



SIRIUS soft starter 200-600 V 171 A, 110-250 V AC spring-type terminals Analog output

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| product brand name | SIRIUS |
| product category | Hybrid switching devices |
| product designation | Soft starter |
| product type designation | 3RW52 |
| manufacturer's article number | <ul style="list-style-type: none"> • of standard HMI module usable 3RW5980-0HS00 • of high feature HMI module 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 3VA2325-7MN32-0AA0: Type of coordination 1, Iq = 30 kA, CLASS 10 • of circuit breaker usable at 500 V 3VA2325-7MN32-0AA0: Type of coordination 1, Iq = 10 kA, CLASS 10 • of circuit breaker usable at 400 V at inside-delta circuit 3VA2440-7MN32-0AA0: Type of coordination 1, Iq = 30 kA, CLASS 10 • of circuit breaker usable at 500 V at inside-delta circuit 3VA2440-7MN32-0AA0: Type of coordination 1, Iq = 10 kA, CLASS 10 • of the gG fuse usable up to 690 V 3NA3365-6: Type of coordination 1, Iq = 65 kA • of the gG fuse usable at inside-delta circuit up to 500 V 3NA3365-6: Type of coordination 1, Iq = 65 kA • of full range R fuse link for semiconductor protection usable up to 690 V 3NE1230-0: Type of coordination 2, Iq = 65 kA • of back-up R fuse link for semiconductor protection usable up to 690 V 3NE3335: Type of coordination 2, Iq = 65 kA |
| General technical data | |
| starting voltage [%] | 30 ... 100 % |
| stopping voltage [%] | 50 %; non-adjustable |
| start-up ramp time of soft starter | 0 ... 20 s |
| current limiting value [%] adjustable | 130 ... 700 % |
| certificate of suitability | <ul style="list-style-type: none"> • CE marking Yes • UL approval Yes • CSA approval Yes |
| product component | <ul style="list-style-type: none"> • HMI-High Feature No • is supported HMI-Standard Yes • is supported HMI-High Feature Yes |
| product feature integrated bypass contact system | Yes |
| number of controlled phases | 3 |
| buffering time in the event of power failure | <ul style="list-style-type: none"> • for main current circuit 100 ms • for control circuit 100 ms |
| insulation voltage rated value | 600 V |
| degree of pollution | 3, acc. to IEC 60947-4-2 |
| impulse voltage rated value | 6 kV |
| blocking voltage of the thyristor maximum | 1 800 V |
| service factor | 1 |
| surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for protective separation | <ul style="list-style-type: none"> • between main and auxiliary circuit 600 V |

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| shock resistance | 15 g / 11 ms, from 12 g / 11 ms with potential contact lifting |
| vibration resistance | 15 mm to 6 Hz; 2 g to 500 Hz |
| utilization category according to IEC 60947-4-2 | AC 53a |
| reference code according to IEC 81346-2 | Q |
| Substance Prohibitance (day/month/year) | 02/15/2018 |
| SVHC substance name | Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol CAS-No. 79-94-7 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1 Dibutylbis(pentane-2,4-dionato-O,O')tin CAS-No. 22673-19-4 |
| Net Weight | 8.12 kg |
| product function | |
| <ul style="list-style-type: none"> ● ramp-up (soft starting) ● soft stopping ● Soft Torque ● adjustable current limitation ● pump stop ● intrinsic device protection ● motor overload protection ● evaluation of thermistor motor protection ● inside-delta circuit ● auto-RESET ● manual RESET ● remote reset ● communication function ● operating measured value display ● error logbook ● via software parameterizable ● via software configurable ● PROFInergy ● firmware update ● removable terminal for control circuit ● torque control ● analog output | <ul style="list-style-type: none"> Yes Yes Yes Yes Yes Yes Yes; Electronic motor overload protection No Yes Yes Yes Yes; By turning off the control supply voltage Yes Yes; Only in conjunction with special accessories Yes; Only in conjunction with special accessories No Yes Yes; in connection with the PROFINET Standard communication module Yes Yes No Yes; 4 ... 20 mA (default) / 0 ... 10 V (parameterizable with High Feature HMI) |
| Power Electronics | |
| operational current | |
| <ul style="list-style-type: none"> ● at 40 °C rated value ● at 50 °C rated value ● at 60 °C rated value | <ul style="list-style-type: none"> 171 A 153 A 141 A |
| operational current at inside-delta circuit | |
| <ul style="list-style-type: none"> ● at 40 °C rated value ● at 50 °C rated value ● at 60 °C rated value | <ul style="list-style-type: none"> 296 A 265 A 244 A |
| operating voltage | |
| <ul style="list-style-type: none"> ● rated value ● at inside-delta circuit rated value | <ul style="list-style-type: none"> 200 ... 600 V 200 ... 600 V |
| relative negative tolerance of the operating voltage | -15 % |
| relative positive tolerance of the operating voltage | 10 % |
| relative negative tolerance of the operating voltage at inside-delta circuit | -15 % |
| relative positive tolerance of the operating voltage at inside-delta circuit | 10 % |
| operating power for 3-phase motors | |
| <ul style="list-style-type: none"> ● at 230 V at 40 °C rated value ● at 230 V at inside-delta circuit at 40 °C rated value ● at 400 V at 40 °C rated value ● at 400 V at inside-delta circuit at 40 °C rated value ● at 500 V at 40 °C rated value | <ul style="list-style-type: none"> 45 kW 90 kW 90 kW 160 kW 110 kW |

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| • at 500 V at inside-delta circuit at 40 °C rated value | 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 % |
| adjustable motor current | |
| • at rotary coding switch on switch position 1 | 81 A |
| • at rotary coding switch on switch position 2 | 87 A |
| • at rotary coding switch on switch position 3 | 93 A |
| • at rotary coding switch on switch position 4 | 99 A |
| • at rotary coding switch on switch position 5 | 105 A |
| • at rotary coding switch on switch position 6 | 111 A |
| • at rotary coding switch on switch position 7 | 117 A |
| • at rotary coding switch on switch position 8 | 123 A |
| • at rotary coding switch on switch position 9 | 129 A |
| • at rotary coding switch on switch position 10 | 135 A |
| • at rotary coding switch on switch position 11 | 141 A |
| • at rotary coding switch on switch position 12 | 147 A |
| • at rotary coding switch on switch position 13 | 153 A |
| • at rotary coding switch on switch position 14 | 159 A |
| • at rotary coding switch on switch position 15 | 165 A |
| • at rotary coding switch on switch position 16 | 171 A |
| • minimum | 81 A |
| adjustable motor current | |
| • for inside-delta circuit at rotary coding switch on switch position 1 | 140 A |
| • for inside-delta circuit at rotary coding switch on switch position 2 | 151 A |
| • for inside-delta circuit at rotary coding switch on switch position 3 | 161 A |
| • for inside-delta circuit at rotary coding switch on switch position 4 | 171 A |
| • for inside-delta circuit at rotary coding switch on switch position 5 | 182 A |
| • for inside-delta circuit at rotary coding switch on switch position 6 | 192 A |
| • for inside-delta circuit at rotary coding switch on switch position 7 | 203 A |
| • for inside-delta circuit at rotary coding switch on switch position 8 | 213 A |
| • for inside-delta circuit at rotary coding switch on switch position 9 | 223 A |
| • for inside-delta circuit at rotary coding switch on switch position 10 | 234 A |
| • for inside-delta circuit at rotary coding switch on switch position 11 | 244 A |
| • for inside-delta circuit at rotary coding switch on switch position 12 | 255 A |
| • for inside-delta circuit at rotary coding switch on switch position 13 | 265 A |
| • for inside-delta circuit at rotary coding switch on switch position 14 | 275 A |
| • for inside-delta circuit at rotary coding switch on switch position 15 | 286 A |
| • for inside-delta circuit at rotary coding switch on switch position 16 | 296 A |
| • at inside-delta circuit minimum | 140 A |
| minimum load [%] | 15 %; Relative to smallest settable le |
| power loss [W] for rated value of the current at AC | |
| • at 40 °C after startup | 63 W |
| • at 50 °C after startup | 58 W |
| • at 60 °C after startup | 54 W |
| power loss [W] at AC at current limitation 350 % | |
| • at 40 °C during startup | 2 405 W |

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| <ul style="list-style-type: none"> at 50 °C during startup at 60 °C during startup | 2 037 W 1 826 W |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | AC |
| control supply voltage at AC | |
| <ul style="list-style-type: none"> at 50 Hz at 60 Hz | 110 ... 250 V 110 ... 250 V |
| relative negative tolerance of the control supply voltage at AC at 50 Hz | -15 % |
| relative positive tolerance of the control supply voltage at AC at 50 Hz | 10 % |
| relative negative tolerance of the control supply voltage at AC at 60 Hz | -15 % |
| 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 frequency | -10 % |
| relative positive tolerance of the control supply voltage frequency | 10 % |
| control supply current in standby mode rated value | 30 mA |
| holding current in bypass operation rated value | 75 mA |
| inrush current by closing the bypass contacts maximum | 2.5 A |
| inrush current peak at application of control supply voltage maximum | 12.2 A |
| duration of inrush current peak at application of control supply voltage | 2.2 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 | |
| number of digital inputs | 1 |
| 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 | 1 |
| switching capacity current of the relay outputs | |
| <ul style="list-style-type: none"> at AC-15 at 250 V rated value at DC-13 at 24 V rated value | 3 A 1 A |
| Installation/ mounting/ dimensions | |
| mounting position | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| fastening method | screw fixing |
| height | 306 mm |
| width | 185 mm |
| depth | 203 mm |
| required spacing with side-by-side mounting | |
| <ul style="list-style-type: none"> forwards backwards upwards downwards at the side | 10 mm 0 mm 100 mm 75 mm 5 mm |
| weight without packaging | 7.15 kg |
| Connections/ Terminals | |
| type of electrical connection | |
| <ul style="list-style-type: none"> for main current circuit for control circuit | busbar connection spring-loaded terminals |
| width of connection bar maximum | 25 mm |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> for DIN cable lug for main contacts stranded for DIN cable lug for main contacts finely stranded | 2x (16 ... 95 mm ²) 2x (25 ... 120 mm ²) |

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| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • 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 finely stranded with core end processing | <p>2x (0.25 ... 1.5 mm²)</p> <p>2x (0.25 ... 1.5 mm²)</p> <p>2x (24 ... 16)</p> <p>2x (24 ... 16)</p> |
| wire length | |
| <ul style="list-style-type: none"> • between soft starter and motor maximum • at the digital inputs at AC maximum | <p>800 m</p> <p>100 m</p> |
| 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>10 ... 14 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>89 ... 124 lbf·in</p> <p>7 ... 10.3 lbf·in</p> |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 5 000 m |
| 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 according to IEC 60721 • during storage according to IEC 60721 • during transport according 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> |
| Electromagnetic compatibility | |
| EMC emitted interference | acc. to IEC 60947-4-2: Class A |
| Communication/ Protocol | |
| 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 circuit breaker usable for Standard Faults <ul style="list-style-type: none"> — at 460/480 V according to UL — 60/480 V according to UL — at 460/480 V at inside-delta circuit according to UL — 60/480 V at inside-delta circuit according to UL — at 575/600 V according to UL — at 575/600 V at inside-delta circuit according to UL • 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 — usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL — usable for High Faults at inside-delta circuit up to 575/600 V according to UL | <p>Siemens type: 3VA52, max. 250 A; I_q = 10 kA</p> <p>Siemens type: 3VA52, max. 250 A; I_q max = 65 kA</p> <p>Siemens type: 3VA52, max. 250 A; I_q = 10 kA</p> <p>Siemens type: 3VA52, max. 250 A; I_q max = 65 kA</p> <p>Siemens type: 3VA52, max. 250 A; I_q = 10 kA</p> <p>Siemens type: 3VA52, max. 250 A; I_q = 10 kA</p> <p>Type: Class RK5 / K5, max. 400 A; I_q = 10 kA</p> <p>Type: Class J / L, max. 350 A; I_q = 100 kA</p> <p>Type: Class RK5 / K5, max. 400 A; I_q = 10 kA</p> <p>Type: Class J / L, max. 350 A; I_q = 100 kA</p> |
| operating power [hp] for 3-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 • at 200/208 V at inside-delta circuit at 50 °C rated value | <p>50 hp</p> <p>50 hp</p> <p>100 hp</p> <p>150 hp</p> <p>75 hp</p> |

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| <ul style="list-style-type: none"> • at 220/230 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 575/600 V at inside-delta circuit at 50 °C rated value | 100 hp 200 hp 250 hp |
| contact rating of auxiliary contacts according to UL | R300-B300 |
| Electrical Safety | |
| protection class IP on the front according to IEC 60529 | IP00; IP20 with cover |
| touch protection on the front according to IEC 60529 | finger-safe, for vertical contact from the front with cover |

Approvals Certificates

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| Environmental Product Declaration | |
| <ul style="list-style-type: none"> • global warming potential [CO2 eq] / during manufacturing • global warming potential [CO2 eq] / during sales • global warming potential [CO2 eq] / during operation • global warming potential [CO2 eq] / after end of life • global warming potential [CO2 eq] / total | 67.7 kg 1.84 kg 242 kg -15.7 kg 296 kg |

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| Environment | General Product Approval |
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[Environmental Conformations](#)



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| General Product Approval | EMV | Test Certificates | Maritime application |
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| Maritime application | other |
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other



Further information

- Information on the packaging
<https://support.industry.siemens.com/cs/ww/en/view/109813875>
- Information for data generation and storage
<https://support.industry.siemens.com/cs/ww/en/view/109995012>
- Information- and Downloadcenter (Catalogs, Brochures,...)
<https://www.siemens.com/ic10>
- Industry Mall (Online ordering system)
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5236-2AC15>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5236-2AC15>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5236-2AC15&lang=en
- Cax online generator
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5236-2AC15>
- Characteristic curves
https://curves.simaris.siemens.com/curves/<smmp_prod_noCOMP="HAUPT"></mmp_prod_no>
- Characteristic: Tripping characteristics, I²t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5236-2AC15/char>
- Characteristic: Installation altitude
https://www.automation.siemens.com/bilddb/index.aspx?gridview=view2&objkey=G_NSB0_XX_01704&showdetail=true&view=Search
- Simulation Tool for Soft Starters (STS)

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