

Siemens
EcoTech



SIRIUS soft starter 200-480 V 25 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	
• 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	3RV2032-4EA10: Type of coordination 1, Iq = 65 kA, CLASS 10
• of circuit breaker usable at 500 V	3RV2032-4EA10: Type of coordination 1, Iq = 15 kA, CLASS 10
• of circuit breaker usable at 400 V at inside-delta circuit	3RV2032-4VA10: Type of coordination 1, Iq = 65 kA, CLASS 10
• of circuit breaker usable at 500 V at inside-delta circuit	3RV2032-4VA10: Type of coordination 1, Iq = 15 kA, CLASS 10
• of the gG fuse usable up to 690 V	3NA3822-6; Type of coordination 1, Iq = 65 kA
• of the gG fuse usable at inside-delta circuit up to 500 V	3NA3822-6; Type of coordination 1, Iq = 65 kA
• of full range R fuse link for semiconductor protection usable up to 690 V	3NE1817-0; Type of coordination 2, Iq = 65 kA
• of back-up R fuse link for semiconductor protection usable up to 690 V	3NE8021-1; 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	
• CE marking	Yes
• UL approval	Yes
• CSA approval	Yes
product component	
• 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	

• 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	1 600 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
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4 Diboron trioxide - 1303-86-2

Weight	2.3 kg
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	25 A
• at 50 °C rated value	22.3 A
• at 60 °C rated value	19.6 A
operational current at inside-delta circuit	
• at 40 °C rated value	43.3 A
• at 50 °C rated value	39 A
• at 60 °C rated value	33.9 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 negative tolerance of the operating voltage at inside-delta circuit	-15 %
relative positive tolerance of the operating voltage at	10 %

inside-delta circuit	
operating power for 3-phase motors	
• at 230 V at 40 °C rated value	5.5 kW
• at 230 V at inside-delta circuit at 40 °C rated value	11 kW
• at 400 V at 40 °C rated value	11 kW
• at 400 V at inside-delta circuit at 40 °C rated value	18.5 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	11.5 A
• at rotary coding switch on switch position 2	12.4 A
• at rotary coding switch on switch position 3	13.3 A
• at rotary coding switch on switch position 4	14.2 A
• at rotary coding switch on switch position 5	15.1 A
• at rotary coding switch on switch position 6	16 A
• at rotary coding switch on switch position 7	16.9 A
• at rotary coding switch on switch position 8	17.8 A
• at rotary coding switch on switch position 9	18.7 A
• at rotary coding switch on switch position 10	19.6 A
• at rotary coding switch on switch position 11	20.5 A
• at rotary coding switch on switch position 12	21.4 A
• at rotary coding switch on switch position 13	22.3 A
• at rotary coding switch on switch position 14	23.2 A
• at rotary coding switch on switch position 15	24.1 A
• at rotary coding switch on switch position 16	25 A
• minimum	11.5 A
adjustable motor current	
• for inside-delta circuit at rotary coding switch on switch position 1	19.9 A
• for inside-delta circuit at rotary coding switch on switch position 2	21.5 A
• for inside-delta circuit at rotary coding switch on switch position 3	23 A
• for inside-delta circuit at rotary coding switch on switch position 4	24.6 A
• for inside-delta circuit at rotary coding switch on switch position 5	26.2 A
• for inside-delta circuit at rotary coding switch on switch position 6	27.7 A
• for inside-delta circuit at rotary coding switch on switch position 7	29.3 A
• for inside-delta circuit at rotary coding switch on switch position 8	30.8 A
• for inside-delta circuit at rotary coding switch on switch position 9	32.4 A
• for inside-delta circuit at rotary coding switch on switch position 10	33.9 A
• for inside-delta circuit at rotary coding switch on switch position 11	35.5 A
• for inside-delta circuit at rotary coding switch on switch position 12	37.1 A
• for inside-delta circuit at rotary coding switch on switch position 13	38.6 A
• for inside-delta circuit at rotary coding switch on switch position 14	40.2 A
• for inside-delta circuit at rotary coding switch on switch position 15	41.7 A
• for inside-delta circuit at rotary coding switch on switch position 16	43.3 A
• at inside-delta circuit minimum	19.9 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	20 W
• at 50 °C after startup	19 W

• at 60 °C after startup	18 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	376 W
• at 50 °C during startup	318 W
• at 60 °C during startup	278 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 (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 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	+/- 10° rotation possible and can be tilted forward or backward on vertical mounting surface
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	2.1 kg
Connections/ Terminals	
type of electrical connection	

• for main current circuit • for control circuit	screw-type terminals screw-type terminals
type of connectable conductor cross-sections • for main contacts — solid — finely stranded with core end processing • for AWG cables for main current circuit solid	2x (1.0 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²) 2x (1.0 ... 2.5 mm ²), 2x (2.5 ... 6.0 mm ²) 2x (16 ... 12), 2x (14 ... 8)
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	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (20 ... 12), 2x (20 ... 14)
wire length • between soft starter and motor maximum • at the digital inputs at AC maximum • at the digital inputs at DC maximum	800 m 100 m 1 000 m
tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals	2 ... 2.5 N·m 0.8 ... 1.2 N·m
tightening torque [lbf·in] • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals	18 ... 22 lbf·in 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 • during storage and transport	-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above -40 ... +80 °C
environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
Environmental footprint	
global warming potential [CO2 eq] total	185 kg
global warming potential [CO2 eq] during manufacturing	37.2 kg
global warming potential [CO2 eq] during sales	0.66 kg
global warming potential [CO2 eq] during operation	152 kg
global warming potential [CO2 eq] after end of life	-4.19 kg
Siemens Eco Profile (SEP)	Siemens EcoTech
Electromagnetic compatibility	
EMC emitted interference	acc. to IEC 60947-4-2: Class A
Communication/ Protocol	
communication module is supported • PROFINET standard • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS	Yes Yes Yes Yes Yes
UL/CSA ratings	
manufacturer's article number • of circuit breaker usable for Standard Faults — 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 — usable for Standard Faults up to 575/600 V according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA Siemens type: 3RV2742, max.40 A or 3VA51, max. 60 A; Iq max = 65 kA Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA Siemens type: 3VA51, max. 60 A; Iq max = 65 kA Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA Type: Class RK5 / K5, max. 100 A; Iq = 5 kA

— usable for High Faults up to 575/600 V according to UL	Type: Class J / L, max. 100 A; Iq = 100 kA
— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class RK5 / K5, max. 100 A; Iq = 5 kA
— usable for High Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 100 A; Iq = 100 kA
operating power [hp] for 3-phase motors	
• at 200/208 V at 50 °C rated value	5 hp
• at 220/230 V at 50 °C rated value	7.5 hp
• at 460/480 V at 50 °C rated value	15 hp
• at 200/208 V at inside-delta circuit at 50 °C rated value	10 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	10 hp
• at 460/480 V at inside-delta circuit at 50 °C rated value	25 hp
contact rating of auxiliary contacts according to UL	R300-B300
Electrical Safety	
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

Approvals Certificates

General Product Approval	EMV
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EMV	Test Certificates	Maritime application
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[KC](#)

[Type Test Certificates/Test Report](#)



other	Environment
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[Confirmation](#)



[Environmental Confirmations](#)

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=3RW5215-1AC04>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5215-1AC04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5215-1AC04>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5215-1AC04&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5215-1AC04/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5215-1AC04&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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



