

SIRIUS soft starter 200-600 V 250 A, 24 V AC/DC Spring-loaded terminals Thermistor input



Figure similar

| | |
|--------------------------------------|---|
| Product brand name | SIRIUS |
| Product category | Hybrid switching devices |
| Product designation | Soft starter |
| Product type designation | 3RW50 |
| Manufacturer's article number | <ul style="list-style-type: none"> • of HMI module usable 3RW5980-0HS01 • of HMI-Modul high-feature usable 3RW5980-0HF00 • of communication module PROFINET standard usable 3RW5980-0CS00 • 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 3VA2440-7MN32-0AA0; Type of assignment 1, Iq = 65 kA • of circuit breaker usable at 500 V 3VA2440-7MN32-0AA0; Type of assignment 1, Iq = 65 kA • of the gG fuse usable up to 690 V 2x3NA3354-6; Type of coordination 1, Iq = 65 kA • of full range R fuse link for semiconductor protection usable up to 690 V 3NE1 331-0; Type of coordination 2, Iq = 65 kA |

- of back-up R fuse link for semiconductor protection usable up to 690 V
- of line contactor usable up to 480 V
- of line contactor usable up to 690 V

[3NE3 335; Type of coordination 2, Iq = 65 kA](#)

3RT1065

3RT1065

General technical data

| | |
|---|---|
| Starting voltage [%] | 30 ... 100 % |
| Stopping voltage [%] | 50 ... 50 % |
| Start-up ramp time of soft starter | 0 ... 20 s |
| Stopping time of soft starter | 0 ... 20 s |
| Current limiting value [%] adjustable | 130 ... 700 % |
| Accuracy class acc. to IEC 61557-12 | 5 % |
| Certificate of suitability | |
| • CE marking | Yes |
| • UL approval | Yes |
| • CSA-approval | Yes |
| Product component | |
| • is supported HMI-Standard | Yes |
| • is supported HMI-High Feature | Yes |
| Product feature integrated bypass contact system | Yes |
| Number of controlled phases | 2 |
| Trip class | CLASS 10A / 10E (preset) / 20E; acc. to IEC 60947-4-2 |
| Recovery time | 300 s |
| Insulation voltage | |
| • rated value | 600 V |
| Degree of pollution | 3, acc. to IEC 60947-4-2 |
| Impulse voltage rated value | 6 V |
| Blocking voltage of the thyristor maximum | 1 600 V |
| Service factor | 1 |
| Protection class IP | IP00; IP20 with additional terminal covers for vertical touching from the front |
| Reference code acc. to DIN EN 81346-2 | Q |
| Product function | |
| • ramp-up (soft starting) | Yes |
| • ramp-down (soft stop) | Yes |
| • Soft Torque | Yes |
| • Adjustable current limitation | Yes |
| • pump ramp down | Yes |
| • Intrinsic device protection | Yes |
| • motor overload protection | Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) |
| • Evaluation of thermistor motor protection | Yes; Type A PTC or Klixon / Thermoclick |
| • Auto-reset | Yes |

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| • Manual RESET | Yes |
| • remote reset | Yes; By turning off the control supply voltage |
| • communication function | Yes |
| • operating measured value display | Yes; Only in conjunction with special accessories |
| • error logbook | Yes; Only in conjunction with special accessories |
| • via software parameterizable | No |
| • via software configurable | Yes |
| • PROFINET | Yes; in connection with the PROFINET Standard communication module |
| • voltage ramp | Yes |
| • torque control | No |
| • analog output | No |

Power Electronics

| | |
|---|---------------|
| Operating current | |
| • at 40 °C rated value | 250 A |
| • at 50 °C rated value | 220 A |
| • at 60 °C rated value | 200 A |
| Operating voltage | |
| • rated value | 200 ... 600 V |
| Relative negative tolerance of the operating voltage | -15 % |
| Relative positive tolerance of the operating voltage | 10 % |
| Operating power for three-phase motors | |
| • at 230 V at 40 °C rated value | 75 kW |
| • at 400 V at 40 °C rated value | 132 kW |
| • at 500 V at 40 °C rated value | 160 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 % |
| Adjustable motor current | |
| • at rotary encoding switch on switch position 1 | 100 A |
| • at rotary encoding switch on switch position 2 | 110 A |
| • at rotary encoding switch on switch position 3 | 120 A |
| • at rotary encoding switch on switch position 4 | 130 A |
| • at rotary encoding switch on switch position 5 | 140 A |
| • at rotary encoding switch on switch position 6 | 150 A |
| • at rotary encoding switch on switch position 7 | 160 A |
| • at rotary encoding switch on switch position 8 | 170 A |
| • at rotary encoding switch on switch position 9 | 180 A |
| • at rotary encoding switch on switch position 10 | 190 A |
| • at rotary encoding switch on switch position 11 | 200 A |

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| <ul style="list-style-type: none"> • at rotary encoding switch on switch position 12 • at rotary encoding switch on switch position 13 • at rotary encoding switch on switch position 14 • at rotary encoding switch on switch position 15 • at rotary encoding switch on switch position 16 • minimum | 210 A 220 A 230 A 240 A 250 A 100 A |
| Minimum load [%] | 15 %; Relative to smallest settable le |
| Power loss [W] for rated value of the current at AC | |
| <ul style="list-style-type: none"> • at 40 °C to power-up • at 50 °C to power-up • at 60 °C to power-up | 23 W 18 W 15 W |
| Power loss [W] at AC at AC | |
| <ul style="list-style-type: none"> • at 40 °C during startup • at 50 °C during startup • at 60 °C during startup | 2 454 W 2 043 W 1 786 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/DC |
| Control supply voltage at AC | |
| <ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value | 24 V 24 V |
| Relative negative tolerance of the control supply voltage at AC at 50 Hz | -20 % |
| Relative positive tolerance of the control supply voltage at AC at 50 Hz | 20 % |
| Relative negative tolerance of the control supply voltage at AC at 60 Hz | -20 % |
| Relative positive tolerance of the control supply voltage at AC at 60 Hz | 20 % |
| Control supply voltage frequency | 50 ... 60 Hz |
| Relative negative tolerance of the control supply voltage frequency | -10 % |
| Relative positive tolerance of the control supply voltage frequency | 10 % |
| Control supply voltage | |
| <ul style="list-style-type: none"> • at DC rated value | 24 V |
| Relative negative tolerance of the control supply voltage at DC | -20 % |
| Relative positive tolerance of the control supply voltage at DC | 20 % |
| Control supply current in standby mode rated value | 160 mA |
| Holding current in the by-pass mode operating rated value | 490 mA |

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| Starting current at close of by-pass contact maximum | 7.6 A |
| Inrush current peak at connect of control supply voltage maximum | 3.3 A |
| Duration of inrush current peak at connect of control supply voltage | 12.1 ms |
| Design of the overvoltage protection | Varistor |
| Design of short-circuit protection for control circuit | 4 A gG fuse (I _{cu} =1 kA), 6 A quick-acting fuse (I _{cu} =1 kA), C1 miniature circuit breaker (I _{cu} = 600 A), C6 miniature circuit breaker (I _{cu} = 300 A); Is not part of scope of supply |

Inputs/ Outputs

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|---|---|
| Number of digital inputs | 1 |
| Number of inputs for thermistor connection | 1; Type A PTC or Klixon / Thermoclick |
| Number of digital outputs | 3 |
| <ul style="list-style-type: none"> not parameterizable | 2 |
| Digital output version | 2 normally-open contacts (NO) / 1 changeover contact (CO) |
| Number of analog outputs | 0 |

Installation/ mounting/ dimensions

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| Mounting position | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| Mounting type | screw fixing |
| Height | 230 mm |
| Width | 160 mm |
| Depth | 282 mm |
| Required spacing with side-by-side mounting | |
| <ul style="list-style-type: none"> forwards | 10 mm |
| <ul style="list-style-type: none"> Backwards | 0 mm |
| <ul style="list-style-type: none"> upwards | 100 mm |
| <ul style="list-style-type: none"> downwards | 75 mm |
| <ul style="list-style-type: none"> at the side | 5 mm |
| Installation altitude at height above sea level maximum | 5 000 m; Derating as of 1000 m, see manual |
| Weight without packaging | 7.3 kg |

Connections/ Terminals

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|--|----------------------------|
| Type of electrical connection | |
| <ul style="list-style-type: none"> for main current circuit | busbar connection |
| <ul style="list-style-type: none"> for control circuit | spring-loaded terminals |
| Width of connection bar maximum | 45 mm |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> for main contacts for box terminal using the front clamping point solid | 95 ... 300 mm ² |
| <ul style="list-style-type: none"> for main contacts for box terminal using the front clamping point finely stranded with core end processing | 70 ... 240 mm ² |

| | |
|---|--|
| <ul style="list-style-type: none"> • for main contacts for box terminal using the front clamping point finely stranded without core end processing | 70 ... 240 mm ² |
| <ul style="list-style-type: none"> • for main contacts for box terminal using the front clamping point stranded | 95 ... 300 mm ² |
| <ul style="list-style-type: none"> • at AWG conductors for main contacts for box terminal using the front clamping point | 3/0 ... 600 kcmil |
| <ul style="list-style-type: none"> • for main contacts for box terminal using the back clamping point solid | 120 ... 240 mm ² |
| <ul style="list-style-type: none"> • at AWG conductors for main contacts for box terminal using the back clamping point | 250 ... 500 kcmil |
| <ul style="list-style-type: none"> • for main contacts for box terminal using both clamping points solid | min. 2x 70 mm ² , max. 2x 240 mm ² |
| <ul style="list-style-type: none"> • for main contacts for box terminal using both clamping points finely stranded with core end processing | min. 2x 50 mm ² , max. 2x 185 mm ² |
| <ul style="list-style-type: none"> • for main contacts for box terminal using both clamping points finely stranded without core end processing | min. 2x 50 mm ² , max. 2x 185 mm ² |
| <ul style="list-style-type: none"> • for main contacts for box terminal using both clamping points stranded | min. 2x 70 mm ² , max. 2x 240 mm ² |
| <ul style="list-style-type: none"> • for main contacts for box terminal using the back clamping point finely stranded with core end processing | 120 ... 185 mm ² |
| <ul style="list-style-type: none"> • for main contacts for box terminal using the back clamping point finely stranded without core end processing | 120 ... 185 mm ² |
| <ul style="list-style-type: none"> • for main contacts for box terminal using the back clamping point stranded | 120 ... 240 mm ² |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • at AWG conductors for main current circuit solid | 2/0 ... 500 kcmil |
| <ul style="list-style-type: none"> • for DIN cable lug for main contacts stranded | 50 ... 240 mm ² |
| <ul style="list-style-type: none"> • for DIN cable lug for main contacts finely stranded | 70 ... 240 mm ² |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for control circuit solid | 2x (0.25 ... 1.5 mm ²) |
| <ul style="list-style-type: none"> • for control circuit finely stranded with core end processing | 2x (0.25 ... 1.5 mm ²) |
| <ul style="list-style-type: none"> • at AWG conductors for control circuit solid | 2x (24 ... 16) |
| <ul style="list-style-type: none"> • at AWG conductors for control circuit finely stranded with core end processing | 2x (24 ... 16) |
| Wire length | |
| <ul style="list-style-type: none"> • between soft starter and motor maximum | 800 m |
| <ul style="list-style-type: none"> • at the digital inputs at AC maximum | 1 000 m |

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| Tightening torque | |
| <ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals | <p>14 ... 24 N·m</p> <p>0.8 ... 1.2 N·m</p> |
| Tightening torque [lbf·in] | |
| <ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals | <p>124 ... 210 lbf·in</p> <p>7 ... 10.3 lbf·in</p> |

Ambient conditions

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| Ambient temperature | |
| <ul style="list-style-type: none"> • during operation • during storage and transport | <p>-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above</p> <p>-40 ... +80 °C</p> |
| Environmental category | |
| <ul style="list-style-type: none"> • during operation acc. to IEC 60721 • during storage acc. to IEC 60721 • during transport acc. to IEC 60721 | <p>3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6</p> <p>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4</p> <p>2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)</p> |
| EMC emitted interference | acc. to IEC 60947-4-2: Class A |

Communication/ Protocol

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| Communication module is supported | |
| <ul style="list-style-type: none"> • PROFINET standard • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |

UL/CSA ratings

| | |
|--|--|
| Manufacturer's article number | |
| <ul style="list-style-type: none"> • of the fuse <ul style="list-style-type: none"> — usable for Standard Faults up to 575/600 V according to UL — usable for High Faults up to 575/600 V according to UL | <p>Type: Class L, max. 800 A; I_q = 18 kA</p> <p>Type: Class L, max. 800 A; I_q = 100 kA</p> |
| Operating power [hp] for three-phase motors | |
| <ul style="list-style-type: none"> • at 200/208 V at 50 °C rated value • at 220/230 V at 50 °C rated value • at 460/480 V at 50 °C rated value • at 575/600 V at 50 °C rated value | <p>50 hp</p> <p>60 hp</p> <p>125 hp</p> <p>150 hp</p> |

ATEX

| | |
|--|-----|
| Certificate of suitability | |
| <ul style="list-style-type: none"> • ATEX | Yes |

| | |
|---|--------------|
| • IECEx | Yes |
| Hardware fault tolerance acc. to IEC 61508 relating to ATEX | 0 |
| PFDAvg with low demand rate acc. to IEC 61508 relating to ATEX | 0.09 |
| PFHD with high demand rate acc. to EN 62061 relating to ATEX | 0.000009 1/h |
| Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX | SIL1 |
| T1 value for proof test interval or service life acc. to IEC 61508 relating to ATEX | 3 y |

Certificates/ approvals

| | |
|--------------------------|--------------------------------|
| General Product Approval | For use in hazardous locations |
|--------------------------|--------------------------------|



| | | |
|---------------------------|-------------------|-------|
| Declaration of Conformity | Test Certificates | other |
|---------------------------|-------------------|-------|



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Confirmation](#)

Further information

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5073-2TB05>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5073-2TB05>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5073-2TB05>

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

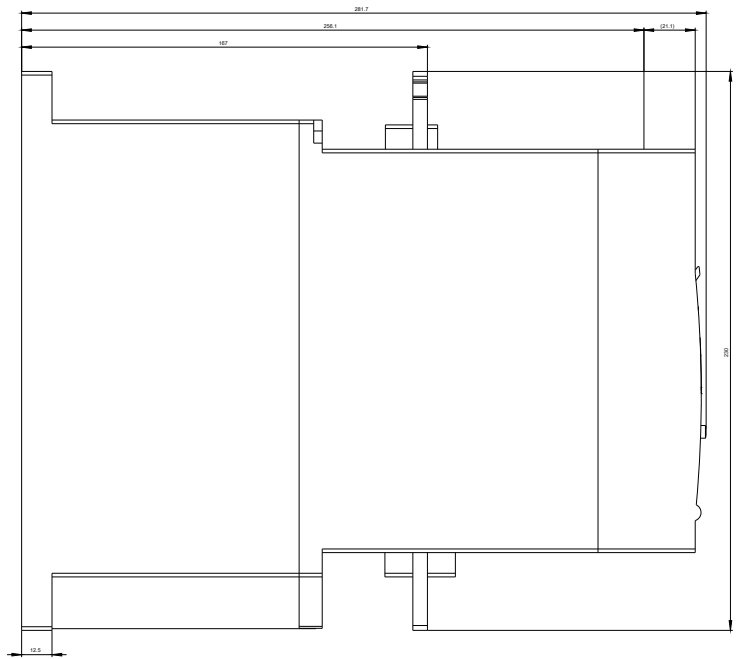
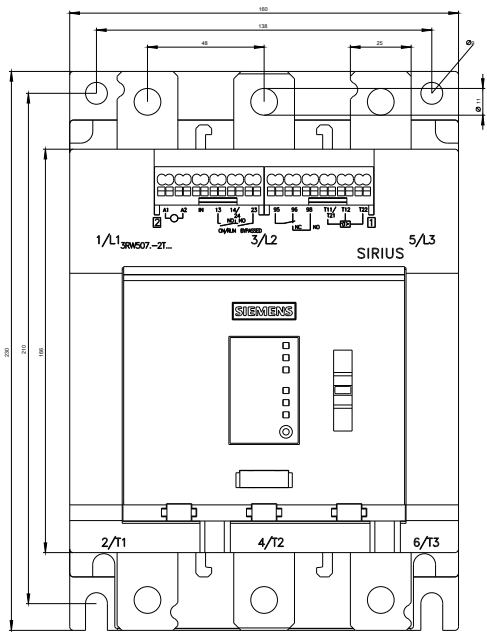
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5073-2TB05&lang=en

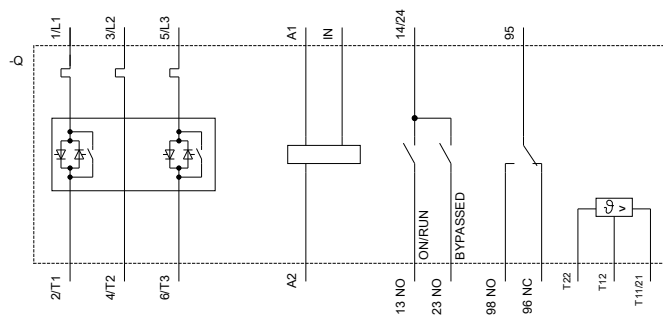
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5073-2TB05/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5073-2TB05&objecttype=14&gridview=view1>





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3RW50...T...IEC.DXF

Format / Size: Hybrid quer

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