



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
	3RW5980-0HS00 3RW5980-0HF00 3RW5980-0CS00 3RW5980-0CP00 3RW5980-0CT00 3RW5980-0CR00 3RW5980-0CE00 3VA2110-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10 3VA2110-7MN32-0AA0; Type of coordination 1, Iq = 20 kA, CLASS 10 3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10 3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 20 kA, CLASS 10 3NA3132-6; Type of coordination 1, Iq = 65 kA 3NA3132-6; Type of coordination 1, Iq = 65 kA 3NE1224-0; 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
	Yes Yes Yes
product component	<ul style="list-style-type: none"> 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	6.46 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; Full motor protection (thermistor motor protection and electronic motor overload protection)
• evaluation of thermistor motor protection	Yes; Type A PTC or Klixon / Thermoclick
• 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
• PROFIenergy	Yes; in connection with the PROFINET Standard communication module
• firmware update	Yes
• removable terminal for control circuit	Yes
• torque control	No
• analog output	No
Power Electronics	
operational current	
• at 40 °C rated value	77 A
• at 50 °C rated value	68 A
• at 60 °C rated value	62 A
operational current at inside-delta circuit	
• at 40 °C rated value	133 A
• at 50 °C rated value	118 A
• at 60 °C rated value	107 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 inside-delta circuit	10 %

operating power for 3-phase motors	
• at 230 V at 40 °C rated value	22 kW
• at 230 V at inside-delta circuit at 40 °C rated value	37 kW
• at 400 V at 40 °C rated value	37 kW
• at 400 V at inside-delta circuit at 40 °C rated value	75 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	32 A
• at rotary coding switch on switch position 2	35 A
• at rotary coding switch on switch position 3	38 A
• at rotary coding switch on switch position 4	41 A
• at rotary coding switch on switch position 5	44 A
• at rotary coding switch on switch position 6	47 A
• at rotary coding switch on switch position 7	50 A
• at rotary coding switch on switch position 8	53 A
• at rotary coding switch on switch position 9	56 A
• at rotary coding switch on switch position 10	59 A
• at rotary coding switch on switch position 11	62 A
• at rotary coding switch on switch position 12	65 A
• at rotary coding switch on switch position 13	68 A
• at rotary coding switch on switch position 14	71 A
• at rotary coding switch on switch position 15	74 A
• at rotary coding switch on switch position 16	77 A
• minimum	32 A
adjustable motor current	
• for inside-delta circuit at rotary coding switch on switch position 1	55.4 A
• for inside-delta circuit at rotary coding switch on switch position 2	60.6 A
• for inside-delta circuit at rotary coding switch on switch position 3	65.8 A
• for inside-delta circuit at rotary coding switch on switch position 4	71 A
• for inside-delta circuit at rotary coding switch on switch position 5	76.2 A
• for inside-delta circuit at rotary coding switch on switch position 6	81.4 A
• for inside-delta circuit at rotary coding switch on switch position 7	86.6 A
• for inside-delta circuit at rotary coding switch on switch position 8	91.8 A
• for inside-delta circuit at rotary coding switch on switch position 9	97 A
• for inside-delta circuit at rotary coding switch on switch position 10	102 A
• for inside-delta circuit at rotary coding switch on switch position 11	107 A
• for inside-delta circuit at rotary coding switch on switch position 12	113 A
• for inside-delta circuit at rotary coding switch on switch position 13	118 A
• for inside-delta circuit at rotary coding switch on switch position 14	123 A
• for inside-delta circuit at rotary coding switch on switch position 15	128 A
• for inside-delta circuit at rotary coding switch on switch position 16	133 A
• at inside-delta circuit minimum	55.4 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	35 W
• at 50 °C after startup	32 W
• at 60 °C after startup	31 W

power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	1 107 W
• at 50 °C during startup	933 W
• at 60 °C during startup	826 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• at 50 Hz	110 ... 250 V
• at 60 Hz	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	0
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	306 mm
width	185 mm
depth	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
weight without packaging	5.6 kg
Connections/ Terminals	
type of electrical connection	
• for main current circuit	box terminal
• for control circuit	spring-loaded terminals
width of connection bar maximum	25 mm
wire length for thermistor connection	
• with conductor cross-section = 0.5 mm ² maximum	50 m
• with conductor cross-section = 1.5 mm ² maximum	150 m

• with conductor cross-section = 2.5 mm ² maximum	250 m
type of connectable conductor cross-sections for main contacts for box terminal	
• using the front clamping point solid	1x (2.5 ... 16 mm ²)
• using the front clamping point finely stranded with core end processing	1x (2.5 ... 50 mm ²)
• 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	2x (0.25 ... 1.5 mm ²)
• for control circuit finely stranded with core end processing	2x (0.25 ... 1.5 mm ²)
• for AWG cables for control circuit solid	2x (24 ... 16)
• for AWG cables for control circuit finely stranded with core end processing	2x (24 ... 16)
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 [CO ₂ eq] total	296 kg
Global Warming Potential [CO ₂ eq] during manufacturing	67.7 kg
global warming potential [CO ₂ eq] during sales	1.84 kg
Global Warming Potential [CO ₂ eq] during operation	242 kg
Global Warming Potential [CO ₂ 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: 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: 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	Type: Class RK5 / K5, max. 250 A; Iq = 10 kA
— usable for High Faults up to 575/600 V according to UL	Type: Class J / L, max. 250 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. 250 A; Iq = 10 kA
— usable for High Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 250 A; Iq = 100 kA
operating power [hp] for 3-phase motors	
• at 200/208 V at 50 °C rated value	20 hp
• at 220/230 V at 50 °C rated value	25 hp
• at 460/480 V at 50 °C rated value	50 hp
• at 200/208 V at inside-delta circuit at 50 °C rated value	30 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	40 hp
• at 460/480 V at inside-delta circuit at 50 °C rated value	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](#)



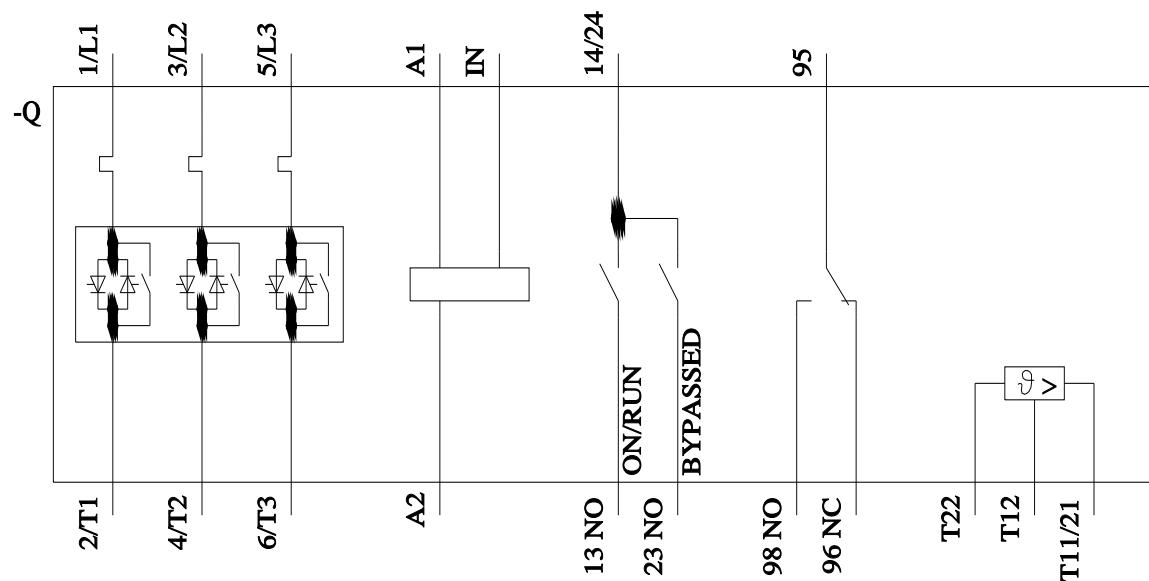
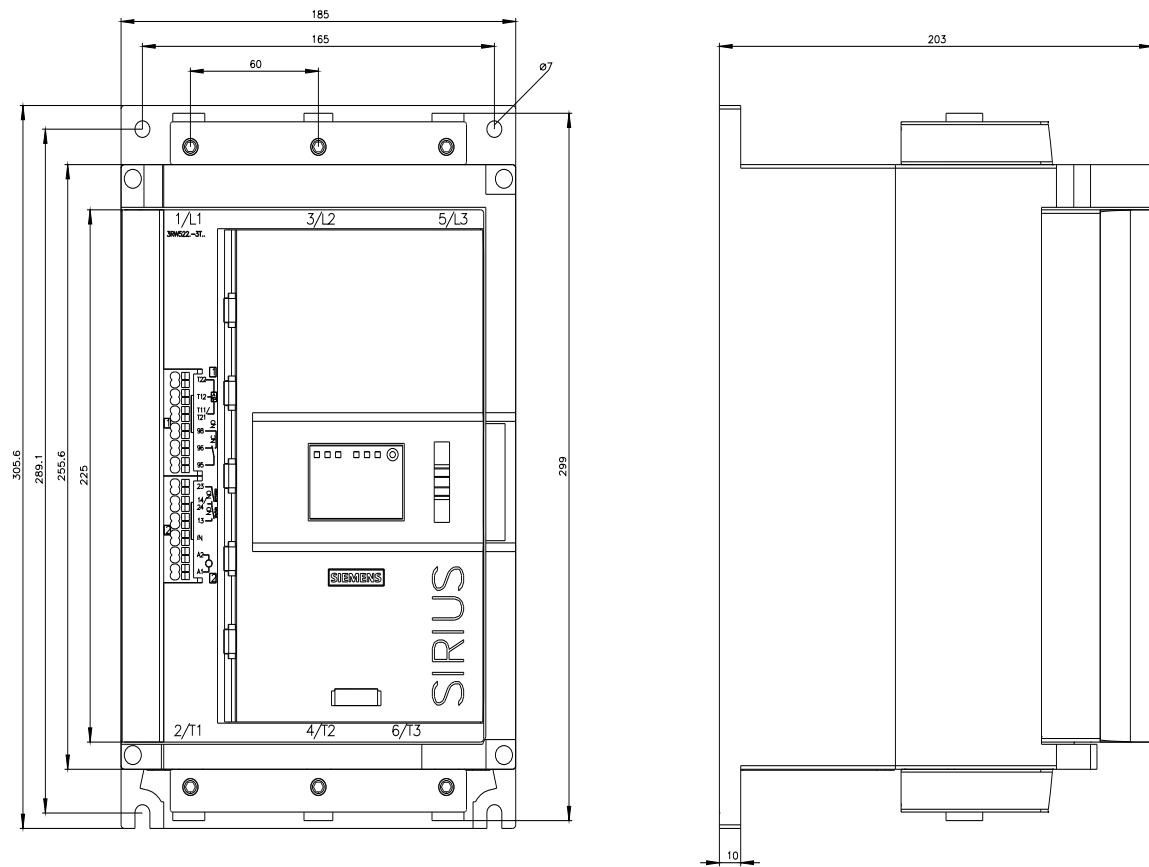
EMV	Test Certificates	Marine / Shipping
 RCM	KC Type Test Certificates/Test Report	 ABS

Marine / Shipping	other	Environment
 PRS	Confirmation	 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=3RW5226-3TC14
Cax online generator http://support.automation.siemens.com/WW/CAxorder/default.aspx?lang=en&mlfb=3RW5226-3TC14
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RW5226-3TC14
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5226-3TC14&lang=en
Characteristic: Tripping characteristics, I ² t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RW5226-3TC14/char
Characteristic: Installation altitude http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5226-3TC14&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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



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