection for control circuit</b>                                                                                                                                            | 4 A gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply |
| <b>Inputs/ Outputs</b>                                                                                                                                                                                   |                                                                                                                                                                                |
| <b>number of digital inputs</b><br>• parameterizable                                                                                                                                                     | 4<br>4                                                                                                                                                                         |
| • <b>number of digital outputs</b><br>• number of digital outputs parameterizable<br>• number of digital outputs not parameterizable                                                                     | 4<br>3<br>1                                                                                                                                                                    |
| <b>digital output version</b>                                                                                                                                                                            | 3 normally-open contacts (NO) / 1 changeover contact (CO)                                                                                                                      |
| <b>number of analog outputs</b>                                                                                                                                                                          | 1                                                                                                                                                                              |
| <b>switching capacity current of the relay outputs</b><br>• at AC-15 at 250 V rated value<br>• at DC-13 at 24 V rated value                                                                              | 3 A<br>1 A                                                                                                                                                                     |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                |                                                                                                                                                                                |
| <b>mounting position</b>                                                                                                                                                                                 | Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)                                                                                                     |
| <b>fastening method</b>                                                                                                                                                                                  | screw fixing                                                                                                                                                                   |
| <b>height</b>                                                                                                                                                                                            | 764 mm                                                                                                                                                                         |
| <b>width</b>                                                                                                                                                                                             | 478 mm                                                                                                                                                                         |
| <b>depth</b>                                                                                                                                                                                             | 241 mm                                                                                                                                                                         |
| required spacing with side-by-side mounting<br>• forwards<br>• backwards<br>• upwards<br>• downwards<br>• at the side                                                                                    | 10 mm<br>0 mm<br>100 mm<br>75 mm<br>5 mm                                                                                                                                       |
| <b>weight without packaging</b>                                                                                                                                                                          | 61 kg                                                                                                                                                                          |
| <b>Connections/ Terminals</b>                                                                                                                                                                            |                                                                                                                                                                                |
| <b>type of electrical connection</b><br>• for main current circuit<br>• for control circuit                                                                                                              | busbar connection<br>screw-type terminals                                                                                                                                      |
| <b>width of connection bar maximum</b>                                                                                                                                                                   | 55 mm                                                                                                                                                                          |
| <b>wire length for thermistor connection</b><br>• with conductor cross-section = 0.5 mm² maximum<br>• with conductor cross-section = 1.5 mm² maximum<br>• with conductor cross-section = 2.5 mm² maximum | 50 m<br>150 m<br>250 m                                                                                                                                                         |
| <b>type of connectable conductor cross-sections</b><br>• for DIN cable lug for main contacts stranded<br>• for DIN cable lug for main contacts finely stranded                                           | 2x (50 ... 240 mm²)<br>2x (70 ... 240 mm²)                                                                                                                                     |
| <b>type of connectable conductor cross-sections</b><br>• for control circuit solid                                                                                                                       | 1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)                                                                                                                                     |

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| <ul style="list-style-type: none"> <li>for control circuit finely stranded with core end processing</li> <li>for AWG cables for control circuit solid</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                | 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)<br>1x (20 ... 12), 2x (20 ... 14)                                                                                                                                                                                                      |
| <b>wire length</b> <ul style="list-style-type: none"> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                        | 800 m<br>1 000 m                                                                                                                                                                                                                                                                  |
| <b>tightening torque</b> <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                                                    | 20 ... 35 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>                                                                                                                                                                                                                                                                                                                                           | 177 ... 310 lbf·in<br>7 ... 10.3 lbf·in                                                                                                                                                                                                                                           |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                   |
| installation altitude at height above sea level maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2 000 m; Derating as of 1000 m, see catalog                                                                                                                                                                                                                                       |
| <b>ambient temperature</b> <ul style="list-style-type: none"> <li>during operation</li> <li>during storage and transport</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                             | -25 ... +60 °C; Please observe derating at temperatures of 40 °C or above<br>-40 ... +80 °C                                                                                                                                                                                       |
| <b>environmental category</b> <ul style="list-style-type: none"> <li>during operation 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>Environmental footprint</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                   |
| Siemens Eco Profile (SEP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Siemens EcoTech                                                                                                                                                                                                                                                                   |
| <b>EMC emitted interference</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | acc. to IEC 60947-4-2: Class A                                                                                                                                                                                                                                                    |
| <b>Communication/ Protocol</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                   |
| <b>communication module is supported</b> <ul style="list-style-type: none"> <li>PROFINET standard</li> <li>PROFINET high-feature</li> <li>EtherNet/IP</li> <li>Modbus RTU</li> <li>Modbus TCP</li> <li>PROFIBUS</li> </ul>                                                                                                                                                                                                                                                                                                                      | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                            |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                   |
| <b>manufacturer's article number</b> <ul style="list-style-type: none"> <li>of 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 J / L, max. 3000 A; Iq = 85 kA<br>Type: Class J / L, max. 3000 A; Iq = 100 kA<br>Type: Class J / L, max. 3000 A; Iq = 85 kA<br>Type: Class J / L, max. 3000 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> | 400 hp<br>450 hp<br>1 000 hp<br>1 250 hp<br>700 hp<br>850 hp<br>1 700 hp<br>2 200 hp                                                                                                                                                                                              |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | R300-B300                                                                                                                                                                                                                                                                         |
| <b>Electrical Safety</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                   |
| <b>protection class IP on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | IP00                                                                                                                                                                                                                                                                              |
| <b>ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                   |
| <b>Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SIL1                                                                                                                                                                                                                                                                              |
| <b>PFHD with high demand rate according to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5E-7 1/h                                                                                                                                                                                                                                                                          |

|                                                                                                                                                        |                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| PFDavg with low demand rate according to IEC 61508 relating to ATEX                                                                                    | 0.008                                                                                        |
| hardware fault tolerance according to IEC 61508 relating to ATEX                                                                                       | 0                                                                                            |
| T1 value for proof test interval or service life according to IEC 61508 relating to ATEX                                                               | 3 a                                                                                          |
| certificate of suitability <ul style="list-style-type: none"> <li>• ATEX</li> <li>• IECEx</li> <li>• according to ATEX directive 2014/34/EU</li> </ul> | Yes<br>Yes<br>BVS 18 ATEX F 003 X                                                            |
| type of protection according to ATEX directive 2014/34/EU                                                                                              | II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb] |

#### Approvals Certificates

##### General Product Approval



[Confirmation](#)



| General Product Approval | EMV | For use in hazardous locations | Test Certificates |
|--------------------------|-----|--------------------------------|-------------------|
|--------------------------|-----|--------------------------------|-------------------|



[KC](#)



[Type Test Certificates/Test Report](#)

| Marine / Shipping | other | Environment |
|-------------------|-------|-------------|
|-------------------|-------|-------------|



[Confirmation](#)



#### Environment



[Environmental Confirmations](#)

#### Further information

##### Information on the packaging

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

##### 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=3RW5558-6HA06>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5558-6HA06>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5558-6HA06>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5558-6HA06&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5558-6HA06&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5558-6HA06/char>

##### Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5558-6HA06&objecttype=14&gridview=view1>

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

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







