



SIRIUS soft starter 200-480 V 93 A, 110-250 V AC Screw terminals  
Thermistor input

|                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>product brand name</b>                               | SIRIUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>product category</b>                                 | Hybrid switching devices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>product designation</b>                              | Soft starter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>product type designation</b>                         | 3RW52                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>manufacturer's article number</b>                    | <ul style="list-style-type: none"> <li>• of standard HMI module usable</li> <li>• of high feature HMI module usable</li> <li>• of communication module PROFINET standard usable</li> <li>• of communication module PROFIBUS usable</li> <li>• of communication module Modbus TCP usable</li> <li>• of communication module Modbus RTU usable</li> <li>• of communication module Ethernet/IP</li> <li>• of circuit breaker usable at 400 V</li> <li>• of circuit breaker usable at 500 V</li> <li>• of circuit breaker usable at 400 V at inside-delta circuit</li> <li>• of circuit breaker usable at 500 V at inside-delta circuit</li> <li>• of the gG fuse usable up to 690 V</li> <li>• of the gG fuse usable at inside-delta circuit up to 500 V</li> <li>• of full range R fuse link for semiconductor protection usable up to 690 V</li> <li>• of back-up R fuse link for semiconductor protection usable up to 690 V</li> </ul> |
| <b>General technical data</b>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>starting voltage [%]</b>                             | 30 ... 100 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>stopping voltage [%]</b>                             | 50 ... 50 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>start-up ramp time of soft starter</b>               | 0 ... 20 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>current limiting value [%] adjustable</b>            | 130 ... 700 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>certificate of suitability</b>                       | <ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>product component</b>                                | <ul style="list-style-type: none"> <li>• HMI-High Feature</li> <li>• is supported HMI-Standard</li> <li>• is supported HMI-High Feature</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>product feature integrated bypass contact system</b> | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>number of controlled phases</b>                      | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

[3RW5980-0HS00](#)

[3RW5980-0HF00](#)

[3RW5980-0CS00](#)

[3RW5980-0CP00](#)

[3RW5980-0CT00](#)

[3RW5980-0CR00](#)

[3RW5980-0CE00](#)

[3VA2216-7MN32-0AA0: Type of coordination 1, Iq = 15 kA, CLASS 10](#)

[3VA2216-7MN32-0AA0: Type of coordination 1, Iq = 10 kA, CLASS 10](#)

[3VA2220-7MN32-0AA0: Type of coordination 1, Iq = 15 kA, CLASS 10](#)

[3VA2220-7MN32-0AA0: Type of coordination 1, Iq = 10 kA, CLASS 10](#)

[3NA3136-6: Type of coordination 1, Iq = 65 kA](#)

[3NA3136-6: Type of coordination 1, Iq = 65 kA](#)

[3NE1224-0: Type of coordination 2, Iq = 65 kA](#)

[3NE4124: Type of coordination 2, Iq = 65 kA](#)

|                                                                                     |                                                                                                   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>trip class</b>                                                                   | CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2                                            |
| <b>buffering time in the event of power failure</b>                                 |                                                                                                   |
| • for main current circuit                                                          | 100 ms                                                                                            |
| • for control circuit                                                               | 100 ms                                                                                            |
| insulation voltage rated value                                                      | 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 safe isolation</b>                               |                                                                                                   |
| • between main and auxiliary circuit                                                | 600 V                                                                                             |
| <b>shock resistance</b>                                                             | 15 g / 11 ms, from 12 g / 11 ms with potential contact lifting                                    |
| <b>vibration resistance</b>                                                         | 15 mm to 6 Hz; 2g to 500 Hz                                                                       |
| utilization category acc. to IEC 60947-4-2                                          | AC 53a                                                                                            |
| <b>reference code acc. to IEC 81346-2</b>                                           | Q                                                                                                 |
| <b>Substance Prohibitance (Date)</b>                                                | 15.02.2018                                                                                        |
| <b>product function</b>                                                             |                                                                                                   |
| • ramp-up (soft starting)                                                           | Yes                                                                                               |
| • ramp-down (soft stop)                                                             | Yes                                                                                               |
| • Soft Torque                                                                       | Yes                                                                                               |
| • adjustable current limitation                                                     | Yes                                                                                               |
| • pump ramp down                                                                    | Yes                                                                                               |
| • intrinsic device protection                                                       | Yes                                                                                               |
| • motor overload protection                                                         | Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) |
| • evaluation of thermistor motor protection                                         | Yes; Type A PTC or Klixon / Thermoclick                                                           |
| • inside-delta circuit                                                              | Yes                                                                                               |
| • auto-RESET                                                                        | Yes                                                                                               |
| • manual RESET                                                                      | Yes                                                                                               |
| • remote reset                                                                      | Yes; By turning off the control supply voltage                                                    |
| • communication function                                                            | Yes                                                                                               |
| • operating measured value display                                                  | Yes; Only in conjunction with special accessories                                                 |
| • error logbook                                                                     | Yes; Only in conjunction with special accessories                                                 |
| • via software parameterizable                                                      | No                                                                                                |
| • via software configurable                                                         | Yes                                                                                               |
| • <b>PROFInergy</b>                                                                 | Yes; in connection with the PROFINET Standard communication module                                |
| • <b>firmware update</b>                                                            | Yes                                                                                               |
| • <b>removable terminal for control circuit</b>                                     | Yes                                                                                               |
| • torque control                                                                    | No                                                                                                |
| • analog output                                                                     | No                                                                                                |
| <b>Power Electronics</b>                                                            |                                                                                                   |
| <b>operational current</b>                                                          |                                                                                                   |
| • at 40 °C rated value                                                              | 93 A                                                                                              |
| • at 50 °C rated value                                                              | 83 A                                                                                              |
| • at 60 °C rated value                                                              | 76 A                                                                                              |
| <b>operational current at inside-delta circuit</b>                                  |                                                                                                   |
| • at 40 °C rated value                                                              | 161 A                                                                                             |
| • at 50 °C rated value                                                              | 143 A                                                                                             |
| • at 60 °C rated value                                                              | 131 A                                                                                             |
| <b>operating voltage</b>                                                            |                                                                                                   |
| • rated value                                                                       | 200 ... 480 V                                                                                     |
| • at inside-delta circuit rated value                                               | 200 ... 480 V                                                                                     |
| <b>relative negative tolerance of the operating voltage</b>                         | -15 %                                                                                             |
| <b>relative positive tolerance of the operating voltage</b>                         | 10 %                                                                                              |
| <b>relative negative tolerance of the operating voltage at inside-delta circuit</b> | -15 %                                                                                             |
| <b>relative positive tolerance of the operating voltage at inside-delta circuit</b> | 10 %                                                                                              |
| <b>operating power for 3-phase motors</b>                                           |                                                                                                   |

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| <ul style="list-style-type: none"> <li>• at 230 V at 40 °C rated value</li> <li>• at 230 V at inside-delta circuit at 40 °C rated value</li> <li>• at 400 V at 40 °C rated value</li> <li>• at 400 V at inside-delta circuit at 40 °C rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 22 kW<br>45 kW<br>45 kW<br>90 kW                                                                                                                            |
| <b>Operating frequency 1 rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 50 Hz                                                                                                                                                       |
| <b>Operating frequency 2 rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 60 Hz                                                                                                                                                       |
| <b>relative negative tolerance of the operating frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -10 %                                                                                                                                                       |
| <b>relative positive tolerance of the operating frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10 %                                                                                                                                                        |
| <b>adjustable motor current</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                             |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                         | 40.5 A<br>44 A<br>47.5 A<br>51 A<br>54.5 A<br>58 A<br>61.5 A<br>65 A<br>68.5 A<br>72 A<br>75.5 A<br>79 A<br>82.5 A<br>86 A<br>89.5 A<br>93 A<br>40.5 A      |
| <b>adjustable motor current</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 1</li> <li>• for inside-delta circuit at rotary coding switch on switch position 2</li> <li>• for inside-delta circuit at rotary coding switch on switch position 3</li> <li>• for inside-delta circuit at rotary coding switch on switch position 4</li> <li>• for inside-delta circuit at rotary coding switch on switch position 5</li> <li>• for inside-delta circuit at rotary coding switch on switch position 6</li> <li>• for inside-delta circuit at rotary coding switch on switch position 7</li> <li>• for inside-delta circuit at rotary coding switch on switch position 8</li> <li>• for inside-delta circuit at rotary coding switch on switch position 9</li> <li>• for inside-delta circuit at rotary coding switch on switch position 10</li> <li>• for inside-delta circuit at rotary coding switch on switch position 11</li> <li>• for inside-delta circuit at rotary coding switch on switch position 12</li> <li>• for inside-delta circuit at rotary coding switch on switch position 13</li> <li>• for inside-delta circuit at rotary coding switch on switch position 14</li> <li>• for inside-delta circuit at rotary coding switch on switch position 15</li> <li>• for inside-delta circuit at rotary coding switch on switch position 16</li> <li>• at inside-delta circuit minimum</li> </ul> | 70.1 A<br>76.2 A<br>82.3 A<br>88.3 A<br>94.4 A<br>100 A<br>107 A<br>113 A<br>119 A<br>125 A<br>131 A<br>137 A<br>143 A<br>149 A<br>155 A<br>161 A<br>70.1 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> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 40 W<br>37 W                                                                                                                                                |

|                                                                                   |                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 60 °C after startup</li> </ul>        | 35 W                                                                                                                                                                           |
| <b>power loss [W] at AC at current limitation 350 %</b>                           |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 40 °C during startup</li> </ul>       | 1 270 W                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 50 °C during startup</li> </ul>       | 1 077 W                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 60 °C during startup</li> </ul>       | 959 W                                                                                                                                                                          |
| <b>Control circuit/ Control</b>                                                   |                                                                                                                                                                                |
| <b>type of voltage of the control supply voltage</b>                              | AC                                                                                                                                                                             |
| <b>control supply voltage at AC</b>                                               |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                      | 110 ... 250 V                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                      | 110 ... 250 V                                                                                                                                                                  |
| <b>relative negative tolerance of the control supply voltage at AC at 50 Hz</b>   | -15 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b>   | 10 %                                                                                                                                                                           |
| <b>relative negative tolerance of the control supply voltage at AC at 60 Hz</b>   | -15 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage at AC at 60 Hz</b>   | 10 %                                                                                                                                                                           |
| <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 current in standby mode rated value</b>                         | 30 mA                                                                                                                                                                          |
| <b>holding current in bypass operation rated value</b>                            | 75 mA                                                                                                                                                                          |
| <b>locked-rotor current at close of bypass contact maximum</b>                    | 2.5 A                                                                                                                                                                          |
| <b>inrush current peak at application of control supply voltage maximum</b>       | 12.2 A                                                                                                                                                                         |
| <b>duration of inrush current peak at application of control supply voltage</b>   | 2.2 ms                                                                                                                                                                         |
| <b>design of the overvoltage protection</b>                                       | Varistor                                                                                                                                                                       |
| <b>design of short-circuit protection for control circuit</b>                     | 4 A gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply |
| <b>Inputs/ Outputs</b>                                                            |                                                                                                                                                                                |
| <b>number of digital inputs</b>                                                   | 1                                                                                                                                                                              |
| <b>number of digital outputs</b>                                                  | 3                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• not parameterizable</li> </ul>           | 2                                                                                                                                                                              |
| <b>digital output version</b>                                                     | 2 normally-open contacts (NO) / 1 changeover contact (CO)                                                                                                                      |
| <b>number of analog outputs</b>                                                   | 0                                                                                                                                                                              |
| <b>switching capacity current of the relay outputs</b>                            |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at AC-15 at 250 V rated value</li> </ul> | 3 A                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• at DC-13 at 24 V rated value</li> </ul>  | 1 A                                                                                                                                                                            |
| <b>Installation/ mounting/ dimensions</b>                                         |                                                                                                                                                                                |
| <b>mounting position</b>                                                          | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back                                                       |
| <b>fastening method</b>                                                           | screw fixing                                                                                                                                                                   |
| <b>height</b>                                                                     | 306 mm                                                                                                                                                                         |
| <b>width</b>                                                                      | 185 mm                                                                                                                                                                         |
| <b>depth</b>                                                                      | 203 mm                                                                                                                                                                         |
| <b>required spacing with side-by-side mounting</b>                                |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• forwards</li> </ul>                      | 10 mm                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• backwards</li> </ul>                     | 0 mm                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>• upwards</li> </ul>                       | 100 mm                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• downwards</li> </ul>                     | 75 mm                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• at the side</li> </ul>                   | 5 mm                                                                                                                                                                           |
| <b>weight without packaging</b>                                                   | 6.9 kg                                                                                                                                                                         |
| <b>Connections/ Terminals</b>                                                     |                                                                                                                                                                                |
| <b>type of electrical connection</b>                                              |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>      | box terminal                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• for control circuit</li> </ul>           | screw-type terminals                                                                                                                                                           |

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| <b>width of connection bar maximum</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 25 mm                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>wire length for thermistor connection</b> <ul style="list-style-type: none"> <li>• with conductor cross-section = 0.5 mm<sup>2</sup> maximum</li> <li>• with conductor cross-section = 1.5 mm<sup>2</sup> maximum</li> <li>• with conductor cross-section = 2.5 mm<sup>2</sup> maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 50 m<br>150 m<br>250 m                                                                                                                                                                                                                                                                                                                                                                              |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for main contacts for box terminal using the front clamping point solid</li> <li>• for main contacts for box terminal using the front clamping point finely stranded with core end processing</li> <li>• for main contacts for box terminal using the front clamping point stranded</li> <li>• at AWG cables for main contacts for box terminal using the front clamping point</li> <li>• for main contacts for box terminal using the back clamping point solid</li> <li>• at AWG cables for main contacts for box terminal using the back clamping point</li> <li>• for main contacts for box terminal using both clamping points solid</li> <li>• for main contacts for box terminal using both clamping points finely stranded with core end processing</li> <li>• for main contacts for box terminal using both clamping points stranded</li> <li>• for main contacts for box terminal using the back clamping point finely stranded with core end processing</li> <li>• for main contacts for box terminal using the back clamping point stranded</li> </ul> | 1x (2.5 ... 16 mm <sup>2</sup> )<br>1x (2.5 ... 50 mm <sup>2</sup> )<br>1x (10 ... 70 mm <sup>2</sup> )<br>1x (10 ... 2/0)<br>1x (2.5 ... 16 mm <sup>2</sup> )<br>1x (10 ... 2/0)<br>2x (2.5 ... 16 mm <sup>2</sup> )<br>2x (2.5 ... 35 mm <sup>2</sup> )<br>2x (6 ... 16 mm <sup>2</sup> ), 2x (10 ... 50 mm <sup>2</sup> )<br>1x (2.5 ... 50 mm <sup>2</sup> )<br>1x (10 ... 70 mm <sup>2</sup> ) |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for control circuit solid</li> <li>• for control circuit finely stranded with core end processing</li> <li>• at AWG cables for control circuit solid</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )<br>1x (20 ... 12), 2x (20 ... 14)                                                                                                                                                                                                                      |
| <b>wire length</b> <ul style="list-style-type: none"> <li>• between soft starter and motor maximum</li> <li>• at the digital inputs at AC maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 800 m<br>100 m                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>tightening torque</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.5 ... 6 N·m<br>0.8 ... 1.2 N·m                                                                                                                                                                                                                                                                                                                                                                    |
| <b>tightening torque [lbf·in]</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 40 ... 53 lbf·in<br>7 ... 10.3 lbf·in                                                                                                                                                                                                                                                                                                                                                               |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                     |
| installation altitude at height above sea level maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5 000 m; Derating as of 1000 m, see catalog                                                                                                                                                                                                                                                                                                                                                         |
| <b>ambient temperature</b> <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 acc. to IEC 60721</li> <li>• during storage acc. to IEC 60721</li> <li>• during transport acc. 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>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> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Modbus TCP</li><li>• PROFIBUS</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| UL/CSA ratings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| <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><li>— usable for High Faults at 460/480 V according to UL</li><li>— usable for Standard Faults at 460/480 V at inside-delta circuit according to UL</li><li>— usable for High Faults at 460/480 V at inside-delta circuit according to UL</li><li>— usable for Standard Faults at 575/600 V according to UL</li><li>— usable for Standard Faults at 575/600 V at inside-delta circuit 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><li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</li><li>— usable for High Faults at inside-delta circuit up to 575/600 V according to UL</li></ul></li></ul> | Siemens type: 3VA51, max. 125 A; Iq = 10 kA<br><br>Siemens type: 3VA51, max. 125 A; Iq max = 65 kA<br><br>Siemens type: 3VA51, max. 125 A; Iq = 10 kA<br><br>Siemens type: 3VA51, max. 125 A; Iq max = 65 kA<br><br>Siemens type: 3VA51, max. 125 A; Iq = 10 kA<br><br>Siemens type: 3VA51, max. 125 A; Iq = 10 kA<br><br>Type: Class RK5 / K5, max. 300 A; Iq = 10 kA<br><br>Type: Class J / L, max. 250 A; Iq = 100 kA<br><br>Type: Class RK5 / K5, max. 300 A; Iq = 10 kA<br><br>Type: Class J / L, max. 250 A; Iq = 100 kA |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| <b>operating power [hp] for 3-phase motors</b> <ul style="list-style-type: none"><li>• at 200/208 V at 50 °C rated value</li><li>• at 220/230 V at 50 °C rated value</li><li>• at 460/480 V at 50 °C rated value</li><li>• at 200/208 V at inside-delta circuit at 50 °C rated value</li><li>• at 220/230 V at inside-delta circuit at 50 °C rated value</li><li>• at 460/480 V at inside-delta circuit at 50 °C rated value</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 25 hp<br>30 hp<br>60 hp<br>40 hp<br><br>50 hp<br><br>100 hp                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | R300-B300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Safety related data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| <b>protection class IP on the front acc. to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | IP00; IP20 with cover                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| <b>touch protection on the front acc. to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | finger-safe, for vertical contact from the front with cover                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| <b>electromagnetic compatibility</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | in accordance with IEC 60947-4-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Certificates/ approvals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EMC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Declaration of Conformity                                                           |                                                                                     |                                                                                       |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  | <a href="#">UK Declaration of Conformity</a>                                          |
| Declaration of Conformity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Test Certificates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Marine / Shipping                                                                   |                                                                                     |                                                                                       |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <a href="#">Type Test Certificates/Test Report</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |
| Marine / Shipping                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                     |                                                                                     |                                                                                       |                                                                                       |

## Further information

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5227-1TC14>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5227-1TC14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5227-1TC14>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5227-1TC14&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5227-1TC14&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5227-1TC14/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5227-1TC14&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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





