



SIRIUS soft starter 200-600 V 143 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	<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 400 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
General technical data	
starting voltage [%]	30 ... 100 %
stopping voltage [%]	50 ... 50 %
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
product component is supported	<ul style="list-style-type: none">• HMI-Standard• HMI-High Feature
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	

- [3RW5980-0HS00](#)
- [3RW5980-0HF00](#)
- [3RW5980-0CS00](#)
- [3RW5980-0CP00](#)
- [3RW5980-0CT00](#)
- [3RW5980-0CR00](#)
- [3RW5980-0CE00](#)
- [3VA2220-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10](#)
- [3VA2325-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10](#)
- [3NA3244-6: Type of coordination 1, Iq = 65 kA](#)
- [3NA3244-6: Type of coordination 1, Iq = 65 kA](#)
- [3NE1227-0: Type of coordination 2, Iq = 65 kA](#)
- [3NE3334-0B: Type of coordination 2, Iq = 65 kA](#)

<ul style="list-style-type: none"> • for main current circuit • for control circuit 	100 ms
insulation voltage rated value	100 ms
degree of pollution	600 V
impulse voltage rated value	3, acc. to IEC 60947-4-2
blocking voltage of the thyristor maximum	6 kV
service factor	1 800 V
surge voltage resistance rated value	1
maximum permissible voltage for safe isolation <ul style="list-style-type: none"> • between main and auxiliary circuit 	6 kV
shock resistance	600 V
vibration resistance	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting
utilization category acc. to IEC 60947-4-2	15 mm to 6 Hz; 2g to 500 Hz
reference code acc. to IEC 81346-2	AC 53a
Substance Prohibitance (Date)	Q
product function <ul style="list-style-type: none"> • 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 	15.02.2018 00:00:00 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 <ul style="list-style-type: none"> • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value 	143 A 128 A 118 A
operational current at inside-delta circuit <ul style="list-style-type: none"> • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value 	248 A 222 A 204 A
operating voltage <ul style="list-style-type: none"> • rated value • at inside-delta circuit rated value 	200 ... 600 V 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	37 kW
• at 230 V at inside-delta circuit at 40 °C rated value	75 kW
• at 400 V at 40 °C rated value	75 kW
• at 400 V at inside-delta circuit at 40 °C rated value	132 kW
• at 500 V at 40 °C rated value	90 kW
• at 500 V at inside-delta circuit at 40 °C rated value	160 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	68 A
• at rotary coding switch on switch position 2	73 A
• at rotary coding switch on switch position 3	78 A
• at rotary coding switch on switch position 4	83 A
• at rotary coding switch on switch position 5	88 A
• at rotary coding switch on switch position 6	93 A
• at rotary coding switch on switch position 7	98 A
• at rotary coding switch on switch position 8	103 A
• at rotary coding switch on switch position 9	108 A
• at rotary coding switch on switch position 10	113 A
• at rotary coding switch on switch position 11	118 A
• at rotary coding switch on switch position 12	123 A
• at rotary coding switch on switch position 13	128 A
• at rotary coding switch on switch position 14	133 A
• at rotary coding switch on switch position 15	138 A
• at rotary coding switch on switch position 16	143 A
• minimum	68 A
adjustable motor current	
• for inside-delta circuit at rotary coding switch on switch position 1	118 A
• for inside-delta circuit at rotary coding switch on switch position 2	126 A
• for inside-delta circuit at rotary coding switch on switch position 3	135 A
• for inside-delta circuit at rotary coding switch on switch position 4	144 A
• for inside-delta circuit at rotary coding switch on switch position 5	152 A
• for inside-delta circuit at rotary coding switch on switch position 6	161 A
• for inside-delta circuit at rotary coding switch on switch position 7	170 A
• for inside-delta circuit at rotary coding switch on switch position 8	178 A
• for inside-delta circuit at rotary coding switch on switch position 9	187 A
• for inside-delta circuit at rotary coding switch on switch position 10	196 A
• for inside-delta circuit at rotary coding switch on switch position 11	204 A
• for inside-delta circuit at rotary coding switch on switch position 12	213 A
• for inside-delta circuit at rotary coding switch on switch position 13	222 A
• for inside-delta circuit at rotary coding switch on switch position 14	230 A
• for inside-delta circuit at rotary coding switch on switch position 15	239 A
• for inside-delta circuit at rotary coding switch on switch position 16	248 A
• at inside-delta circuit minimum	118 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	55 W
• at 50 °C after startup	50 W
• at 60 °C after startup	47 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	2 127 W
• at 50 °C during startup	1 807 W
• at 60 °C during startup	1 605 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
locked-rotor current at close of bypass contact 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 (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 inputs for thermistor connection	0
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	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	6.6 kg
Connections/ Terminals	
type of electrical connection	
• for main current circuit	busbar connection
• for control circuit	screw-type terminals
width of connection bar maximum	25 mm
type of connectable conductor cross-sections	
• for DIN cable lug for main contacts stranded	2x (16 ... 95 mm ²)
• for DIN cable lug for main contacts finely stranded	2x (25 ... 120 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)
• at 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	10 ... 14 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	89 ... 124 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 acc. 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 acc. to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
• during transport acc. to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
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: 3VA52, max. 250 A; I _q = 10 kA
— usable for High Faults at 460/480 V according to UL	Siemens type: 3VA52, max. 250 A; I _q max = 65 kA
— usable for Standard Faults at 460/480 V at inside-delta circuit according to UL	Siemens type: 3VA52, max. 250 A; I _q = 10 kA
— usable for High Faults at 460/480 V at inside-delta circuit according to UL	Siemens type: 3VA52, max. 250 A; I _q max = 65 kA
— usable for Standard Faults at 575/600 V according to UL	Siemens type: 3VA52, max. 250 A; I _q = 10 kA
— usable for Standard Faults at 575/600 V at inside-delta circuit according to UL	Siemens type: 3VA52, max. 250 A; I _q = 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. 350 A; I_q = 10 kA

Type: Class J / L, max. 350 A; I_q = 100 kA

Type: Class RK5 / K5, max. 350 A; I_q = 10 kA

Type: Class J / L, max. 350 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 575/600 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
- at 575/600 V at inside-delta circuit at 50 °C rated value

40 hp

40 hp

100 hp

125 hp

75 hp

75 hp

150 hp

200 hp

contact rating of auxiliary contacts according to UL

R300-B300

Safety related data

protection class IP on the front acc. to IEC 60529

IP00; IP20 with cover

touch protection on the front acc. to IEC 60529

finger-safe, for vertical contact from the front with cover

electromagnetic compatibility

in accordance with IEC 60947-4-2

Certificates/ approvals

General Product Approval

EMC

Declaration of
Conformity



Test Certificates

Marine / Shipping

[Type Test Certificates/Test Report](#)



other

[Confirmation](#)

Further information

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=3RW5235-6AC15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5235-6AC15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5235-6AC15>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5235-6AC15&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

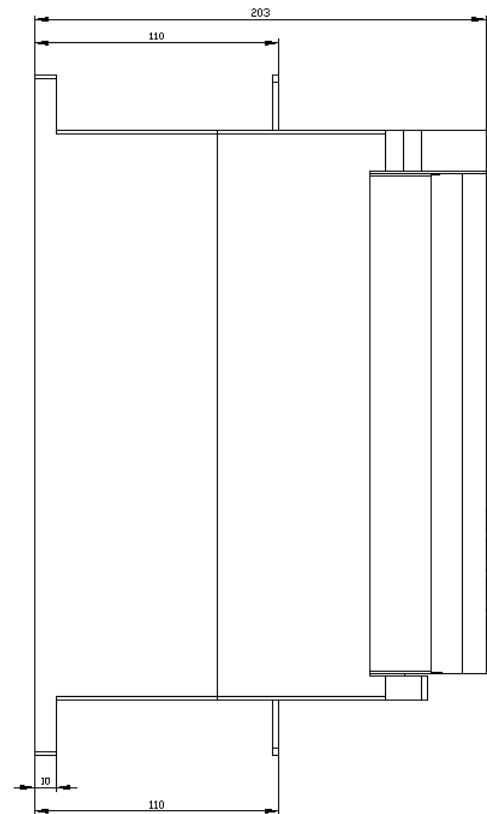
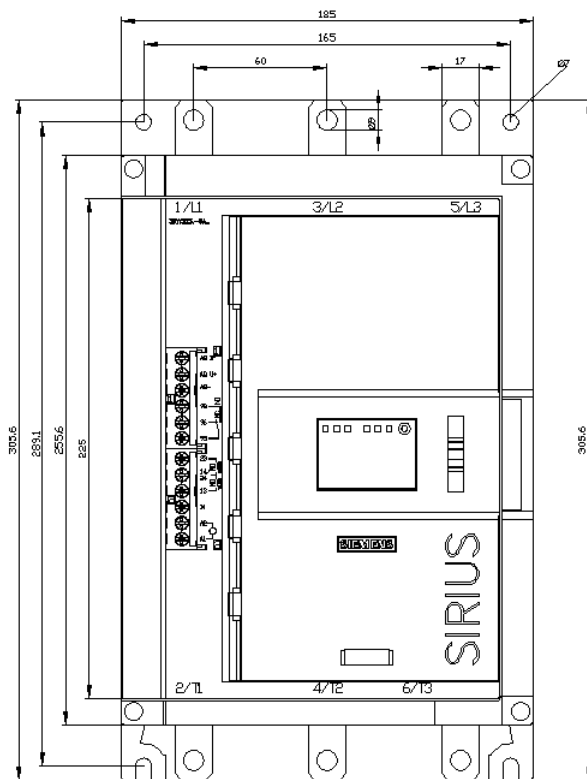
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5235-6AC15/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5235-6AC15&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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



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