



SIRIUS soft starter 200-690 V 370 A, 24 V AC/DC spring-type terminals

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| <b>product brand name</b>                               | SIRIUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>product category</b>                                 | Hybrid switching devices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>product designation</b>                              | Soft starter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>product type designation</b>                         | 3RW55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>manufacturer's article number</b>                    | <ul style="list-style-type: none"> <li>• of high feature HMI module usable <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="#">3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>• of circuit breaker usable at 500 V <a href="#">3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>• of circuit breaker usable at 400 V at inside-delta circuit <a href="#">3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>• of circuit breaker usable at 500 V at inside-delta circuit <a href="#">3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>• of the gG fuse usable up to 690 V 2x3NA3365-6; Type of coordination 1, Iq = 65 kA</li> <li>• of the gG fuse usable at inside-delta circuit up to 500 V 2x3NA3365-6; Type of coordination 1, Iq = 65 kA</li> <li>• of full range R fuse link for semiconductor protection usable up to 690 V <a href="#">3NE1334-2; 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="#">3NE3340-8; Type of coordination 2, Iq = 65 kA</a></li> </ul> |
| <b>General technical data</b>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>starting voltage [%]</b>                             | 20 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>stopping voltage [%]</b>                             | 50 %; non-adjustable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>start-up ramp time of soft starter</b>               | 0 ... 360 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>ramp-down time of soft starter</b>                   | 0 ... 360 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>start torque [%]</b>                                 | 10 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>stopping torque [%]</b>                              | 10 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>torque limitation [%]</b>                            | 20 ... 200 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>current limiting value [%] adjustable</b>            | 125 ... 800 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>breakaway voltage [%] adjustable</b>                 | 40 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>breakaway time adjustable</b>                        | 0 ... 2 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>number of parameter sets</b>                         | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>accuracy class</b>                                   | 5 (based on IEC 61557-12)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>certificate of suitability</b>                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| • CE marking                                            | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| • UL approval                                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| • CSA approval                                          | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>product component</b>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| • HMI-High Feature                                      | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| • 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>vibration resistance</b>                                  | 15 mm up to 6 Hz; 2 g up to 500 Hz                                                                                                                                                                                                                                                                                                                             |
| <b>recovery time after overload trip adjustable</b>          | 60 ... 1 800 s                                                                                                                                                                                                                                                                                                                                                 |
| utilization category according to IEC 60947-4-2              | AC 53a                                                                                                                                                                                                                                                                                                                                                         |
| <b>reference code according to IEC 81346-2</b>               | Q                                                                                                                                                                                                                                                                                                                                                              |
| <b>Substance Prohibitance (day/month/year)</b>               | 02/15/2018                                                                                                                                                                                                                                                                                                                                                     |
| <b>SVHC substance name</b>                                   | Lead CAS-No. 7439-92-1<br>Lead monoxide (lead oxide) CAS-No. 1317-36-8<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5<br>Melamine CAS-No. 108-78-1<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1<br>Dibutylbis(pentane-2,4-dionato-O,O')tin CAS-No. 22673-19-4<br>Lead titanium trioxide CAS-No. 12060-00-3 |
| <b>Net Weight</b>                                            | 12.249 kg                                                                                                                                                                                                                                                                                                                                                      |
| <b>product function</b>                                      |                                                                                                                                                                                                                                                                                                                                                                |
| • ramp-up (soft starting)                                    | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • soft stopping                                              | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • breakaway pulse                                            | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • adjustable current limitation                              | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • creep speed in both directions of rotation                 | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • pump stop                                                  | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • DC braking                                                 | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • motor heating                                              | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • min/max pointer                                            | 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                                             | No                                                                                                                                                                                                                                                                                                                                                             |
| • spring-loaded terminal                                     | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • <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                                                                                                                                                                                                                                                                                                                                                            |
| • combined braking                                           | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • analog output                                              | Yes; 4 ... 20 mA (default) / 0 ... 10 V                                                                                                                                                                                                                                                                                                                        |
| • programmable control inputs/outputs                        | Yes                                                                                                                                                                                                                                                                                                                                                            |
| • condition monitoring                                       | Yes                                                                                                                                                                                                                                                                                                                                                            |

- automatic parameterisation
- application wizards
- alternative stopping mode
- emergency operation mode
- reversing operation
- soft starting at heavy starting conditions

Yes  
Yes  
Yes  
Yes  
Yes  
Yes

#### Power Electronics

|                                                                                     |                                                                    |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>operational current</b>                                                          |                                                                    |
| • at 40 °C rated value                                                              | 370 A                                                              |
| • at 40 °C rated value minimum                                                      | 74 A                                                               |
| • at 50 °C rated value                                                              | 328 A                                                              |
| • at 60 °C rated value                                                              | 300 A                                                              |
| <b>operational current at inside-delta circuit</b>                                  |                                                                    |
| • at 40 °C rated value                                                              | 641 A                                                              |
| • at 50 °C rated value                                                              | 568 A                                                              |
| • at 60 °C rated value                                                              | 519 A                                                              |
| <b>operating voltage</b>                                                            |                                                                    |
| • rated value                                                                       | 200 ... 690 V                                                      |
| • at inside-delta circuit rated value                                               | 200 ... 600 V                                                      |
| <b>relative negative tolerance of the operating voltage</b>                         | -15 %                                                              |
| <b>relative positive tolerance of the operating voltage</b>                         | 10 %                                                               |
| <b>relative negative tolerance of the operating voltage at inside-delta circuit</b> | -15 %                                                              |
| <b>relative positive tolerance of the operating voltage at inside-delta circuit</b> | 10 %                                                               |
| <b>operating power for 3-phase motors</b>                                           |                                                                    |
| • at 230 V at 40 °C rated value                                                     | 110 kW                                                             |
| • at 230 V at inside-delta circuit at 40 °C rated value                             | 200 kW                                                             |
| • at 400 V at 40 °C rated value                                                     | 200 kW                                                             |
| • at 400 V at inside-delta circuit at 40 °C rated value                             | 355 kW                                                             |
| • at 500 V at 40 °C rated value                                                     | 250 kW                                                             |
| • at 500 V at inside-delta circuit at 40 °C rated value                             | 450 kW                                                             |
| • at 690 V at 40 °C rated value                                                     | 355 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>                          |                                                                    |
| • at 40 °C after startup                                                            | 111 W                                                              |
| • at 50 °C after startup                                                            | 98 W                                                               |
| • at 60 °C after startup                                                            | 90 W                                                               |
| <b>power loss [W] at AC at current limitation 350 %</b>                             |                                                                    |
| • at 40 °C during startup                                                           | 5 563 W                                                            |
| • at 50 °C during startup                                                           | 4 694 W                                                            |
| • at 60 °C during startup                                                           | 4 145 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>                                                 |                                                                    |
| • at 50 Hz rated value                                                              | 24 V                                                               |
| • at 60 Hz rated value                                                              | 24 V                                                               |
| <b>relative negative tolerance of the control supply voltage at AC at 50 Hz</b>     | -20 %                                                              |
| <b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b>     | 20 %                                                               |
| <b>relative negative tolerance of the control supply voltage at AC at 60 Hz</b>     | -20 %                                                              |
| <b>relative positive tolerance of the control supply voltage at AC at 60 Hz</b>     | 20 %                                                               |
| <b>control supply voltage frequency</b>                                             | 50 ... 60 Hz                                                       |

|                                                                            |                                                                                                                                                                                |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>relative negative tolerance of the control supply voltage frequency</b> | -10 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage frequency</b> | 10 %                                                                                                                                                                           |
| <b>control supply voltage at DC rated value</b>                            | 24 V                                                                                                                                                                           |
| <b>relative negative tolerance of the control supply voltage at DC</b>     | -20 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage at DC</b>     | 20 %                                                                                                                                                                           |
| <b>control supply current in standby mode rated value</b>                  | 440 mA                                                                                                                                                                         |
| <b>holding current in bypass operation rated value</b>                     | 720 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>                                            | 4                                                                                                                                                                              |
| • parameterizable                                                          | 4                                                                                                                                                                              |
| • <b>number of digital outputs</b>                                         | 4                                                                                                                                                                              |
| • number of digital outputs parameterizable                                | 3                                                                                                                                                                              |
| • number of digital outputs not parameterizable                            | 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>                     |                                                                                                                                                                                |
| • at AC-15 at 250 V rated value                                            | 3 A                                                                                                                                                                            |
| • at DC-13 at 24 V rated value                                             | 1 A                                                                                                                                                                            |
| <b>Installation/ mounting/ dimensions</b>                                  |                                                                                                                                                                                |
| <b>mounting position</b>                                                   | Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)                                                                                                     |
| <b>fastening method</b>                                                    | screw fixing                                                                                                                                                                   |
| <b>height</b>                                                              | 393 mm                                                                                                                                                                         |
| <b>width</b>                                                               | 210 mm                                                                                                                                                                         |
| <b>depth</b>                                                               | 203 mm                                                                                                                                                                         |
| required spacing with side-by-side mounting                                |                                                                                                                                                                                |
| • forwards                                                                 | 10 mm                                                                                                                                                                          |
| • backwards                                                                | 0 mm                                                                                                                                                                           |
| • upwards                                                                  | 100 mm                                                                                                                                                                         |
| • downwards                                                                | 75 mm                                                                                                                                                                          |
| • at the side                                                              | 5 mm                                                                                                                                                                           |
| <b>weight without packaging</b>                                            | 10.9 kg                                                                                                                                                                        |
| <b>Connections/ Terminals</b>                                              |                                                                                                                                                                                |
| <b>type of electrical connection</b>                                       |                                                                                                                                                                                |
| • for main current circuit                                                 | busbar connection                                                                                                                                                              |
| • for control circuit                                                      | spring-loaded terminals                                                                                                                                                        |
| <b>width of connection bar maximum</b>                                     | 45 mm                                                                                                                                                                          |
| <b>wire length for thermistor connection</b>                               |                                                                                                                                                                                |
| • with conductor cross-section = 0.5 mm² maximum                           | 50 m                                                                                                                                                                           |
| • with conductor cross-section = 1.5 mm² maximum                           | 150 m                                                                                                                                                                          |
| • with conductor cross-section = 2.5 mm² maximum                           | 250 m                                                                                                                                                                          |
| <b>type of connectable conductor cross-sections</b>                        |                                                                                                                                                                                |
| • for DIN cable lug for main contacts stranded                             | 2x (50 ... 240 mm²)                                                                                                                                                            |
| • for DIN cable lug for main contacts finely stranded                      | 2x (70 ... 240 mm²)                                                                                                                                                            |
| <b>type of connectable conductor cross-sections</b>                        |                                                                                                                                                                                |
| • for control circuit solid                                                | 2x (0.25 ... 1.5 mm²)                                                                                                                                                          |
| • for control circuit finely stranded with core end processing             | 2x (0.25 ... 1.5 mm²)                                                                                                                                                          |
| • for AWG cables for control circuit solid                                 | 2x (24 ... 16)                                                                                                                                                                 |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• for AWG cables for control circuit finely stranded with core end processing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2x (24 ... 16)                                                                                                                                                                                                                                                                    |
| <b>wire length</b> <ul style="list-style-type: none"> <li>• between soft starter and motor maximum</li> <li>• at the digital inputs at 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>                                                                                                                                                                                                                                                                                                                                                                | 14 ... 24 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>                                                                                                                                                                                                                                                                                                                                                       | 124 ... 210 lbf·in<br>7 ... 10.3 lbf·in                                                                                                                                                                                                                                           |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                   |
| installation altitude at height above sea level maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2 000 m                                                                                                                                                                                                                                                                           |
| <b>ambient temperature</b> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage and transport</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                         | -25 ... +60 °C; Please observe derating at temperatures of 40 °C or above<br>-40 ... +80 °C                                                                                                                                                                                       |
| <b>environmental category</b> <ul style="list-style-type: none"> <li>• during operation according to IEC 60721</li> <li>• during storage according to IEC 60721</li> <li>• during transport according to IEC 60721</li> </ul>                                                                                                                                                                                                                                                                                                                                   | 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6<br>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4<br>2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) |
| <b>Electromagnetic compatibility</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                   |
| <b>EMC emitted interference</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | acc. to IEC 60947-4-2: Class A                                                                                                                                                                                                                                                    |
| <b>Communication/ Protocol</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                   |
| <b>communication module is supported</b> <ul style="list-style-type: none"> <li>• PROFINET standard</li> <li>• 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. 1200 A; Iq = 18 kA<br>Type: Class J / L, max. 1200 A; Iq = 100 kA<br>Type: Class J / L, max. 1200 A; Iq = 18 kA<br>Type: Class J / L, max. 1200 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> | 100 hp<br>125 hp<br>250 hp<br>300 hp<br>200 hp<br>200 hp<br>450 hp<br>600 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; IP20 with cover                                                                                                                                                                                                                                                             |
| <b>touch protection on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | finger-safe, for vertical contact from the front with cover                                                                                                                                                                                                                       |
| <b>ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                   |
| <b>Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SIL 1                                                                                                                                                                                                                                                                             |
| <b>PFHD with high demand rate according to IEC 61508</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 5E-7 1/h                                                                                                                                                                                                                                                                          |

|                                                                                                                                                        |                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| relating to ATEX                                                                                                                                       |                                                                                              |
| 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

|                                                                                                                                                                                                                                                                                                                                                                |                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Environmental Product Declaration                                                                                                                                                                                                                                                                                                                              |                                                 |
| <ul style="list-style-type: none"> <li>• global warming potential [CO2 eq] / during manufacturing</li> <li>• global warming potential [CO2 eq] / during sales</li> <li>• global warming potential [CO2 eq] / during operation</li> <li>• global warming potential [CO2 eq] / after end of life</li> <li>• global warming potential [CO2 eq] / total</li> </ul> | 95.3 kg<br>2.8 kg<br>756 kg<br>-21 kg<br>833 kg |
| Environment                                                                                                                                                                                                                                                                                                                                                    | General Product Approval                        |

[Environmental Confirmations](#)



|                          |     |                                |
|--------------------------|-----|--------------------------------|
| General Product Approval | EMV | For use in hazardous locations |
|                          |     |                                |
| EG-Konf.                 |     | RCM                            |
|                          |     | IECEX                          |
|                          |     | ATEX                           |

|                                                    |                      |
|----------------------------------------------------|----------------------|
| Test Certificates                                  | Maritime application |
| <a href="#">Type Test Certificates/Test Report</a> |                      |
|                                                    |                      |
|                                                    |                      |
|                                                    |                      |
|                                                    |                      |

|                                                           |
|-----------------------------------------------------------|
| other                                                     |
| <a href="#">Confirmation</a> <a href="#">Confirmation</a> |

#### Further information

Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>  
Information for data generation and storage  
<https://support.industry.siemens.com/cs/ww/en/view/109995012>  
Information- and Downloadcenter (Catalogs, Brochures,...)  
<https://www.siemens.com/ic10>  
Industry Mall (Online ordering system)  
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5546-2HA06>  
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)  
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5546-2HA06>  
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)  
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5546-2HA06&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5546-2HA06&lang=en)  
Cax online generator  
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5546-2HA06>  
Characteristic curves

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

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5546-2HA06/char>

**Characteristic: Installation altitude**

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

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

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

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9/5/2025 