

Siemens
EcoTech



SIRIUS soft starter 200-480 V 63 A, 110-250 V AC 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 • 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	3RW5980-0HS00 3RW5980-0HF00 3RW5980-0CS00 3RW5980-0CP00 3RW5980-0CT00 3RW5980-0CR00 3RW5980-0CE00 3VA2163-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10 3VA2163-7MN32-0AA0; Type of coordination 1, Iq = 20 kA, CLASS 10 3VA2110-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10 3VA2110-7MN32-0AA0; Type of coordination 1, Iq = 20 kA, CLASS 10 3NA3830-6; Type of coordination 1, Iq = 65 kA 3NA3830-6; Type of coordination 1, Iq = 65 kA 3NE1022-0; 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	
• CE marking • UL approval • CSA approval	Yes Yes Yes
product component	
• HMI-High Feature • is supported HMI-Standard • is supported HMI-High Feature	No Yes 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	1 400 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-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4
Weight	5.2 kg
product function • 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 • PROFenergy • firmware update • removable terminal for control circuit • 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)
Power Electronics	
operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value	63 A 55.5 A 50.5 A
operational current at inside-delta circuit • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value	109 A 96 A 87.5 A
operating voltage • rated value • at inside-delta circuit rated value	200 ... 480 V 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 inside-delta circuit	10 %
operating power for 3-phase motors	

• 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	18.5 kW 30 kW 30 kW 55 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 • at rotary coding switch on switch position 2 • at rotary coding switch on switch position 3 • at rotary coding switch on switch position 4 • at rotary coding switch on switch position 5 • at rotary coding switch on switch position 6 • at rotary coding switch on switch position 7 • at rotary coding switch on switch position 8 • at rotary coding switch on switch position 9 • at rotary coding switch on switch position 10 • at rotary coding switch on switch position 11 • at rotary coding switch on switch position 12 • at rotary coding switch on switch position 13 • at rotary coding switch on switch position 14 • at rotary coding switch on switch position 15 • at rotary coding switch on switch position 16 • minimum	25.5 A 28 A 30.5 A 33 A 35.5 A 38 A 40.5 A 43 A 45.5 A 48 A 50.5 A 53 A 55.5 A 58 A 60.5 A 63 A 25.5 A
adjustable motor current	
• for inside-delta circuit at rotary coding switch on switch position 1 • for inside-delta circuit at rotary coding switch on switch position 2 • for inside-delta circuit at rotary coding switch on switch position 3 • for inside-delta circuit at rotary coding switch on switch position 4 • for inside-delta circuit at rotary coding switch on switch position 5 • for inside-delta circuit at rotary coding switch on switch position 6 • for inside-delta circuit at rotary coding switch on switch position 7 • for inside-delta circuit at rotary coding switch on switch position 8 • for inside-delta circuit at rotary coding switch on switch position 9 • for inside-delta circuit at rotary coding switch on switch position 10 • for inside-delta circuit at rotary coding switch on switch position 11 • for inside-delta circuit at rotary coding switch on switch position 12 • for inside-delta circuit at rotary coding switch on switch position 13 • for inside-delta circuit at rotary coding switch on switch position 14 • for inside-delta circuit at rotary coding switch on switch position 15 • for inside-delta circuit at rotary coding switch on switch position 16 • at inside-delta circuit minimum	44.2 A 48.5 A 52.8 A 57.2 A 61.5 A 65.8 A 70.1 A 74.5 A 78.8 A 83.1 A 87.5 A 91.8 A 96.1 A 100 A 105 A 109 A 44.2 A
minimum load [%]	15 %; Relative to smallest settable Ie
power loss [W] for rated value of the current at AC	
• at 40 °C after startup • at 50 °C after startup • at 60 °C after startup	31 W 29 W 27 W
power loss [W] at AC at current limitation 350 %	

• at 40 °C during startup • at 50 °C during startup • at 60 °C during startup	882 W 744 W 659 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• 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 (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 • at DC-13 at 24 V rated value	3 A 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	306 mm
width	185 mm
depth	203 mm
required spacing with side-by-side mounting	
• forwards • backwards • upwards • downwards • at the side	10 mm 0 mm 100 mm 75 mm 5 mm
weight without packaging	5.6 kg
Connections/ Terminals	
type of electrical connection	
• for main current circuit • for control circuit	box terminal screw-type terminals
width of connection bar maximum	25 mm
type of connectable conductor cross-sections for main contacts for box terminal	
• using the front clamping point solid • using the front clamping point finely stranded with core	1x (2.5 ... 16 mm²) 1x (2.5 ... 50 mm²)

end processing	
• using the front clamping point stranded	1x (10 ... 70 mm ²)
• using the back clamping point solid	1x (2.5 ... 16 mm ²)
• r box terminal using the back clamping point	1x (10 ... 2/0)
• using both clamping points solid	2x (2.5 ... 16 mm ²)
• using both clamping points finely stranded with core end processing	2x (2.5 ... 35 mm ²)
• using both clamping points stranded	2x (6 ... 16 mm ²), 2x (10 ... 50 mm ²)
• using the back clamping point finely stranded with core end processing	1x (2.5 ... 50 mm ²)
• using the back clamping point stranded	1x (10 ... 70 mm ²)
type of connectable conductor cross-sections	
• for control circuit solid	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²)
• for control circuit finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• for AWG cables for control circuit solid	1x (20 ... 12), 2x (20 ... 14)
wire length	
• between soft starter and motor maximum	800 m
• at the digital inputs at AC maximum	100 m
tightening torque	
• for main contacts with screw-type terminals	4.5 ... 6 N·m
• for auxiliary and control contacts with screw-type terminals	0.8 ... 1.2 N·m
tightening torque [lbf·in]	
• for main contacts with screw-type terminals	40 ... 53 lbf·in
• for auxiliary and control contacts with screw-type terminals	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	-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above
• during storage and transport	-40 ... +80 °C
environmental category	
• 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)
Environmental footprint	
Global Warming Potential [CO2 eq] total	296 kg
Global Warming Potential [CO2 eq] during manufacturing	67.7 kg
global warming potential [CO2 eq] during sales	1.84 kg
Global Warming Potential [CO2 eq] during operation	242 kg
Global Warming Potential [CO2 eq] after end of life	-15.7 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	Yes
• EtherNet/IP	Yes
• Modbus RTU	Yes
• Modbus TCP	Yes
• PROFIBUS	Yes
UL/CSA ratings	
manufacturer's article number	
• of circuit breaker usable for Standard Faults	
— at 460/480 V according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 10 kA
— 60/480 V according to UL	Siemens type: 3VA51, max. 125 A; Iq max = 65 kA
— at 460/480 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 125 A; Iq = 10 kA
— 60/480 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 125 A; Iq max = 65 kA
— at 575/600 V according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 10 kA
— at 575/600 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 125 A; Iq = 10 kA

• of the fuse — 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	Type: Class RK5 / K5, max. 200 A; I _q = 10 kA Type: Class J / L, max. 225 A; I _q = 100 kA Type: Class RK5 / K5, max. 200 A; I _q = 10 kA Type: Class J / L, max. 225 A; I _q = 100 kA
operating power [hp] for 3-phase motors • 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 200/208 V at inside-delta circuit at 50 °C rated value • 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	15 hp 20 hp 40 hp 30 hp 30 hp 75 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	
General Product Approval	



[Confirmation](#)



EMV	Test Certificates	Marine / Shipping
	KC Type Test Certificates/Test Report	
Marine / Shipping	other	Environment



[Confirmation](#)

Siemens
EcoTech



[Environmental Confirmations](#)

Further information

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=3RW5225-1AC14>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5225-1AC14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5225-1AC14>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5225-1AC14&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5225-1AC14/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5225-1AC14&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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



