



Figure similar

SIRIUS soft starter 200-480 V 13 A, 24 V AC/DC Screw terminals Fail-safe

product brand name

product category

product designation

product type designation

manufacturer's article number

- of high feature HMI module usable
- of communication module PROFINET standard usable
- of communication module PROFINET high-feature usable
- of communication module PROFIBUS usable
- of communication module Modbus TCP usable
- of communication module Modbus RTU usable
- of communication module Ethernet/IP
- of circuit breaker usable at 400 V
- of circuit breaker usable at 500 V
- of circuit breaker usable at 400 V at inside-delta circuit
- of circuit breaker usable at 500 V at inside-delta circuit
- of the gG fuse usable up to 690 V
- of the gG fuse usable at inside-delta circuit up to 500 V
- of full range R fuse link for semiconductor protection usable up to 690 V
- of back-up R fuse link for semiconductor protection usable up to 690 V
- of the redundant contactor for applications > SIL 1 according to EN 62061
- of the redundant contactor for applications > SIL 1 at inside-delta circuit according to EN 62061
- of the redundant contactor for applications > SIL 1 according to EN ISO 13849-1
- of the redundant contactor for applications > SIL 1 at inside-delta circuit according to EN ISO 13849-1

SIRIUS

Hybrid switching devices

Failsafe soft starters

3RW55

[3RW5980-0HF00](#)

[3RW5980-0CS00](#)

[3RW5950-0CH00](#)

[3RW5980-0CP00](#)

[3RW5980-0CT00](#)

[3RW5980-0CR00](#)

[3RW5980-0CE00](#)

[3RV2032-4TA10](#); Type of coordination 1, Iq = 65 kA, CLASS 10

[3RV2032-4TA10](#); Type of coordination 1, Iq = 18 kA, CLASS 10

[3RV2032-4DA10](#); Type of coordination 1, Iq = 65 kA, CLASS 10

[3RV2032-4DA10](#); Type of coordination 1, Iq = 18 kA, CLASS 10

[3NA3820-6](#); Type of coordination 1, Iq = 65 kA

[3NA3820-6](#); Type of coordination 1, Iq = 65 kA

[3NE1815-0](#); Type of coordination 2, Iq = 65 kA

[3NE8017-1](#); Type of coordination 2, Iq = 65 kA

[3RT2027](#)

[3RT2027](#)

[3RT2027](#)

[3RT2027](#)

General technical data

|                                    |                      |
|------------------------------------|----------------------|
| starting voltage [%]               | 20 ... 100 %         |
| stopping voltage [%]               | 50 %; non-adjustable |
| start-up ramp time of soft starter | 0 ... 360 s          |
| ramp-down time of soft starter     | 0 ... 360 s          |
| start torque [%]                   | 10 ... 100 %         |
| stopping torque [%]                | 10 ... 100 %         |
| torque limitation [%]              | 20 ... 200 %         |

|                                                         |                                                                                                                                                                                                                            |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>current limiting value [%] adjustable</b>            | 125 ... 800 %                                                                                                                                                                                                              |
| <b>breakaway voltage [%] adjustable</b>                 | 40 ... 100 %                                                                                                                                                                                                               |
| <b>breakaway time adjustable</b>                        | 0 ... 2 s                                                                                                                                                                                                                  |
| <b>number of parameter sets</b>                         | 3                                                                                                                                                                                                                          |
| <b>accuracy class according to IEC 61557-12</b>         | 5 %                                                                                                                                                                                                                        |
| <b>certificate of suitability</b>                       |                                                                                                                                                                                                                            |
| • CE marking                                            | Yes                                                                                                                                                                                                                        |
| • UL approval                                           | Yes                                                                                                                                                                                                                        |
| • CSA approval                                          | Yes                                                                                                                                                                                                                        |
| <b>product component</b>                                |                                                                                                                                                                                                                            |
| • HMI-High Feature                                      | Yes                                                                                                                                                                                                                        |
| • is supported HMI-High Feature                         | Yes                                                                                                                                                                                                                        |
| <b>product feature integrated bypass contact system</b> | Yes                                                                                                                                                                                                                        |
| <b>number of controlled phases</b>                      | 3                                                                                                                                                                                                                          |
| <b>trip class</b>                                       | CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2                                                                                                                                                               |
| <b>current unbalance limiting value [%]</b>             | 10 ... 60 %                                                                                                                                                                                                                |
| <b>ground-fault monitoring limiting value [%]</b>       | 10 ... 95 %                                                                                                                                                                                                                |
| <b>buffering time in the event of power failure</b>     |                                                                                                                                                                                                                            |
| • for main current circuit                              | 100 ms                                                                                                                                                                                                                     |
| • for control circuit                                   | 100 ms                                                                                                                                                                                                                     |
| <b>idle time adjustable</b>                             | 0 ... 255 s                                                                                                                                                                                                                |
| <b>insulation voltage rated value</b>                   | 480 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>        | 1 600 V                                                                                                                                                                                                                    |
| <b>service factor</b>                                   | 1.15                                                                                                                                                                                                                       |
| <b>surge voltage resistance rated value</b>             | 6 kV                                                                                                                                                                                                                       |
| <b>maximum permissible voltage for safe isolation</b>   |                                                                                                                                                                                                                            |
| • between main and auxiliary circuit                    | 480 V; does not apply for thermistor connection                                                                                                                                                                            |
| <b>shock resistance</b>                                 | 15 g / 11 ms, from 6 g / 11 ms with potential contact lifting                                                                                                                                                              |
| <b>vibration resistance</b>                             | 15 mm up to 6 Hz; 2 g up to 500 Hz                                                                                                                                                                                         |
| <b>recovery time after overload trip adjustable</b>     | 60 ... 1 800 s                                                                                                                                                                                                             |
| <b>utilization category according to IEC 60947-4-2</b>  | AC 53a                                                                                                                                                                                                                     |
| <b>reference code according to IEC 81346-2</b>          | Q                                                                                                                                                                                                                          |
| <b>Substance Prohibitance (Date)</b>                    | 11/22/2019                                                                                                                                                                                                                 |
| <b>product function</b>                                 |                                                                                                                                                                                                                            |
| • ramp-up (soft starting)                               | Yes                                                                                                                                                                                                                        |
| • ramp-down (soft stop)                                 | Yes                                                                                                                                                                                                                        |
| • breakaway pulse                                       | Yes                                                                                                                                                                                                                        |
| • adjustable current limitation                         | Yes                                                                                                                                                                                                                        |
| • creep speed in both directions of rotation            | Yes                                                                                                                                                                                                                        |
| • pump ramp down                                        | Yes                                                                                                                                                                                                                        |
| • DC braking                                            | Yes                                                                                                                                                                                                                        |
| • motor heating                                         | Yes                                                                                                                                                                                                                        |
| • slave pointer function                                | Yes                                                                                                                                                                                                                        |
| • trace function                                        | Yes                                                                                                                                                                                                                        |
| • intrinsic device protection                           | Yes                                                                                                                                                                                                                        |
| • motor overload protection                             | Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) / When using the motor overload protection according to ATEX, an upstream contactor is required in inside-delta circuit. |
| • 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                                                                                                                                                                                                                        |
| • communication function                                | Yes                                                                                                                                                                                                                        |
| • operating measured value display                      | Yes                                                                                                                                                                                                                        |
| • event list                                            | Yes                                                                                                                                                                                                                        |
| • error logbook                                         | Yes                                                                                                                                                                                                                        |
| • via software parameterizable                          | Yes                                                                                                                                                                                                                        |
| • via software configurable                             | Yes                                                                                                                                                                                                                        |
| • screw terminal                                        | Yes                                                                                                                                                                                                                        |
| • spring-loaded terminal                                | No                                                                                                                                                                                                                         |
| • <b>PROFInergy</b>                                     | Yes; in connection with the PROFINET Standard and PROFINET High-                                                                                                                                                           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• <b>firmware update</b></li> <li>• <b>removable terminal for control circuit</b></li> <li>• voltage ramp</li> <li>• torque control</li> <li>• combined braking</li> <li>• analog output</li> <li>• programmable control inputs/outputs</li> <li>• condition monitoring</li> <li>• automatic parameterisation</li> <li>• application wizards</li> <li>• alternative run-down</li> <li>• emergency operation mode</li> <li>• reversing operation</li> <li>• soft starting at heavy starting conditions</li> </ul> | Feature communication modules<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes; 4 ... 20 mA (default) / 0 ... 10 V<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes |
| <b>Power Electronics</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                              |
| <b>operational current</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• at 40 °C rated value</li> <li>• at 40 °C rated value minimum</li> <li>• at 50 °C rated value</li> <li>• at 60 °C rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                        | 13 A<br>2.5 A<br>11.5 A<br>10.5 A                                                                                                                            |
| <b>operational current at inside-delta circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• at 40 °C rated value</li> <li>• at 50 °C rated value</li> <li>• at 60 °C rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                | 22.5 A<br>19.9 A<br>18.2 A                                                                                                                                   |
| <b>operating voltage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• rated value</li> <li>• at inside-delta circuit rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                          | 200 ... 480 V<br>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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                              |
| <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>                                                                                                                                                                                                                                                                                            | 3 kW<br>5.5 kW<br>5.5 kW<br>11 kW                                                                                                                            |
| <b>Operating frequency 1 rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 50 Hz                                                                                                                                                        |
| <b>Operating frequency 2 rated value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 60 Hz                                                                                                                                                        |
| <b>relative negative tolerance of the operating frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -10 %                                                                                                                                                        |
| <b>relative positive tolerance of the operating frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10 %                                                                                                                                                         |
| <b>minimum load [%]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10 %; Relative to set I <sub>e</sub>                                                                                                                         |
| <b>power loss [W] for rated value of the current at AC</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• at 40 °C after startup</li> <li>• at 50 °C after startup</li> <li>• at 60 °C after startup</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                          | 4 W<br>3 W<br>3 W                                                                                                                                            |
| <b>power loss [W] at AC at current limitation 350 %</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• at 40 °C during startup</li> <li>• at 50 °C during startup</li> <li>• at 60 °C during startup</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                       | 198 W<br>166 W<br>148 W                                                                                                                                      |
| <b>type of the motor protection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Electronic, tripping in the event of thermal overload of the motor                                                                                           |
| <b>Control circuit/ Control</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                              |
| <b>type of voltage of the control supply voltage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | AC/DC                                                                                                                                                        |
| <b>control supply voltage at AC</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                | 24 V<br>24 V                                                                                                                                                 |
| <b>relative negative tolerance of the control supply voltage at AC at 50 Hz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -20 %                                                                                                                                                        |
| <b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20 %                                                                                                                                                         |
| <b>relative negative tolerance of the control supply voltage at AC at 60 Hz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -20 %                                                                                                                                                        |

|                                                                                 |                                                                                                                                                                                |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>relative positive tolerance of the control supply voltage at AC at 60 Hz</b> | 20 %                                                                                                                                                                           |
| <b>control supply voltage frequency</b>                                         | 50 ... 60 Hz                                                                                                                                                                   |
| <b>relative negative tolerance of the control supply voltage frequency</b>      | -10 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage frequency</b>      | 10 %                                                                                                                                                                           |
| <b>control supply voltage</b>                                                   |                                                                                                                                                                                |
| • at DC rated value                                                             | 24 V                                                                                                                                                                           |
| <b>relative negative tolerance of the control supply voltage at DC</b>          | -20 %                                                                                                                                                                          |
| <b>relative positive tolerance of the control supply voltage at DC</b>          | 20 %                                                                                                                                                                           |
| <b>control supply current in standby mode rated value</b>                       | 420 mA                                                                                                                                                                         |
| <b>holding current in bypass operation rated value</b>                          | 820 mA                                                                                                                                                                         |
| <b>inrush current by closing the bypass contacts maximum</b>                    | 0.91 A                                                                                                                                                                         |
| <b>inrush current peak at application of control supply voltage maximum</b>     | 7.5 A                                                                                                                                                                          |
| <b>duration of inrush current peak at application of control supply voltage</b> | 20 ms                                                                                                                                                                          |
| <b>design of the overvoltage protection</b>                                     | Varistor                                                                                                                                                                       |
| <b>design of short-circuit protection for control circuit</b>                   | 4 A gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply |

#### Inputs/ Outputs

|                                                        |                                                                                            |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>number of digital inputs</b>                        | 4                                                                                          |
| • with fail-safe                                       | 1                                                                                          |
| • parameterizable                                      | 4                                                                                          |
| • <b>number of digital outputs</b>                     | 3                                                                                          |
| • Number of digital outputs with fail-safe             | 1                                                                                          |
| • number of digital outputs parameterizable            | 2                                                                                          |
| • number of digital outputs not parameterizable        | 1                                                                                          |
| <b>digital output version</b>                          | 2 normally-open contacts (NO) / 1 normally-closed contact (NC) / 1 changeover contact (CO) |
| <b>number of analog outputs</b>                        | 1                                                                                          |
| <b>switching capacity current of the relay outputs</b> |                                                                                            |
| • at AC-15 at 250 V rated value                        | 3 A                                                                                        |
| • at DC-13 at 24 V rated value                         | 1 A                                                                                        |

#### Response times

|                                                                                         |        |
|-----------------------------------------------------------------------------------------|--------|
| OFF-delay time with safety-related request when switched off via control inputs maximum | 100 ms |
|-----------------------------------------------------------------------------------------|--------|

#### Installation/ mounting/ dimensions

|                                                    |                                                                            |
|----------------------------------------------------|----------------------------------------------------------------------------|
| <b>mounting position</b>                           | Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) |
| <b>fastening method</b>                            | screw fixing                                                               |
| <b>height</b>                                      | 275 mm                                                                     |
| <b>width</b>                                       | 170 mm                                                                     |
| <b>depth</b>                                       | 152 mm                                                                     |
| <b>required spacing with side-by-side mounting</b> |                                                                            |
| • forwards                                         | 10 mm                                                                      |
| • backwards                                        | 0 mm                                                                       |
| • upwards                                          | 100 mm                                                                     |
| • downwards                                        | 75 mm                                                                      |
| • at the side                                      | 5 mm                                                                       |
| <b>weight without packaging</b>                    | 2.3 kg                                                                     |

#### Connections/ Terminals

|                                                     |                      |
|-----------------------------------------------------|----------------------|
| <b>type of electrical connection</b>                |                      |
| • for main current circuit                          | screw-type terminals |
| • for control circuit                               | screw-type terminals |
| <b>wire length for thermistor connection</b>        |                      |
| • with conductor cross-section = 0.5 mm² maximum    | 50 m                 |
| • with conductor cross-section = 1.5 mm² maximum    | 150 m                |
| • with conductor cross-section = 2.5 mm² maximum    | 250 m                |
| <b>type of connectable conductor cross-sections</b> |                      |
| • for main contacts                                 |                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded with core end processing</li> <li>• at AWG cables for main current circuit solid</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2x (1.0 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )<br>2x (1.0 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6.0 mm <sup>2</sup> )<br>2x (16 ... 12), 2x (14 ... 8)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <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> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>wire length</b> <ul style="list-style-type: none"> <li>• between soft starter and motor maximum</li> <li>• at the digital inputs at DC maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 800 m<br>1 000 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>tightening torque</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2 ... 2.5 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 18 ... 22 lbf·in<br>7 ... 10.3 lbf·in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| installation altitude at height above sea level maximum<br><b>ambient temperature</b> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage and transport</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2 000 m; Derating as of 1000 m, see catalog<br>-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above<br>-40 ... +80 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>environmental category</b> <ul style="list-style-type: none"> <li>• during operation according to IEC 60721</li> <li>• during storage according to IEC 60721</li> <li>• during transport according to IEC 60721</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6<br>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4<br>2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)<br>acc. to IEC 60947-4-2: Class A                                                                                                                                                                                                                                                                                                                                                                    |
| <b>EMC emitted interference</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Communication/ Protocol</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>communication module is supported</b> <ul style="list-style-type: none"> <li>• PROFINET standard</li> <li>• PROFINET high-feature</li> <li>• EtherNet/IP</li> <li>• Modbus RTU</li> <li>• Modbus TCP</li> <li>• PROFIBUS</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>manufacturer's article number</b> <ul style="list-style-type: none"> <li>• of circuit breaker <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 High Faults at 575/600 V at inside-delta circuit according to UL</li> <li>— usable for Standard Faults at 575/600 V at inside-delta circuit according to UL</li> </ul> </li> <li>• of the fuse <ul style="list-style-type: none"> <li>— usable for Standard Faults up to 575/600 V according to UL</li> <li>— usable for High Faults up to 575/600 V according to UL</li> <li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</li> <li>— usable for High Faults at inside-delta circuit up to 575/600 V according to UL</li> </ul> </li> </ul> | Siemens type: 3RV2742, max. 40 A or 3VA51, max. 40 A; Iq = 5 kA<br>Siemens type: 3RV2742, max. 30 A or 3VA51, max. 35 A; Iq max = 65 kA<br>Siemens type: 3RV2742, max. 40 A or 3VA51, max. 40 A; Iq = 5 kA<br>Siemens type: 3RV2742, max. 30 A or 3VA51, max. 35 A; Iq max = 65 kA<br>Siemens type: 3RV2742, max. 40 A or 3VA51, max. 40 A; Iq = 5 kA<br>Siemens type: 3RV2742, max. 30 A or 3VA51, max. 35 A; Iq max = 65 kA<br>Siemens type: 3RV2742, max. 40 A or 3VA51, max. 40 A; Iq = 5 kA<br>Type: Class RK5 / K5, max. 50 A; Iq = 5 kA<br>Type: Class J / L, max. 50 A; Iq = 100 kA<br>Type: Class RK5 / K5, max. 50 A; Iq = 5 kA<br>Type: Class J / L, max. 50 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> <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2 hp<br>3 hp<br>7.5 hp<br>5 hp<br><br>5 hp<br><br>10 hp<br><br>R300-B300                                                                                                                                                                  |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                           |
| <b>safety device type according to IEC 61508-2</b><br><b>B10d value</b><br><b>Safety Integrity Level (SIL)</b> <ul style="list-style-type: none"> <li>• according to IEC 61508</li> </ul> <b>SIL Claim Limit (subsystem) according to EN 62061</b><br>performance level (PL) according to EN ISO 13849-1<br>category according to EN ISO 13849-1<br><b>stop category according to EN 60204-1</b><br><b>Safe failure fraction (SFF)</b><br><b>average diagnostic coverage level (DCavg)</b><br><b>diagnostics test interval by internal test function maximum</b><br>PFHD with high demand rate according to EN 62061<br><b>PFDavg with low demand rate according to IEC 61508</b><br><b>hardware fault tolerance according to IEC 61508</b><br>T1 value for proof test interval or service life according to IEC 61508<br><b>safe state</b><br><b>protection class IP on the front according to IEC 60529</b><br><b>touch protection on the front according to IEC 60529</b><br><b>electromagnetic compatibility</b> | Type B<br>1 588 000<br><br>SIL1<br>SIL 1<br>c<br>2<br>0<br>60 %<br>90 %<br>1 000 s<br><br>1E-6 1/h<br>0.09<br>0<br>20 a<br><br>Open load circuit<br>IP20<br><br>finger-safe, for vertical contact from the front<br>acc. to IEC 60947-4-2 |
| <b>ATEX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                           |
| <b>certificate of suitability</b> <ul style="list-style-type: none"> <li>• ATEX</li> <li>• IECEx</li> <li>• according to ATEX directive 2014/34/EU</li> </ul> <b>type of protection according to ATEX directive 2014/34/EU</b><br><b>hardware fault tolerance according to IEC 61508 relating to ATEX</b><br><b>PFDavg with low demand rate according to IEC 61508 relating to ATEX</b><br><b>PFHD with high demand rate according to EN 62061 relating to ATEX</b><br><b>Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX</b><br><b>T1 value for proof test interval or service life according to IEC 61508 relating to ATEX</b>                                                                                                                                                                                                                                                                                                                                                                | Yes<br>Yes<br>BVS 18 ATEX F 003 X<br>II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]<br>0<br><br>0.008<br><br>5E-7 1/h<br><br>SIL1<br><br>3 a                                                |
| <b>Certificates/ approvals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                           |
| <b>General Product Approval</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                           |



[Confirmation](#)



|     |                                |                           |                   |                   |
|-----|--------------------------------|---------------------------|-------------------|-------------------|
| EMC | For use in hazardous locations | Declaration of Conformity | Test Certificates | Marine / Shipping |
|-----|--------------------------------|---------------------------|-------------------|-------------------|



[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[Confirmation](#)

## Further information

### Information on the packaging

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

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

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

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5513-1HF04>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5513-1HF04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5513-1HF04>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5513-1HF04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5513-1HF04&lang=en)

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

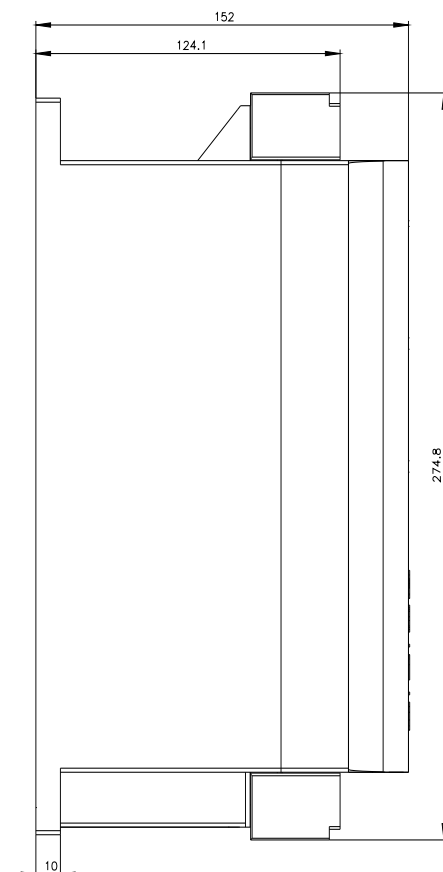
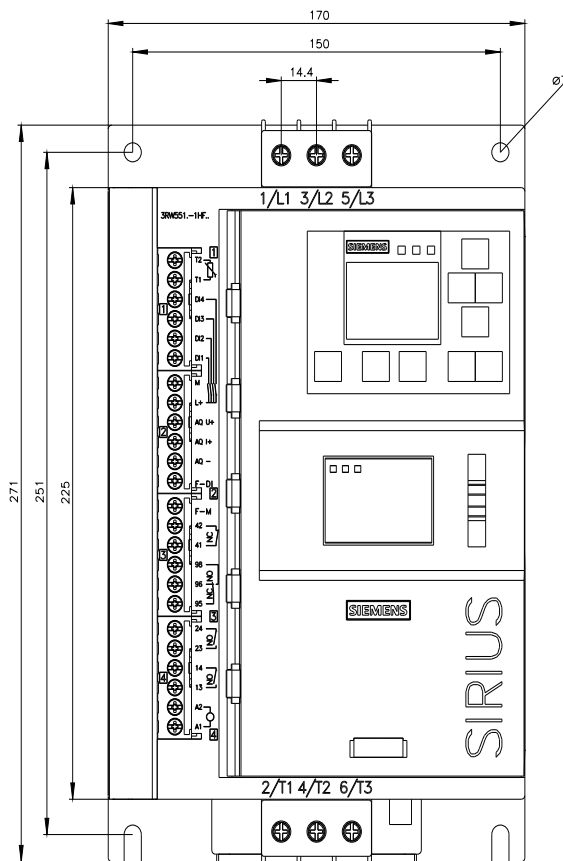
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5513-1HF04/char>

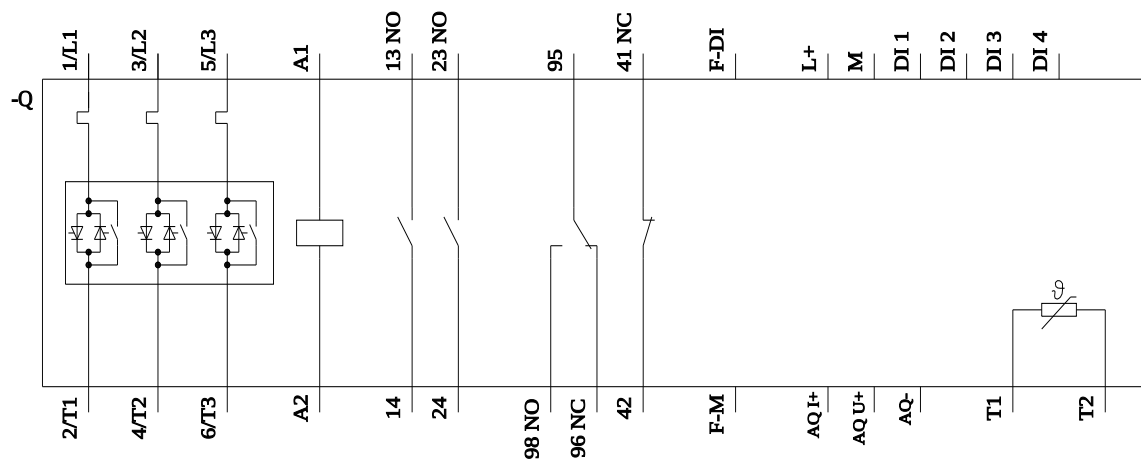
### Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5513-1HF04&objecttype=14&gridview=view1>

### Simulation Tool for Soft Starters (STS)

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





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1/13/2023 

