



SIRIUS soft starter 200-480 V 370 A, 24 V AC/DC Screw terminals Analog output

<b>product brand name</b>	SIRIUS
<b>product category</b>	Hybrid switching devices
<b>product designation</b>	Soft starter
<b>product type designation</b>	3RW52
<b>manufacturer's article number</b>	<ul style="list-style-type: none"> <li>of standard HMI module usable <a href="#">3RW5980-0HS00</a></li> <li>of high feature HMI module usable <a href="#">3RW5980-0HF00</a></li> <li>of communication module PROFINET standard usable <a href="#">3RW5980-0CS00</a></li> <li>of communication module PROFIBUS usable <a href="#">3RW5980-0CP00</a></li> <li>of communication module Modbus TCP usable <a href="#">3RW5980-0CT00</a></li> <li>of communication module Modbus RTU usable <a href="#">3RW5980-0CR00</a></li> <li>of communication module Ethernet/IP <a href="#">3RW5980-0CE00</a></li> <li>of circuit breaker usable at 400 V <a href="#">3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>of circuit breaker usable at 500 V <a href="#">3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>of circuit breaker usable at 400 V at inside-delta circuit <a href="#">3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>of circuit breaker usable at 500 V at inside-delta circuit <a href="#">3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</a></li> <li>of the gG fuse usable up to 690 V 2x3NA3365-6; Type of coordination 1, Iq = 65 kA</li> <li>of the gG fuse usable at inside-delta circuit up to 500 V 2x3NA3365-6; Type of coordination 1, Iq = 65 kA</li> <li>of full range R fuse link for semiconductor protection usable up to 690 V <a href="#">3NE1334-2; Type of coordination 2, Iq = 65 kA</a></li> <li>of back-up R fuse link for semiconductor protection usable up to 690 V <a href="#">3NE3336; Type of coordination 2, Iq = 65 kA</a></li> </ul>
<b>General technical data</b>	
<b>starting voltage [%]</b>	30 ... 100 %
<b>stopping voltage [%]</b>	50 %; non-adjustable
<b>start-up ramp time of soft starter</b>	0 ... 20 s
<b>current limiting value [%] adjustable</b>	130 ... 700 %
<b>certificate of suitability</b>	<ul style="list-style-type: none"> <li>CE marking Yes</li> <li>UL approval Yes</li> <li>CSA approval Yes</li> </ul>
<b>product component</b>	<ul style="list-style-type: none"> <li>HMI-High Feature No</li> <li>is supported HMI-Standard Yes</li> <li>is supported HMI-High Feature Yes</li> </ul>
<b>product feature integrated bypass contact system</b>	Yes
<b>number of controlled phases</b>	3
<b>trip class</b>	CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2
<b>buffering time in the event of power failure</b>	<ul style="list-style-type: none"> <li>for main current circuit 100 ms</li> <li>for control circuit 100 ms</li> </ul>

<b>insulation voltage rated value</b>	600 V
<b>degree of pollution</b>	3, acc. to IEC 60947-4-2
<b>impulse voltage rated value</b>	6 kV
<b>blocking voltage of the thyristor maximum</b>	1 600 V
<b>service factor</b>	1
<b>surge voltage resistance rated value</b>	6 kV
<b>maximum permissible voltage for protective separation</b> • between main and auxiliary circuit	600 V
<b>shock resistance</b>	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting
<b>vibration resistance</b>	15 mm to 6 Hz; 2g to 500 Hz
utilization category according to IEC 60947-4-2	AC 53a
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	02/15/2018
<b>product function</b> • ramp-up (soft starting) • ramp-down (soft stop) • Soft Torque • adjustable current limitation • pump ramp down • 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 • <b>PROFInergy</b> • <b>firmware update</b> • <b>removable terminal for control circuit</b> • torque control • analog output	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)
<b>Power Electronics</b>	
<b>operational current</b> • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value	370 A 328 A 300 A
<b>operational current at inside-delta circuit</b> • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value	641 A 568 A 519 A
<b>operating voltage</b> • rated value • at inside-delta circuit rated value	200 ... 480 V 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> • 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	110 kW 200 kW 200 kW 355 kW
<b>Operating frequency 1 rated value</b>	50 Hz
<b>Operating frequency 2 rated value</b>	60 Hz

<b>relative negative tolerance of the operating frequency</b>	-10 %
<b>relative positive tolerance of the operating frequency</b>	10 %
<b>adjustable motor current</b>	
• at rotary coding switch on switch position 1	160 A
• at rotary coding switch on switch position 2	174 A
• at rotary coding switch on switch position 3	188 A
• at rotary coding switch on switch position 4	202 A
• at rotary coding switch on switch position 5	216 A
• at rotary coding switch on switch position 6	230 A
• at rotary coding switch on switch position 7	244 A
• at rotary coding switch on switch position 8	258 A
• at rotary coding switch on switch position 9	272 A
• at rotary coding switch on switch position 10	286 A
• at rotary coding switch on switch position 11	300 A
• at rotary coding switch on switch position 12	314 A
• at rotary coding switch on switch position 13	328 A
• at rotary coding switch on switch position 14	342 A
• at rotary coding switch on switch position 15	356 A
• at rotary coding switch on switch position 16	370 A
• minimum	160 A
<b>adjustable motor current</b>	
• for inside-delta circuit at rotary coding switch on switch position 1	277 A
• for inside-delta circuit at rotary coding switch on switch position 2	301 A
• for inside-delta circuit at rotary coding switch on switch position 3	326 A
• for inside-delta circuit at rotary coding switch on switch position 4	350 A
• for inside-delta circuit at rotary coding switch on switch position 5	374 A
• for inside-delta circuit at rotary coding switch on switch position 6	398 A
• for inside-delta circuit at rotary coding switch on switch position 7	423 A
• for inside-delta circuit at rotary coding switch on switch position 8	447 A
• for inside-delta circuit at rotary coding switch on switch position 9	471 A
• for inside-delta circuit at rotary coding switch on switch position 10	495 A
• for inside-delta circuit at rotary coding switch on switch position 11	520 A
• for inside-delta circuit at rotary coding switch on switch position 12	544 A
• for inside-delta circuit at rotary coding switch on switch position 13	568 A
• for inside-delta circuit at rotary coding switch on switch position 14	592 A
• for inside-delta circuit at rotary coding switch on switch position 15	617 A
• for inside-delta circuit at rotary coding switch on switch position 16	641 A
• at inside-delta circuit minimum	277 A
<b>minimum load [%]</b>	15 %; Relative to smallest settable I <sub>e</sub>
<b>power loss [W] for rated value of the current at AC</b>	
• at 40 °C after startup	123 W
• at 50 °C after startup	110 W
• at 60 °C after startup	102 W
<b>power loss [W] at AC at current limitation 350 %</b>	
• at 40 °C during startup	5 575 W
• at 50 °C during startup	4 706 W
• at 60 °C during startup	4 157 W
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC/DC

<b>control supply voltage at AC</b>	
• at 50 Hz rated value	24 V
• at 60 Hz rated value	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>	160 mA
<b>holding current in bypass operation rated value</b>	470 mA
<b>inrush current by closing the bypass contacts maximum</b>	7.6 A
inrush current peak at application of control supply voltage maximum	3.3 A
duration of inrush current peak at application of control supply voltage	12.1 ms
<b>design of the overvoltage protection</b>	Varistor
<b>design of short-circuit protection for control circuit</b>	4 A gG fuse (I <sub>cu</sub> =1 kA), 6 A quick-acting fuse (I <sub>cu</sub> =1 kA), C1 miniature circuit breaker (I <sub>cu</sub> = 600 A), C6 miniature circuit breaker (I <sub>cu</sub> = 300 A); Is not part of scope of supply
<b>Inputs/ Outputs</b>	
<b>number of digital inputs</b>	1
<b>number of digital outputs</b>	3
• not parameterizable	2
<b>digital output version</b>	2 normally-open contacts (NO) / 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
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
<b>fastening method</b>	screw fixing
<b>height</b>	393 mm
<b>width</b>	210 mm
<b>depth</b>	203 mm
required spacing with side-by-side mounting	
• forwards	10 mm
• backwards	0 mm
• upwards	100 mm
• downwards	75 mm
• at the side	5 mm
<b>weight without packaging</b>	9.9 kg
<b>Connections/ Terminals</b>	
<b>type of electrical connection</b>	
• for main current circuit	busbar connection
• for control circuit	screw-type terminals
<b>width of connection bar maximum</b>	45 mm
<b>type of connectable conductor cross-sections</b>	
• for DIN cable lug for main contacts stranded	2x (50 ... 240 mm²)
• for DIN cable lug for main contacts finely stranded	2x (70 ... 240 mm²)

<b>type of connectable conductor cross-sections</b>	
• 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	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
• for AWG cables for control circuit solid	1x (20 ... 12), 2x (20 ... 14)
<b>wire length</b>	
• between soft starter and motor maximum	800 m
• at the digital inputs at AC maximum	100 m
• at the digital inputs at DC maximum	1 000 m
<b>tightening torque</b>	
• for main contacts with screw-type terminals	14 ... 24 N·m
• for auxiliary and control contacts with screw-type terminals	0.8 ... 1.2 N·m
<b>tightening torque [lbf·in]</b>	
• for main contacts with screw-type terminals	124 ... 210 lbf·in
• for auxiliary and control contacts with screw-type terminals	7 ... 10.3 lbf·in
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above
• during storage and transport	-40 ... +80 °C
<b>environmental category</b>	
• 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)
<b>EMC emitted interference</b>	
acc. to IEC 60947-4-2: Class A	
<b>Communication/ Protocol</b>	
<b>communication module is supported</b>	
• PROFINET standard	Yes
• EtherNet/IP	Yes
• Modbus RTU	Yes
• Modbus TCP	Yes
• PROFIBUS	Yes
<b>UL/CSA ratings</b>	
<b>manufacturer's article number</b>	
• of the fuse	
— usable for Standard Faults up to 575/600 V according to UL	Type: Class J / L, max. 1200 A; Iq = 18 kA
— usable for High Faults up to 575/600 V according to UL	Type: Class J / L, max. 1200 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. 1200 A; Iq = 18 kA
— usable for High Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 1200 A; Iq = 100 kA
<b>operating power [hp] for 3-phase motors</b>	
• at 200/208 V at 50 °C rated value	100 hp
• at 220/230 V at 50 °C rated value	125 hp
• at 460/480 V at 50 °C rated value	250 hp
• at 200/208 V at inside-delta circuit at 50 °C rated value	200 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	200 hp
• at 460/480 V at inside-delta circuit at 50 °C rated value	450 hp
<b>contact rating of auxiliary contacts according to UL</b>	
R300-B300	
<b>Safety related data</b>	
<b>protection class IP on the front according to IEC 60529</b>	
IP00; IP20 with cover	
<b>touch protection on the front according to IEC 60529</b>	
finger-safe, for vertical contact from the front with cover	
<b>electromagnetic compatibility</b>	
in accordance with IEC 60947-4-2	
<b>Certificates/ approvals</b>	
<b>General Product Approval</b>	
<b>EMC</b>	



[Confirmation](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[Confirmation](#)

#### Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RW5246-6AC04>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5246-6AC04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-6AC04>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5246-6AC04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5246-6AC04&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-6AC04/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5246-6AC04&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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







