



SIRIUS soft starter 200-600 V 38 A, 24 V AC/DC Screw terminals Analog output

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 • of high feature HMI module usable • of communication module PROFINET standard usable • of communication module PROFIBUS usable • of communication module Modbus TCP usable • of communication module Modbus RTU usable • of communication module Ethernet/IP • of circuit breaker usable at 400 V • of circuit breaker usable at 500 V • of circuit breaker usable at 400 V at inside-delta circuit • of circuit breaker usable at 500 V at inside-delta circuit • of the gG fuse usable up to 690 V • of the gG fuse usable at inside-delta circuit up to 500 V • of full range R fuse link for semiconductor protection usable up to 690 V • of back-up R fuse link for semiconductor protection usable up to 690 V 	<ul style="list-style-type: none"> 3RW5980-0HS00 3RW5980-0HF00 3RW5980-0CS00 3RW5980-0CP00 3RW5980-0CT00 3RW5980-0CR00 3RW5980-0CE00 3RV2032-4WA10; Type of coordination 1, Iq = 65 kA, CLASS 10 3RV2032-4WA10; Type of coordination 1, Iq = 10 kA, CLASS 10 3RV2032-4RA10; Type of coordination 1, Iq = 65 kA, CLASS 10 3RV2032-4RA10; Type of coordination 1, Iq = 10 kA, CLASS 10 3NA3824-6; Type of coordination 1, Iq = 65 kA 3NA3824-6; Type of coordination 1, Iq = 65 kA 3NE1820-0; Type of coordination 2, Iq = 65 kA 3NE8024-1; 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 • UL approval • CSA approval 	<ul style="list-style-type: none"> Yes Yes Yes
product component	
<ul style="list-style-type: none"> • HMI-High Feature • is supported HMI-Standard • is supported HMI-High Feature 	<ul style="list-style-type: none"> No Yes Yes
product feature integrated bypass contact system	Yes
number of controlled phases	3
trip class	CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2
buffering time in the event of power failure	
<ul style="list-style-type: none"> • for main current circuit • for control circuit 	<ul style="list-style-type: none"> 100 ms 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	1 600 V
service factor	1
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
• between main and auxiliary circuit	600 V
shock resistance	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting
vibration resistance	15 mm to 6 Hz; 2g to 500 Hz
utilization category according to IEC 60947-4-2	AC 53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	02/15/2018
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; Electronic motor overload protection
• evaluation of thermistor motor protection	No
• inside-delta circuit	Yes
• auto-RESET	Yes
• 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
• PROFInergy	Yes; in connection with the PROFINET Standard communication module
• firmware update	Yes
• removable terminal for control circuit	Yes
• torque control	No
• analog output	Yes; 4 ... 20 mA (default) / 0 ... 10 V (parameterizable with High Feature HMI)
Power Electronics	
operational current	
• at 40 °C rated value	38 A
• at 50 °C rated value	33.5 A
• at 60 °C rated value	30.5 A
operational current at inside-delta circuit	
• at 40 °C rated value	65.8 A
• at 50 °C rated value	58 A
• at 60 °C rated value	52.8 A
operating voltage	
• rated value	200 ... 600 V
• at inside-delta circuit rated value	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	
• at 230 V at 40 °C rated value	11 kW
• at 230 V at inside-delta circuit at 40 °C rated value	18.5 kW
• at 400 V at 40 °C rated value	18.5 kW
• at 400 V at inside-delta circuit at 40 °C rated value	30 kW
• at 500 V at 40 °C rated value	22 kW
• at 500 V at inside-delta circuit at 40 °C rated value	37 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	15.5 A
• at rotary coding switch on switch position 2	17 A
• at rotary coding switch on switch position 3	18.5 A
• at rotary coding switch on switch position 4	20 A
• at rotary coding switch on switch position 5	21.5 A
• at rotary coding switch on switch position 6	23 A
• at rotary coding switch on switch position 7	24.5 A
• at rotary coding switch on switch position 8	26 A
• at rotary coding switch on switch position 9	27.5 A
• at rotary coding switch on switch position 10	29 A
• at rotary coding switch on switch position 11	30.5 A
• at rotary coding switch on switch position 12	32 A
• at rotary coding switch on switch position 13	33.5 A
• at rotary coding switch on switch position 14	35 A
• at rotary coding switch on switch position 15	36.5 A
• at rotary coding switch on switch position 16	38 A
• minimum	15.5 A
adjustable motor current	
• for inside-delta circuit at rotary coding switch on switch position 1	26.8 A
• for inside-delta circuit at rotary coding switch on switch position 2	29.4 A
• for inside-delta circuit at rotary coding switch on switch position 3	32 A
• for inside-delta circuit at rotary coding switch on switch position 4	34.6 A
• for inside-delta circuit at rotary coding switch on switch position 5	37.2 A
• for inside-delta circuit at rotary coding switch on switch position 6	39.8 A
• for inside-delta circuit at rotary coding switch on switch position 7	42.4 A
• for inside-delta circuit at rotary coding switch on switch position 8	45 A
• for inside-delta circuit at rotary coding switch on switch position 9	47.6 A
• for inside-delta circuit at rotary coding switch on switch position 10	50.2 A
• for inside-delta circuit at rotary coding switch on switch position 11	52.8 A
• for inside-delta circuit at rotary coding switch on switch position 12	55.4 A
• for inside-delta circuit at rotary coding switch on switch position 13	58 A
• for inside-delta circuit at rotary coding switch on switch position 14	60.6 A
• for inside-delta circuit at rotary coding switch on switch position 15	63.2 A
• for inside-delta circuit at rotary coding switch on switch position 16	65.8 A
• at inside-delta circuit minimum	26.8 A
minimum load [%]	15 %; Relative to smallest settable I _e
power loss [W] for rated value of the current at AC	
• at 40 °C after startup	23 W
• at 50 °C after startup	22 W
• at 60 °C after startup	21 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	628 W
• at 50 °C during startup	526 W
• at 60 °C during startup	464 W

Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
• at 50 Hz rated value	24 V
• at 60 Hz rated value	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	
• 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 bypass operation rated value	360 mA
inrush current by closing the bypass contacts maximum	0.75 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
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
• 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	
• at AC-15 at 250 V rated value	3 A
• at DC-13 at 24 V rated value	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	275 mm
width	170 mm
depth	152 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
weight without packaging	2.3 kg
Connections/ Terminals	
type of electrical connection	
• for main current circuit	screw-type terminals
• for control circuit	screw-type terminals
type of connectable conductor cross-sections	
• for main contacts	

<ul style="list-style-type: none"> — solid — finely stranded with core end processing ● for AWG cables for main current circuit solid 	<p>2x (1.0 ... 2.5 mm²), 2x (2.5 ... 10 mm²)</p> <p>2x (1.0 ... 2.5 mm²), 2x (2.5 ... 6.0 mm²)</p> <p>2x (16 ... 12), 2x (14 ... 8)</p>
<p>type of connectable conductor cross-sections</p> <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 	<p>1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)</p> <p>1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)</p> <p>1x (20 ... 12), 2x (20 ... 14)</p>
<p>wire length</p> <ul style="list-style-type: none"> ● between soft starter and motor maximum ● at the digital inputs at AC maximum ● at the digital inputs at DC maximum 	<p>800 m</p> <p>100 m</p> <p>1 000 m</p>
<p>tightening torque</p> <ul style="list-style-type: none"> ● for main contacts with screw-type terminals ● for auxiliary and control contacts with screw-type terminals 	<p>2 ... 2.5 N·m</p> <p>0.8 ... 1.2 N·m</p>
<p>tightening torque [lbf·in]</p> <ul style="list-style-type: none"> ● for main contacts with screw-type terminals ● for auxiliary and control contacts with screw-type terminals 	<p>18 ... 22 lbf·in</p> <p>7 ... 10.3 lbf·in</p>
Ambient conditions	
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog
<p>ambient temperature</p> <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>
<p>environmental category</p> <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>
EMC emitted interference	acc. to IEC 60947-4-2: Class A
Communication/ Protocol	
<p>communication module is supported</p> <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	
<p>manufacturer's article number</p> <ul style="list-style-type: none"> ● of circuit breaker <ul style="list-style-type: none"> — usable for Standard Faults at 460/480 V according to UL — usable for High Faults at 460/480 V according to UL — usable for Standard Faults at 460/480 V at inside-delta circuit according to UL — usable for High Faults at 460/480 V at inside-delta circuit according to UL — usable for Standard Faults at 575/600 V according to UL — usable for Standard Faults 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: 3RV2742, max. 70 A or 3VA51, max. 125 A; I_q = 5 kA</p> <p>Siemens type: 3RV2742, max.40 A or 3VA51, max. 60 A; I_q max = 65 kA</p> <p>Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; I_q = 5 kA</p> <p>Siemens type: 3VA51, max. 60 A; I_q max = 65 kA</p> <p>Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; I_q = 5 kA</p> <p>Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; I_q = 5 kA</p> <p>Type: Class RK5 / K5, max. 150 A; I_q = 5 kA</p> <p>Type: Class J / L, max. 150 A; I_q = 100 kA</p> <p>Type: Class RK5 / K5, max. 150 A; I_q = 5 kA</p> <p>Type: Class J / L, max. 150 A; I_q = 100 kA</p>
<p>operating power [hp] for 3-phase motors</p> <ul style="list-style-type: none"> ● at 200/208 V at 50 °C rated value ● at 220/230 V at 50 °C rated value 	<p>10 hp</p> <p>10 hp</p>

- at 460/480 V at 50 °C rated value 20 hp
- at 575/600 V at 50 °C rated value 30 hp
- at 200/208 V at inside-delta circuit at 50 °C rated value 15 hp
- at 220/230 V at inside-delta circuit at 50 °C rated value 20 hp
- at 460/480 V at inside-delta circuit at 50 °C rated value 40 hp
- at 575/600 V at inside-delta circuit at 50 °C rated value 50 hp

contact rating of auxiliary contacts according to UL R300-B300

Safety related data

protection class IP on the front according to IEC 60529 IP20
 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front
 electromagnetic compatibility in accordance with IEC 60947-4-2

Certificates/ approvals

General Product Approval

EMC



[Confirmation](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



EG-Konf.

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



LRS

Marine / Shipping

other



PRS

[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,...)

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5217-1AC05>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5217-1AC05>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5217-1AC05>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5217-1AC05&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5217-1AC05/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5217-1AC05&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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



