SIEMENS

product brand name

Data sheet 3RW5558-6HA14

SIRIUS



SIRIUS soft starter 200-480 V 1280 A, 110-250 V AC Screw terminals





| product branching | |
|---|--|
| product category | Hybrid switching devices |
| product designation | Soft starter |
| product type designation | 3RW55 |
| manufacturer's article number | |
| of high feature HMI module usable | 3RW5980-0HF00 |
| of communication module PROFINET standard usable | 3RW5980-0CS00 |
| • of communication module PROFINET high-feature usable | 3RW5950-0CH00 |
| of communication module PROFIBUS usable | 3RW5980-0CP00 |
| of communication module Modbus TCP usable | 3RW5980-0CT00 |
| of communication module Modbus RTU usable | 3RW5980-0CR00 |
| of communication module Ethernet/IP | 3RW5980-0CE00 |
| of circuit breaker usable at 400 V | 3VA2716-7AB05-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10 |
| of circuit breaker usable at 500 V | 3VA2716-7AB05-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10 |
| of the gG fuse usable up to 690 V | 3x3NA3365-6; Type of coordination 1, Iq = 65 kA |
| of full range R fuse link for semiconductor protection usable up to 690 V | 3NB3357-1KK26; Type of coordination 2, Iq = 65 kA |
| of back-up R fuse link for semiconductor protection usable up to 690 V | 3x3NE3340-8; Type of coordination 2, Iq = 65 kA |
| eneral technical data | |
| starting voltage [%] | 20 100 % |
| stopping voltage [%] | 50 %; non-adjustable |
| start-up ramp time of soft starter | 0 360 s |
| ramp-down time of soft starter | 0 360 s |
| start torque [%] | 10 100 % |
| stopping torque [%] | 10 100 % |
| torque limitation [%] | 20 200 % |
| current limiting value [%] adjustable | 125 800 % |
| breakaway voltage [%] adjustable | 40 100 % |
| breakaway time adjustable | 0 2 s |
| number of parameter sets | 3 |
| accuracy class | 5 (based on IEC 61557-12) |
| certificate of suitability | |
| CE marking | Yes |
| UL approval | Yes |
| CSA approval | Yes |
| product component | |
| | |

| • is supported HMI-High Feature | Yes |
|--|---|
| product feature integrated bypass contact system | Yes |
| number of controlled phases | 3 |
| current unbalance limiting value [%] | 10 60 % |
| ground-fault monitoring limiting value [%] | 10 95 % |
| buffering time in the event of power failure | |
| for main current circuit | 100 ms |
| for control circuit | 100 ms |
| idle time adjustable | 0 255 s |
| insulation voltage rated value | 480 V |
| degree of pollution | 3, acc. to IEC 60947-4-2 |
| impulse voltage rated value | 6 kV |
| blocking voltage of the thyristor maximum | 1 400 V |
| service factor | 1.15 |
| surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for protective separation | |
| between main and auxiliary circuit | 480 V; does not apply for thermistor connection |
| shock resistance | 15 g / 11 ms, from 6 g / 11 ms with potential contact lifting |
| recovery time after overload trip adjustable | 60 1 800 s |
| utilization category according to IEC 60947-4-2 | AC 53a |
| reference code according to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 02/11/2019 |
| SVHC substance name | Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 Dicyclohexyl phthalate (DCHP) - 84-61-7 Dodecamethylcyclohexasiloxane (D6) - 540-97-6 Lead titanium trioxide - 12060-00-3 |
| product function | |
| 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 |
| PROFlenergy | Yes; in connection with the PROFINET Standard and PROFINET High-Feature communication modules |
| firmware update | Yes |
| removable terminal for control circuit | Yes |
| voltage ramp | Yes |
| torque control | Yes |
| combined braking | Yes |

| analog output | Yes; 4 20 mA (default) / 0 10 V |
|--|--|
| programmable control inputs/outputs | Yes |
| condition monitoring | Yes |
| automatic parameterisation | Yes |
| application wizards | Yes |
| alternative run-down | Yes |
| emergency operation mode | Yes |
| reversing operation | Yes |
| soft starting at heavy starting conditions | Yes |
| Power Electronics | |
| operational current | |
| • at 40 °C rated value | 1 280 A |
| • at 40 °C rated value minimum | 256 A |
| • at 50 °C rated value | 1 139 A |
| • at 60 °C rated value | 1 030 A |
| operational current at inside-delta circuit | |
| at 40 °C rated value | 2 217 A |
| at 50 °C rated value | 1 973 A |
| at 60 °C rated value | 1 784 A |
| operating voltage | |
| • rated value | 200 480 V |
| at inside-delta circuit rated value | 200 480 V |
| relative negative tolerance of the operating voltage | -15 % |
| relative positive tolerance of the operating voltage | 10 % |
| relative positive tolerance of the operating voltage | -15 % |
| inside-delta circuit | |
| relative positive tolerance of the operating voltage at inside-delta circuit | 10 % |
| operating power for 3-phase motors | |
| at 230 V at 40 °C rated value | 400 kW |
| at 230 V at inside-delta circuit at 40 °C rated value | 710 kW |
| • at 400 V at 40 °C rated value | 710 kW |
| at 400 V at inside-delta circuit at 40 °C rated value | 1 200 kW |
| Operating frequency 1 rated value | 50 Hz |
| Operating frequency 2 rated value | 60 Hz |
| relative negative tolerance of the operating frequency | -10 % |
| relative positive tolerance of the operating frequency | 10 % |
| minimum load [%] | 10 %; Relative to set le |
| power loss [W] for rated value of the current at AC | |
| at 40 °C after startup | 384 W |
| at 50 °C after startup | 337 W |
| at 60 °C after startup | 275 W |
| power loss [W] at AC at current limitation 350 % | |
| at 40 °C during startup | 23 279 W |
| at 50 °C during startup | 19 496 W |
| at 60 °C during startup | 16 778 W |
| type of the motor protection | Electronic, tripping in the event of thermal overload of the motor |
| Control circuit/ Control | , , , , , , , , , , , , , , , , , , , |
| type of voltage of the control supply voltage | AC |
| control supply voltage at AC | |
| • at 50 Hz | 110 250 V |
| • at 60 Hz | 110 250 V |
| relative negative tolerance of the control supply voltage at | -15 % |
| AC at 50 Hz relative positive tolerance of the control supply voltage at | 10 % |
| AC at 50 Hz | -15 % |
| relative negative tolerance of the control supply voltage at AC at 60 Hz | |
| relative positive tolerance of the control supply voltage at AC at 60 Hz | 10 % |
| control supply voltage frequency | 50 60 Hz |
| relative negative tolerance of the control supply voltage | -10 % |
| frequency | |

| relative positive tolerance of the control supply unitage frequency control supply current in standby mode rated value lincus furrent per yolosing the bypase contacts maximum insus current peak at application of control supply value maximum charge in a supplication of control supply value maximum design of the overvoltage protection ### Application (Control of the Control of Control design of the overvoltage protection ### Application (Control design of the overvoltage protection #### Application (Control design of the overvoltage protection ##### Application (Control design of the overvoltage protection ################################### | | |
|--|--|---|
| Intrust, current thy opeas operation rated value 210 m.A 1 must current by closing the bypass contacts maximum as an owner pask at application of control supply voltage 44 A 3 | | 10 % |
| Incuba current by closing the bypass contacts maximum A | control supply current in standby mode rated value | 100 mA |
| furnith current peak at application of control supply voltage assamoun of invinsh current peak at application of control supply voltage design of the overvoltage protection of design of short-circuit protection for control circuit breaker (lou= 80.0 A). (B miniature circuit breaker (lou= 90.0 A). (B niniature circuit breaker (lo | holding current in bypass operation rated value | 210 mA |
| maximum duration of innah current peak at application of control supply votage design of the overvottage protection votage from the overvottage protection votage from the overvottage protection of design of short-circuit protection for control circuit bracker (icu=600.A), C6 miniature circuit bracker (icu=500.A), 15 miniature circuit bracker (icu=600.A), 15 miniat | inrush current by closing the bypass contacts maximum | 1 A |
| voltage design of short-circuit protection for control circuit design of short-circuit protection for control circuit protection of control circuit protection of control circuit protection of control circuit protection of circuit protection for control circuit protection of circuit circuit protection for control circuit protection of circuit circuit protection of connection of circuit protection of connection of circuit protection of connection of circuit circuit protection of connection of circuit circuit protection of connection of circuit protection of connection of circuit protection of connection of circuit circuit protection of connection of circuit circuit protection of connection of connection of circuit circuit protection of circuit c | | 44 A |
| design of short-circuit protection for control circuit braker (tas- 90 A), C8 miniature circuit braker (tas- 90 A), C8 miniature circuit braker (tas- 90 A), C8 miniature circuit braker (tas- 90 A), is not part of scope of supply Imports/ Outputs Immber of digital inputs Immber of digital outputs Immber of digital outputs parameterizable Immber of digital outputs parameterizable Immber of digital outputs parameterizable Immber of digital outputs Immber of digital outpu | | 1.7 ms |
| breaker (dua* 900 A). Ce miniature circitit breaker (qua* 300 A); Is not part of supply imputs/ Outputs * parameterizable | design of the overvoltage protection | Varistor |
| rumber of digital inputs Parameterizable 4 | design of short-circuit protection for control circuit | breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of |
| • parameterizable • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable • an Installation of the relay outputs • at AC-15 at 250 V rated value • at DC-13 at 250 V rated value • at DC-14 at 250 V rated value • at DC-15 at 250 V rated va | Inputs/ Outputs | |
| • number of digital outputs • number of digital outputs • number of digital outputs parameterizable • number of digital outputs parameterizable • number of digital outputs on parameterizable • number of analog outputs • number of analog outputs | number of digital inputs | 4 |
| • number of digital outputs • number of analog outputs • number of analog outputs output version number of analog outputs 1 switching capacity current of the relay outputs • at AC-15 at 250 V rated value • at DC-13 at 24V rated value • at DC-13 at 250 V rated valu | | 4 |
| • number of digital outputs parameterizable 1 digital output version | F T T T T T T T T T T T T T T T T T T T | |
| • number of digital outputs parameterizable 1 digital output version | number of digital outputs | 4 |
| • number of digital outputs not parameterizable 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 number of analog outputs 1 1 1 1 1 1 1 1 1 | | |
| digital output version 3 normally-open contacts (NO) / 1 changeover contact (CO) number of analog outputs 1 * at AC-15 at 250 Y rated value 3 A * at DC-13 at 24 V rated value 1 A * at DC-13 at 24 V rated value 1 A * at DC-13 at 24 V rated value 1 A * at DC-13 at 24 V rated value 1 A * at DC-13 at 24 V rated value 1 A * at DC-13 at 250 V rated value 1 A * at DC-13 at 24 V rated value 1 A * attraction mounting position Vertical (can be rotated */- 90° and titled forward or backward */- 22.5°) * fastaning method 478 mm height 241 mm required spacing with side-by-side mounting 241 mm * forwards 0 mm * forwards 0 mm * ownwards 0 mm * downwards 75 mm * ownwards 5 mm * ot the side 5 mm * or man current circuit \$ for main current circuit * of or main current circuit \$ serve-type terminals width of connections at the circuit soil connections | | |
| number of analog outputs **witching capacity current of the relay outputs ** at AC-15 at 250 V rated value **at DC-13 at 24 V rated value **Installation mounting of dimensions **mounting position **Vertical (can be rolated +/- 90° and tilted forward or backward +/- 22.5°) **fastening method **height **fat mm **depth **equired spacing with side-by-side mounting **equired spacing with side-by-side mounting **equired spacing with side-by-side mounting **enowards **onwards **onw | | |
| switching capacity current of the relay outputs 3 A • at AC-15 at 280 V rated value 1 A • at DC-15 at 28 V rated value 1 A Installation/ mounting dimensions Vertical (can be rotated +/- 90" and tilted forward or backward +/- 22.5") fastening method screw fixing height 478 mm depth 241 mm required spacing with side-by-side mounting 10 mm • forwards 10 mm • backwards 0 mm • upwards 15 mm • at the side 5 mm • at the side 5 mm velowing triminals screw-type terminals type of electrical connection 5 mm • for main current circuit busbar connection • for main current circuit | | |
| • at AC-16 at 250 V rated value 1 A • at DC-13 at 24 V rated value 1 A • at DC-13 at 24 V rated value Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) mounting position Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) fastening method screw fixing height 478 mm depth 241 mm required spacing with side-by-side mounting 10 mm • backwards 0 mm • backwards 0 mm • downwards 75 mm • at the side 5 mm weight without packaging 61 kg Connections/ Terminals 10 mm type of electrical connection 5 mm • for control circuit busbar connection • for control circuit busbar connection • of control circuit busbar connection • with conductor cross-section = 0.5 mm² maximum 50 m • with conductor cross-section = 0.5 mm² maximum 25 m • of or DIN cable lug for main contacts stranded 2k (50 240 mm²) • for DIN cable lug for main contacts stranded 2k (60 | | |
| ■ at DC-13 at 24 V rated value Installation/ mounting position mounting position fastening method beight 764 mm width depth 241 mm required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side • at the side • at the side • for ramin current circuit • for control circuit sort or ses-section = 0.5 mm² maximum • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 0.5 mm² maximum • with conductor cross-sections = 0.5 mm² maximum • for DIN cable lug for main contacts stranded • for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for paw (abc) strander and control contacts with screw-type terminals • for paw (abc) strander and motor maximum • at the digital inputs at DC maximum • at the digital inputs at DC maximum • at the digital inputs at DC maximum • at the digital inputs at DC max | | 3 A |
| mounting position Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) fastening method screw fixing 764 mm width 478 mm depth 478 mm cequired spacing with side-by-side mounting | | |
| mounting position Vertical (can be rotated +/- 90" and tilted forward or backward +/- 22.5") fastening method screw fixing height 764 mm width 478 mm depth 241 mm required spacing with side-by-side mounting required spacing with side-by-side mounting of owards 10 mm a backwards 0 mm u pwards 100 mm d downwards 5 mm at the side 5 mm weight without packaging 61 kg Connections? Terminals Type of electrical connection of or main current circuit busbar connection of or morto circuit screw-type terminals wildth of connection bar maximum 55 mm wild onductor cross-section = 0.5 mm² maximum 50 m will conductor cross-section = 1.5 mm² maximum 50 m will conductor cross-section = 2.5 mm² maximum 250 m yeb of connectable conductor cross-sections 4 (50 m) of or DIN cable lug for main contacts finely stranded 2x (70 m, 240 mm²) type of connectable conductor cross-sections 1x (0.5 m, 2.40 mm²) <td></td> <td></td> | | |
| festening method Screw fixing height | | Vertical (can be rotated ±/_ 90° and tilted forward or backward ±/_ 22.5°) |
| height 764 mm width 478 mm depth 241 mm required spacing with side-by-side mounting 41 mm e forwards 10 mm backwards 0 mm upwards 100 mm downwards 75 mm e downwards 6 mm weight without packaging 61 kg Connection/ Torminals type of electrical connection for main current circuit busbar connection of or control circuit screw-type terminals width of connection bar maximum 55 mm with conductor cross-section = 0.5 mm² maximum 50 m with conductor cross-section = 1.5 mm² maximum 150 m with conductor cross-section = 1.5 mm² maximum 250 m type of connectable conductor cross-sections 2x (50 240 mm²) for DIN cable lug for main contacts stranded 2x (50 240 mm²) for control circuit solid 1x (0.5 2.5 mm²), 2x (0.5 2.5 mm²) for control circuit solid 1x (0.5 2.5 mm²), 2x (0.5 2.5 mm²) for control circuit solid 1x (0.5 2.5 mm²), | | |
| width 478 mm depth 241 mm required spacing with side-by-side mounting 6 mm 6 forwards 10 mm 6 backwards 0 mm 4 upwards 100 mm 6 downwards 75 mm 8 at the side 5 mm weight without packaging 61 kg Connections/ Terminals Eype of electrical connection 6 for main current circuit busbar connection 6 for control circuit screw-type terminals width or founcetion bar maximum 55 mm with conductor cross-section = 0.5 mm² maximum 55 mm with conductor cross-section = 1.5 mm² maximum 150 m with conductor cross-section = 1.5 mm² maximum 250 m type of connectable conductor cross-sections 2x (50 240 mm²) 6 for DIN cable lug for main contacts finely stranded 2x (70 240 mm²) for control circuit finely stranded with core end processing 1x (0.5 2.5 mm²), 2x (0.5 2.5 mm²) 6 for control circuit finely stranded with core end processing 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) 6 for control circuit finely stranded w | | · |
| required spacing with side-by-side mounting • forwards • backwards • ou mm • upwards • at the side • at the side • at the side • for main current circuit • for control circuit solid • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for DIN cable lug for main contacts finely stranded • for Coll circuit solid • for control circuit solid • for control circuit solid • for for noncetable conductor cross-sections • for DIN cable lug for main contacts finely stranded • for DIN cable lug for main contacts finely stranded • for Control circuit solid • for DIN cable lug for main contacts finely stranded • for DIN cable lug for main contacts finely stranded • for DIN cable lug for main contacts finely stranded • for control circuit solid • for AWG cables for control circuit solid • for Contr | | |
| required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for DIN cable lug for main contacts finely stranded type of connectable conductor cross-sections • for control circuit isolid • for control circuit isolid • for control circuit isolid • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-sections • for DIN cable lug for main contacts stranded • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid wire length • between soft starter and motor maximum • at the digital inputs at DC maximum 1000 m tightening torque • for main contacts with screw-type terminals • for formin contacts with screw-type terminals • for formin contacts with screw-type terminals • for maximary and control contacts with screw-type terminals • for maximary and control contacts with screw-type terminals • for maximary and control contacts with screw-type terminals • for maximary and control contacts with screw-type terminals • for maximary and control contacts with screw-type terminals | | |
| forwards backwards upwards upwards downwards downwards at the side s mm weight without packaging for main current circuit for control circuit connection with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum with conductor cross-sections for DIN cable lug for main contacts frinely stranded for control circuit solid for control circuit solid for control circuit solid with conductor cross-section = 2.5 mm² maximum with conductor cross-section = 2.5 mm² maximum with conductor cross-sections for DIN cable lug for main contacts stranded for onectable conductor cross-sections for control circuit solid for AWG cables for control circuit solid for AWG ables for control circuit solid for await maximum at the digital inputs at DC maximum for main contacts with screw-type terminals for awaitinary and control contacts with screw-type terminals | • | 24 |
| backwards upwards upwards downwards at the side 5 mm weight without packaging 61 kg Connections/Terminals type of electrical connection of or main current circuit for control circuit with conductor cross-section = 0.5 mm² maximum with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum with conductor cross-sections of or DIN cable lug for main contacts stranded for DIN cable lug for main contacts finely stranded for control circuit solid for control circuit solid for control circuit solid for control circuit finely stranded with core end processing for AWG cables for control circuit solid for AWG cables for control circuit solid set the digital inputs at DC maximum at the digital inputs at DC maximum for main contacts with screw-type terminals of or main contacts with screw-type terminals of or awailiary and control contacts with screw-type terminals error awailiary and control contacts with screw-type terminals error awailiary and control contacts with screw-type terminals 0 mm 100 | | 10 mm |
| • upwards • downwards • at the side ** at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit busbar connection • for control circuit for control circuit for connection bar maximum • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded * for control circuit solid • for control circuit solid • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid * set of connectable conductor cross-sections • for bush cable lug for main contacts finely stranded * for control circuit finely stranded with core end processing • for control circuit finely stranded with core end processing • for www. Conductor control circuit solid * set of control circuit finely stranded with core end processing • for away control circuit solid * set of con | | |
| • downwards • at the side • at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded • for control circuit solid • for control circuit finely stranded with core end processing • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid • between soft starter and motor maximum • at the digital inputs at DC maximum 1 000 m tightening torque • for main contacts with screw-type terminals • for axiliary and control contacts with screw-type terminals | | |
| • at the side weight without packaging 61 kg Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum 150 m • with conductor cross-section = 2.5 mm² maximum 250 m type of connectable conductor cross-sections • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded 1x (0.5 240 mm²) • for control circuit solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) • for AWG cables for control circuit solid 2x (20 12), 2x (20 14) wire length • between soft starter and motor maximum • at the digital inputs at DC maximum 1 000 m tightening torque • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • or auxiliary and control contacts with screw-type terminals | · | |
| weight without packaging 61 kg Connections/ Terminals type of electrical connection busbar connection • for main current circuit busbar connection • for control circuit screw-type terminals width of connection bar maximum 55 mm • 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 type of connectable conductor cross-sections 2x (50 240 mm²) • for DIN cable lug for main contacts stranded 2x (70 240 mm²) • for control circuit solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) • for control circuit solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) • for AWG cables for control circuit solid 1x (20 12), 2x (20 14) wire length between soft starter and motor maximum 800 m • at the digital inputs at DC maximum 1000 m tightening torque for auxiliary and control contacts with screw-type terminals 20 35 N·m • for auxiliary and control contacts with screw-type terminals 0.8 1.2 N·m | | |
| type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-sections • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts stranded • for control circuit solid • for control circuit finely stranded with core end processing • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid vire length • between soft starter and motor maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals | | |
| type of electrical connection • for main current circuit • for control circuit • for control circuit width of connection bar maximum • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded type of connectable conductor cross-sections • for control circuit solid • for control circuit finely stranded with core end processing • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid wire length • between soft starter and motor maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxillary and control contacts with screw-type terminals • for auxillary and control contacts with screw-type terminals • for auxillary and control contacts with screw-type terminals | | от кg |
| • for main current circuit • for control circuit • for control circuit width of connection bar maximum busing length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid vire length • between soft starter and motor maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals | | |
| • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-sections • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded • for Connectable conductor cross-sections • for control circuit solid • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid • for AWG cables for control circuit solid • between soft starter and motor maximum • at the digital inputs at DC maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals | | |
| width of connection bar maximum 55 mm wire length for thermistor connection 50 m with conductor cross-section = 0.5 mm² maximum 150 m with conductor cross-section = 2.5 mm² maximum 250 m type of connectable conductor cross-sections 2x (50 240 mm²) o for DIN cable lug for main contacts stranded 2x (70 240 mm²) type of connectable conductor cross-sections 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) o for control circuit solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) o for control circuit finely stranded with core end processing 1x (0.5 2.5 mm²), 2x (0.5 2.5 mm²) o for AWG cables for control circuit solid 1x (20 12), 2x (20 14) wire length 800 m o between soft starter and motor maximum 800 m o at the digital inputs at DC maximum 1 000 m tightening torque 6 or main contacts with screw-type terminals 20 35 N·m o for auxiliary and control contacts with screw-type terminals 0.8 1.2 N·m | | |
| wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded • for DIN cable lug for main contacts finely stranded • for control circuit solid • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid • between soft starter and motor maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals | | |
| with conductor cross-section = 0.5 mm² maximum with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum with conductor cross-section = 2.5 mm² maximum for DIN cable lug for main contacts stranded for DIN cable lug for main contacts finely stranded for DIN cable lug for main contacts finely stranded for control circuit solid for control circuit finely stranded with core end processing for AWG cables for control circuit solid for AWG cables for control circuit solid wire length between soft starter and motor maximum at the digital inputs at DC maximum toom main contacts with screw-type terminals for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals 0.8 1.2 N·m | | 55 mm |
| with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum type of connectable conductor cross-sections for DIN cable lug for main contacts stranded for DIN cable lug for main contacts finely stranded for DIN cable lug for main contacts finely stranded 2x (70 240 mm²) type of connectable conductor cross-sections for control circuit solid for control circuit finely stranded with core end processing for AWG cables for control circuit solid for AWG cables for control circuit solid wire length between soft starter and motor maximum at the digital inputs at DC maximum at the digital inputs at DC maximum for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals for auxiliary and control contacts with screw-type for auxiliary and control contacts with screw-type | | |
| with conductor cross-section = 2.5 mm² maximum type of connectable conductor cross-sections for DIN cable lug for main contacts stranded for DIN cable lug for main contacts finely stranded type of connectable conductor cross-sections for control circuit solid for control circuit finely stranded with core end processing for AWG cables for control circuit solid for AWG cables for control circuit solid between soft starter and motor maximum at the digital inputs at DC maximum for main contacts with screw-type terminals for auxiliary and control contacts with screw-type for auxiliary and control contacts with screw-type terminals | | |
| type of connectable conductor cross-sections • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded 2x (70 240 mm²) type of connectable conductor cross-sections • for control circuit solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid 1x (20 12), 2x (20 14) wire length • between soft starter and motor maximum • at the digital inputs at DC maximum 1 000 m tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals | | |
| • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded • for DIN cable lug for main contacts finely stranded • for DIN cable lug for main contacts finely stranded • for DIN cable lug for main contacts finely stranded • for DIN cable lug for main contacts finely stranded • for Control circuit solid • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid • for AWG cables for control circuit solid • between soft starter and motor maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type | | 250 m |
| for DIN cable lug for main contacts finely stranded type of connectable conductor cross-sections for control circuit solid for control circuit finely stranded with core end processing for AWG cables for control circuit solid for AWG cables for control circuit solid wire length between soft starter and motor maximum at the digital inputs at DC maximum for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals 20 35 N·m 0.8 1.2 N·m | type of connectable conductor cross-sections | |
| type of connectable conductor cross-sections • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid **wire length* • between soft starter and motor maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals **Total Control Control Contacts with screw-type terminals **Total Control Control Contacts wi | for DIN cable lug for main contacts stranded | 2x (50 240 mm²) |
| for control circuit solid for control circuit finely stranded with core end processing for AWG cables for control circuit solid for AWG cables for control circuit solid wire length between soft starter and motor maximum at the digital inputs at DC maximum for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 1.5 mm²) 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) 2x (0.5 1.5 mm²), 2x (0.5 1 | for DIN cable lug for main contacts finely stranded | 2x (70 240 mm²) |
| • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) wire length • between soft starter and motor maximum • at the digital inputs at DC maximum 1 000 m tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals 0.8 1.2 N·m | type of connectable conductor cross-sections | |
| for AWG cables for control circuit solid 1x (20 12), 2x (20 14) wire length | for control circuit solid | 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) |
| wire length • between soft starter and motor maximum • at the digital inputs at DC maximum 1 000 m tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals 0 8 1.2 N·m | • for control circuit finely stranded with core end processing | 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) |
| between soft starter and motor maximum at the digital inputs at DC maximum 1 000 m tightening torque for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals 0.8 1.2 N·m | for AWG cables for control circuit solid | 1x (20 12), 2x (20 14) |
| at the digital inputs at DC maximum tightening torque for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals 0.8 1.2 N·m | wire length | |
| tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals 20 35 N⋅m 0.8 1.2 N⋅m | between soft starter and motor maximum | 800 m |
| for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals 20 35 N⋅m 0.8 1.2 N⋅m | at the digital inputs at DC maximum | 1 000 m |
| • for auxiliary and control contacts with screw-type terminals 0.8 1.2 N·m | tightening torque | |
| terminals | for main contacts with screw-type terminals | 20 35 N·m |
| | | 0.8 1.2 N·m |
| tightening torque [lbf·in] | | |
| | tightening torque [lbf·in] | |

| for main contracts with account up a terminal | 477 240 lbf :n |
|--|---|
| for main contacts with screw-type terminals | 177 310 lbf·in |
| for auxiliary and control contacts with screw-type terminals | 7 10.3 lbf·in |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 5 000 m; Derating as of 1000 m, see catalog |
| ambient temperature | |
| during operation | -25 +60 °C; Please observe derating at temperatures of 40 °C or above |
| during storage and transport | -40 +80 °C |
| environmental category | |
| during operation according to IEC 60721 | 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 |
| during storage according to IEC 60721 | 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 |
| during transport according to IEC 60721 | 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) |
| Environmental footprint | |
| Siemens Eco Profile (SEP) | Siemens EcoTech |
| EMC emitted interference | acc. to IEC 60947-4-2: Class A |
| Communication/ Protocol | |
| communication module is supported | |
| PROFINET standard | Yes |
| PROFINET high-feature | Yes |
| • EtherNet/IP | Yes |
| Modbus RTU | Yes |
| Modbus TCP | Yes |
| • PROFIBUS | Yes |
| UL/CSA ratings | |
| manufacturer's article number | |
| of the fuse | |
| usable for Standard Faults up to 575/600 V according to UL | Type: Class J / L, max. 3000 A; Iq = 85 kA |
| — usable for High Faults up to 575/600 V according to UL | Type: Class J / L, max. 3000 A; Iq = 100 kA |
| — usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL | Type: Class J / L, max. 3000 A; Iq = 85 kA |
| — usable for High Faults at inside-delta circuit up to 575/600 V according to UL | Type: Class J / L, max. 3000 A; Iq = 100 kA |
| operating power [hp] for 3-phase motors | 400 hr |
| • at 200/208 V at 50 °C rated value | 400 hp |
| • at 220/230 V at 50 °C rated value | 450 hp |
| at 460/480 V at 50 °C rated value | 1 000 hp |
| at 200/208 V at inside-delta circuit at 50 °C rated value | 700 hp |
| at 220/230 V at inside-delta circuit at 50 °C rated value | 850 hp |
| at 460/480 V at inside-delta circuit at 50 °C rated value | 1 700 hp |
| contact rating of auxiliary contacts according to UL | R300-B300 |
| Electrical Safety | |
| protection class IP on the front according to IEC 60529 | IP00 |
| Safety Integrity Level (SIL) according to IEC 61508 relating | SIL1 |
| to ATEX PFHD with high demand rate according to IEC 61508 | 5E-7 1/h |
| relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX | 0.008 |
| hardware fault tolerance according to IEC 61508 relating to ATEX | 0 |
| T1 value for proof test interval or service life according to IEC 61508 relating to ATEX | 3 a |
| certificate of suitability | |
| • ATEX | Yes |
| • IECEx | Yes |
| according to ATEX directive 2014/34/EU | BVS 18 ATEX F 003 X |
| type of protection according to ATEX directive 2014/34/EU | II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb] |
| Approvals Certificates | |
| | |

General Product Approval







Confirmation





EMV

For use in hazardous locations

Test Certificates

Marine / Shipping



<u>KC</u>





Type Test Certificates/Test Report



Marine / Shipping





Confirmation

other



Environment





Environment

Environmental Confirmations

Further information

Information on the packaging

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

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5558-6HA14

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5558-6HA14

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RW5558-6HA14

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5558-6HA14&lang=en

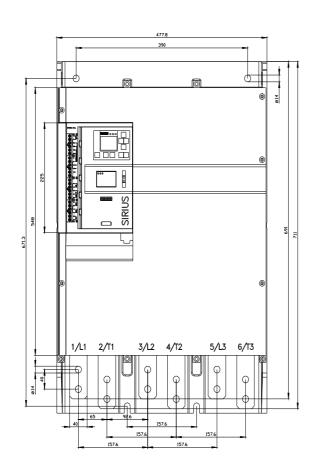
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RW5558-6HA14/ch

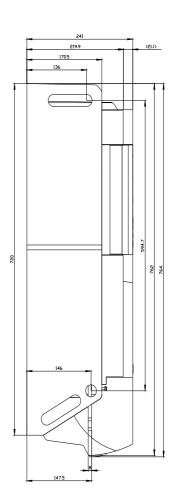
Characteristic: Installation altitude

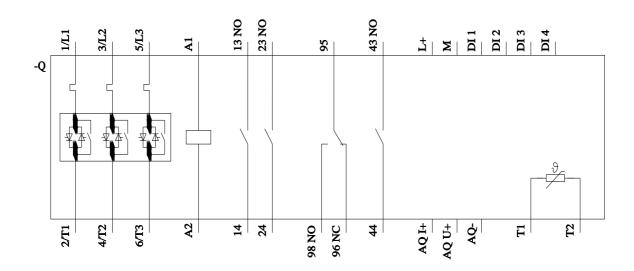
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5558-6HA14\&objecttype=14\&gridview=view1}$

Simulation Tool for Soft Starters (STS)

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







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