

Siemens  
EcoTech



SIRIUS soft starter 200-480 V 143 A, 24 V AC/DC Screw terminals Analog output

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| product brand name                               | SIRIUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| product category                                 | Hybrid switching devices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| product designation                              | Soft starter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| product type designation                         | 3RW50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| manufacturer's article number                    | <ul style="list-style-type: none"> <li>• of high feature HMI module usable <a href="#">3RW5980-0HF00</a></li> <li>• of communication module PROFINET standard usable <a href="#">3RW5980-0CS00</a></li> <li>• of communication module 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="#">3VA2220-7MN32-0AA0; Type of assignment 1, Iq = 20 kA</a></li> <li>• of circuit breaker usable at 500 V <a href="#">3VA2220-7MN32-0AA0; Type of assignment 1, Iq = 20 kA</a></li> <li>• of the gG fuse usable up to 690 V <a href="#">3NA3244-6; Type of coordination 1, Iq = 65 kA</a></li> <li>• of full range R fuse link for semiconductor protection usable up to 690 V <a href="#">3NE1 227-0; 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="#">3NE3 334 -0B; Type of coordination 2, Iq = 65 kA</a></li> <li>• of line contactor usable up to 480 V <a href="#">3RT1055</a></li> <li>• of line contactor usable up to 690 V <a href="#">3RT1055</a></li> </ul> |
| General technical data                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| starting voltage [%]                             | 30 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| stopping voltage [%]                             | 50 %; non-adjustable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| start-up ramp time of soft starter               | 0 ... 20 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ramp-down time of soft starter                   | 0 ... 20 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| current limiting value [%] adjustable            | 130 ... 700 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| certificate of suitability                       | <ul style="list-style-type: none"> <li>• CE marking Yes</li> <li>• UL approval Yes</li> <li>• CSA approval Yes</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| product component                                | <ul style="list-style-type: none"> <li>• HMI-High Feature No</li> <li>• is supported HMI-Standard Yes</li> <li>• is supported HMI-High Feature Yes</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| product feature integrated bypass contact system | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| number of controlled phases                      | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| buffering time in the event of power failure     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• for control circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 100 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>insulation voltage rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 600 V                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>degree of pollution</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3, acc. to IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>impulse voltage rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 6 kV                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>blocking voltage of the thyristor maximum</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1 400 V                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>service factor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>surge voltage resistance rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6 kV                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>maximum permissible voltage for protective separation</b> <ul style="list-style-type: none"> <li>• between main and auxiliary circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 600 V                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>shock resistance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 15 g / 11 ms, from 12 g / 11 ms with potential contact lifting                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>vibration resistance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 15 mm to 6 Hz; 2 g to 500 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| utilization category according to IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | AC-53a                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>reference code according to IEC 81346-2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Q                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Substance Prohibitance (day/month/year)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 09/23/2019                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <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>Perfluorobutane sulfonic acid (PFBS) and its salts CAS-No. -                                                                                                                                           |
| <b>Net Weight</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3.986 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>product function</b> <ul style="list-style-type: none"> <li>• ramp-up (soft starting)</li> <li>• soft stopping</li> <li>• Soft Torque</li> <li>• adjustable current limitation</li> <li>• pump stop</li> <li>• intrinsic device protection</li> <li>• motor overload protection</li> <li>• evaluation of thermistor motor protection</li> <li>• auto-RESET</li> <li>• manual RESET</li> <li>• remote reset</li> <li>• communication function</li> <li>• operating measured value display</li> <li>• error logbook</li> <li>• via software parameterizable</li> <li>• via software configurable</li> <li>• <b>PROFInergy</b></li> <li>• voltage ramp</li> <li>• torque control</li> <li>• analog output</li> </ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes; Electronic motor overload protection<br>No<br>Yes<br>Yes<br>Yes; By turning off the control supply voltage<br>Yes<br>Yes; Only in conjunction with special accessories<br>Yes; Only in conjunction with special accessories<br>No<br>Yes<br>Yes; in connection with the PROFINET Standard communication module<br>Yes<br>No<br>Yes; 4 ... 20 mA (default) / 0 ... 10 V (parameterizable with High Feature HMI) |
| <b>Power Electronics</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>operational current</b> <ul style="list-style-type: none"> <li>• at 40 °C rated value</li> <li>• at 50 °C rated value</li> <li>• at 60 °C rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 143 A<br>128 A<br>118 A                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>operating voltage</b> <ul style="list-style-type: none"> <li>• rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 200 ... 480 V                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>relative negative tolerance of the operating voltage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -15 %                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>relative positive tolerance of the operating voltage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>operating power for 3-phase motors</b> <ul style="list-style-type: none"> <li>• at 230 V at 40 °C rated value</li> <li>• at 400 V at 40 °C rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 37 kW<br>75 kW                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Operating frequency 1 rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 50 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Operating frequency 2 rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>relative negative tolerance of the operating frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>relative positive tolerance of the operating frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>adjustable motor current</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 1</li> <li>• at rotary coding switch on switch position 2</li> <li>• at rotary coding switch on switch position 3</li> <li>• at rotary coding switch on switch position 4</li> <li>• at rotary coding switch on switch position 5</li> <li>• at rotary coding switch on switch position 6</li> <li>• at rotary coding switch on switch position 7</li> <li>• at rotary coding switch on switch position 8</li> <li>• at rotary coding switch on switch position 9</li> <li>• at rotary coding switch on switch position 10</li> <li>• at rotary coding switch on switch position 11</li> <li>• at rotary coding switch on switch position 12</li> <li>• at rotary coding switch on switch position 13</li> <li>• at rotary coding switch on switch position 14</li> <li>• at rotary coding switch on switch position 15</li> <li>• at rotary coding switch on switch position 16</li> <li>• minimum</li> </ul> | 68 A<br>73 A<br>78 A<br>83 A<br>88 A<br>93 A<br>98 A<br>103 A<br>108 A<br>113 A<br>118 A<br>123 A<br>128 A<br>133 A<br>138 A<br>143 A<br>68 A                                                                                      |
| <b>minimum load [%]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 15 %; Relative to smallest settable I <sub>e</sub>                                                                                                                                                                                 |
| <b>power loss [W] for rated value of the current at AC</b> <ul style="list-style-type: none"> <li>• at 40 °C after startup</li> <li>• at 50 °C after startup</li> <li>• at 60 °C after startup</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 23 W<br>19 W<br>16 W                                                                                                                                                                                                               |
| <b>power loss [W] at AC at current limitation 350%</b> <ul style="list-style-type: none"> <li>• at 40 °C during startup</li> <li>• at 50 °C during startup</li> <li>• at 60 °C during startup</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1 336 W<br>1 134 W<br>1 007 W                                                                                                                                                                                                      |
| <b>type of the motor protection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Electronic, tripping in the event of thermal overload of the motor                                                                                                                                                                 |
| <b>Control circuit/ Control</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                    |
| <b>type of voltage of the control supply voltage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | AC/DC                                                                                                                                                                                                                              |
| <b>control supply voltage at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 24 V<br>24 V                                                                                                                                                                                                                       |
| <b>relative negative tolerance of the control supply voltage at AC at 50 Hz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -20 %                                                                                                                                                                                                                              |
| <b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20 %                                                                                                                                                                                                                               |
| <b>relative negative tolerance of the control supply voltage at AC at 60 Hz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -20 %                                                                                                                                                                                                                              |
| <b>relative positive tolerance of the control supply voltage at AC at 60 Hz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20 %                                                                                                                                                                                                                               |
| <b>control supply voltage frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 50 ... 60 Hz                                                                                                                                                                                                                       |
| <b>relative negative tolerance of the control supply voltage frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -10 %                                                                                                                                                                                                                              |
| <b>relative positive tolerance of the control supply voltage frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10 %                                                                                                                                                                                                                               |
| <b>control supply voltage at DC rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 24 V                                                                                                                                                                                                                               |
| <b>relative negative tolerance of the control supply voltage at DC</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -20 %                                                                                                                                                                                                                              |
| <b>relative positive tolerance of the control supply voltage at DC</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 20 %                                                                                                                                                                                                                               |
| <b>control supply current in standby mode rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 160 mA                                                                                                                                                                                                                             |
| <b>holding current in bypass operation rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 360 mA                                                                                                                                                                                                                             |
| <b>inrush current by closing the bypass contacts maximum</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 7.6 A                                                                                                                                                                                                                              |
| inrush current peak at application of control supply voltage maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3.3 A                                                                                                                                                                                                                              |
| duration of inrush current peak at application of control supply voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12.1 ms                                                                                                                                                                                                                            |
| <b>design of the overvoltage protection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Varistor                                                                                                                                                                                                                           |
| <b>design of short-circuit protection for control circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4 A gG fuse (I <sub>cu</sub> =1 kA), 6 A quick-acting fuse (I <sub>cu</sub> =1 kA), C1 miniature circuit breaker (I <sub>cu</sub> = 600 A), C6 miniature circuit breaker (I <sub>cu</sub> = 300 A); Is not part of scope of supply |
| <b>Inputs/ Outputs</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                    |

|                                                                                        |                                                                                                                          |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>number of digital inputs</b>                                                        | 1                                                                                                                        |
| <b>number of digital outputs</b>                                                       | 3                                                                                                                        |
| • not parameterizable                                                                  | 2                                                                                                                        |
| <b>digital output version</b>                                                          | 2 normally-open contacts (NO) / 1 changeover contact (CO)                                                                |
| <b>number of analog outputs</b>                                                        | 1                                                                                                                        |
| <b>switching capacity current of the relay outputs</b>                                 |                                                                                                                          |
| • at AC-15 at 250 V rated value                                                        | 3 A                                                                                                                      |
| • at DC-13 at 24 V rated value                                                         | 1 A                                                                                                                      |
| <b>Installation/ mounting/ dimensions</b>                                              |                                                                                                                          |
| <b>mounting position</b>                                                               | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| <b>fastening method</b>                                                                | screw fixing                                                                                                             |
| <b>height</b>                                                                          | 198 mm                                                                                                                   |
| <b>width</b>                                                                           | 120 mm                                                                                                                   |
| <b>depth</b>                                                                           | 249 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>                                                        | 3.2 kg                                                                                                                   |
| <b>Connections/ Terminals</b>                                                          |                                                                                                                          |
| <b>type of electrical connection</b>                                                   |                                                                                                                          |
| • for main current circuit                                                             | busbar connection                                                                                                        |
| • for control circuit                                                                  | screw-type terminals                                                                                                     |
| <b>width of connection bar maximum</b>                                                 | 25 mm                                                                                                                    |
| <b>type of connectable conductor cross-sections for main contacts for box terminal</b> |                                                                                                                          |
| • using the front clamping point solid                                                 | 16 ... 120 mm²                                                                                                           |
| • using the front clamping point finely stranded with core end processing              | 16 ... 120 mm²                                                                                                           |
| • using the front clamping point finely stranded without core end processing           | 10 ... 120 mm²                                                                                                           |
| • using the front clamping point stranded                                              | 16 ... 70 mm²                                                                                                            |
| • using the back clamping point solid                                                  | 16 ... 120 mm²                                                                                                           |
| • r box terminal using the back clamping point                                         | 6 ... 250 kcmil                                                                                                          |
| • using both clamping points solid                                                     | max. 1x 95 mm², 1x 120 mm²                                                                                               |
| • using both clamping points finely stranded with core end processing                  | max. 1x 95 mm², 1x 120 mm²                                                                                               |
| • using both clamping points finely stranded without core end processing               | max. 1x 95 mm², 1x 120 mm²                                                                                               |
| • using both clamping points stranded                                                  | max. 2x 120 mm²                                                                                                          |
| • using the back clamping point finely stranded with core end processing               | 16 ... 120 mm²                                                                                                           |
| • using the back clamping point finely stranded without core end processing            | 10 ... 120 mm²                                                                                                           |
| • using the back clamping point stranded                                               | 16 ... 120 mm²                                                                                                           |
| <b>type of connectable conductor cross-sections</b>                                    |                                                                                                                          |
| • for AWG cables for main current circuit solid                                        | 4 ... 250 kcmil                                                                                                          |
| • for DIN cable lug for main contacts stranded                                         | 16 ... 95 mm²                                                                                                            |
| • for DIN cable lug for main contacts finely stranded                                  | 25 ... 120 mm²                                                                                                           |
| <b>type of connectable conductor cross-sections</b>                                    |                                                                                                                          |
| • for control circuit solid                                                            | 1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)                                                                               |
| • for control circuit finely stranded with core end processing                         | 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)                                                                               |
| • for AWG cables for control circuit solid                                             | 1x (20 ... 12), 2x (20 ... 14)                                                                                           |
| <b>wire length</b>                                                                     |                                                                                                                          |
| • between soft starter and motor maximum                                               | 800 m                                                                                                                    |
| • at the digital inputs at AC maximum                                                  | 1 000 m                                                                                                                  |
| <b>tightening torque</b>                                                               |                                                                                                                          |
| • for main contacts with screw-type terminals                                          | 10 ... 14 N·m                                                                                                            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                              | 0.8 ... 1.2 N·m                                                                                                                                                                                                                                                                   |
| <b>tightening torque [lbf·in]</b> <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                       | 89 ... 124 lbf·in<br>7 ... 10.3 lbf·in                                                                                                                                                                                                                                            |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                   |
| installation altitude at height above sea level maximum                                                                                                                                                                                                                                                                                                                                                                                     | 5 000 m                                                                                                                                                                                                                                                                           |
| <b>ambient temperature</b> <ul style="list-style-type: none"> <li>during operation</li> <li>during storage and transport</li> </ul>                                                                                                                                                                                                                                                                                                         | -25 ... +60 °C; Please observe derating at temperatures of 40 °C or above<br>-40 ... +80 °C                                                                                                                                                                                       |
| <b>environmental category</b> <ul style="list-style-type: none"> <li>during operation according to IEC 60721</li> <li>during storage according to IEC 60721</li> <li>during transport according to IEC 60721</li> </ul>                                                                                                                                                                                                                     | 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6<br>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4<br>2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) |
| <b>Electromagnetic compatibility</b>                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                   |
| <b>EMC emitted interference</b>                                                                                                                                                                                                                                                                                                                                                                                                             | acc. to IEC 60947-4-2: Class A                                                                                                                                                                                                                                                    |
| <b>Communication/ Protocol</b>                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                   |
| <b>communication module is supported</b> <ul style="list-style-type: none"> <li>PROFINET standard</li> <li>EtherNet/IP</li> <li>Modbus RTU</li> <li>Modbus TCP</li> <li>PROFIBUS</li> </ul>                                                                                                                                                                                                                                                 | Yes<br>Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                   |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                   |
| <b>manufacturer's article number</b> <ul style="list-style-type: none"> <li><b>of circuit breaker</b> <ul style="list-style-type: none"> <li>— usable for Standard Faults at 460/480 V according to UL</li> </ul> </li> <li><b>of the fuse</b> <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> </ul> </li> </ul> | Siemens type: 3VA5225, max. 250 A; Iq = 10 kA<br><br>Type: Class RK5 / K5, max. 350 A; Iq = 10 kA<br>Type: Class J, max. 350 A; Iq = 100 kA                                                                                                                                       |
| <b>operating power [hp] for 3-phase motors</b> <ul style="list-style-type: none"> <li>at 200/208 V at 50 °C rated value</li> <li>at 220/230 V at 50 °C rated value</li> <li>at 460/480 V at 50 °C rated value</li> </ul>                                                                                                                                                                                                                    | 40 hp<br>40 hp<br>100 hp                                                                                                                                                                                                                                                          |
| <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 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                   | 9E-6 1/h                                                                                                                                                                                                                                                                          |
| <b>PFDavg with low demand rate according to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                  | 0.09                                                                                                                                                                                                                                                                              |
| <b>hardware fault tolerance according to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                     | 0                                                                                                                                                                                                                                                                                 |
| <b>T1 value for proof test interval or service life according to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                             | 3 a                                                                                                                                                                                                                                                                               |
| <b>certificate of suitability</b> <ul style="list-style-type: none"> <li>ATEX</li> <li>IECEx</li> <li>UKEX</li> </ul>                                                                                                                                                                                                                                                                                                                       | Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                 |
| <b>Approvals Certificates</b>                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                   |
| <b>Environmental Product Declaration</b>                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>global warming potential [CO2 eq] / during manufacturing</li> <li>global warming potential [CO2 eq] / during sales</li> </ul>                                                                                                                                                                                                                                                                        | 31.2 kg<br>0.945 kg                                                                                                                                                                                                                                                               |

- global warming potential [CO<sub>2</sub> eq] / during operation
- global warming potential [CO<sub>2</sub> eq] / after end of life
- global warming potential [CO<sub>2</sub> eq] / total

316 kg  
-2.75 kg  
345 kg

## Environment

[Environmental Confirmations](#)

Siemens  
EcoTech



## General Product Approval

## EMV

## For use in hazardous locations



[Miscellaneous](#)

## Test Certificates

## Maritime application

[Type Test Certificates/Test Report](#)



## other

[Confirmation](#)



## 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=3RW5055-6AB04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5055-6AB04>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5055-6AB04&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5055-6AB04&lang=en)

### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5055-6AB04>

### Characteristic curves

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

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5055-6AB04/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>





