



SIRIUS soft starter 200-480 V 32 A, 24 V AC/DC Screw terminals
Thermistor input

product brand name
product category
product designation
product type designation
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

SIRIUS
Hybrid switching devices
Soft starter
3RW52

- [3RW5980-0HS00](#)
- [3RW5980-0HF00](#)
- [3RW5980-0CS00](#)

- [3RW5980-0CP00](#)
- [3RW5980-0CT00](#)
- [3RW5980-0CR00](#)
- [3RW5980-0CE00](#)

[3RV2032-4VA10](#); Type of coordination 1, Iq = 65 kA, CLASS 10

[3RV2032-4VA10](#); Type of coordination 1, Iq = 10 kA, CLASS 10

[3RV2032-4JA10](#); Type of coordination 1, Iq = 65 kA, CLASS 10

[3RV2032-4JA10](#); 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

[3NE1818-0](#); Type of coordination 2, Iq = 65 kA

[3NE8022-1](#); 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
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 	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	1 600 V
surge voltage resistance rated value	1
maximum permissible voltage for safe isolation	6 kV
<ul style="list-style-type: none"> • 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	
<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 	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection)
	Yes; Type A PTC or Klixon / Thermoclick
<ul style="list-style-type: none"> • 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 • PROFInergy 	Yes
	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
	No

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 	32 A
	28.4 A
	26 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 	55.4 A
	49 A
	45 A
operating voltage	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • 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 	7.5 kW
	15 kW
	15 kW
	22 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	14 A
• at rotary coding switch on switch position 2	15.2 A
• at rotary coding switch on switch position 3	16.4 A
• at rotary coding switch on switch position 4	17.6 A
• at rotary coding switch on switch position 5	18.8 A
• at rotary coding switch on switch position 6	20 A
• at rotary coding switch on switch position 7	21.2 A
• at rotary coding switch on switch position 8	22.4 A
• at rotary coding switch on switch position 9	23.6 A
• at rotary coding switch on switch position 10	24.8 A
• at rotary coding switch on switch position 11	26 A
• at rotary coding switch on switch position 12	27.2 A
• at rotary coding switch on switch position 13	28.4 A
• at rotary coding switch on switch position 14	29.6 A
• at rotary coding switch on switch position 15	30.8 A
• at rotary coding switch on switch position 16	32 A
• minimum	14 A
adjustable motor current	
• for inside-delta circuit at rotary coding switch on switch position 1	24.2 A
• for inside-delta circuit at rotary coding switch on switch position 2	26.3 A
• for inside-delta circuit at rotary coding switch on switch position 3	28.4 A
• for inside-delta circuit at rotary coding switch on switch position 4	30.5 A
• for inside-delta circuit at rotary coding switch on switch position 5	32.6 A
• for inside-delta circuit at rotary coding switch on switch position 6	34.6 A
• for inside-delta circuit at rotary coding switch on switch position 7	36.7 A
• for inside-delta circuit at rotary coding switch on switch position 8	38.8 A
• for inside-delta circuit at rotary coding switch on switch position 9	40.9 A
• for inside-delta circuit at rotary coding switch on switch position 10	43 A
• for inside-delta circuit at rotary coding switch on switch position 11	45 A
• for inside-delta circuit at rotary coding switch on switch position 12	47.1 A
• for inside-delta circuit at rotary coding switch on switch position 13	49.2 A
• for inside-delta circuit at rotary coding switch on switch position 14	51.3 A
• for inside-delta circuit at rotary coding switch on switch position 15	53.3 A
• for inside-delta circuit at rotary coding switch on switch position 16	55.4 A
• at inside-delta circuit minimum	24.2 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	22 W
• at 50 °C after startup	21 W
• at 60 °C after startup	20 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	531 W
• at 50 °C during startup	449 W
• at 60 °C during startup	395 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	

<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	24 V
relative negative tolerance of the control supply voltage at AC at 50 Hz	24 V
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	20 %
relative negative tolerance of the control supply voltage frequency	50 ... 60 Hz
relative positive tolerance of the control supply voltage frequency	-10 %
control supply voltage	10 %
<ul style="list-style-type: none"> • 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 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
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • 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	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	
<ul style="list-style-type: none"> • forwards • backwards • upwards • downwards • at the side 	10 mm
	0 mm
	100 mm
	75 mm
	5 mm
weight without packaging	2.3 kg

Connections/ Terminals

type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for control circuit 	screw-type terminals
	screw-type terminals
wire length for thermistor connection	
<ul style="list-style-type: none"> • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum 	50 m
	150 m
	250 m
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts 	
— solid	2x (1.0 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²)
— finely stranded with core end processing	2x (1.0 ... 2.5 mm ²), 2x (2.5 ... 6.0 mm ²)

<ul style="list-style-type: none"> at AWG cables for main current circuit solid 	2x (16 ... 12), 2x (14 ... 8)
type of connectable conductor cross-sections <ul style="list-style-type: none"> for control circuit solid for control circuit finely stranded with core end processing 	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)
<ul style="list-style-type: none"> at AWG cables for control circuit solid 	1x (20 ... 12), 2x (20 ... 14)
wire length <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 	800 m 100 m 1 000 m
tightening torque <ul style="list-style-type: none"> 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] <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> during operation during storage and transport 	-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above -40 ... +80 °C
environmental category <ul style="list-style-type: none"> 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) acc. to IEC 60947-4-2: Class A
EMC emitted interference	
Communication/ Protocol	
communication module is supported <ul style="list-style-type: none"> PROFINET standard EtherNet/IP Modbus RTU Modbus TCP PROFIBUS 	Yes Yes Yes Yes Yes
UL/CSA ratings	
manufacturer's article number <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 	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 100 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. 100 A; Iq = 5 kA Siemens type: 3VA51, max. 60 A; Iq max = 65 kA Siemens type: 3RV2742, max. 70 A or 3VA51, max. 100 A; Iq = 5 kA Siemens type: 3RV2742, max. 70 A or 3VA51, max. 100 A; Iq = 5 kA Type: Class RK5 / K5, max. 125 A; Iq = 5 kA Type: Class J / L, max. 125 A; Iq = 100 kA Type: Class RK5 / K5, max. 125 A; Iq = 5 kA Type: Class J / L, max. 125 A; Iq = 100 kA
operating power [hp] for 3-phase motors <ul style="list-style-type: none"> 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 	7.5 hp 10 hp 20 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 15 hp
- at 460/480 V at inside-delta circuit at 50 °C rated value 30 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



[Type Test Certificates/Test Report](#)



Marine / Shipping

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=3RW5216-1TC04>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5216-1TC04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5216-1TC04>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5216-1TC04&lang=en

Characteristic: Tripping characteristics, I^t, Let-through current

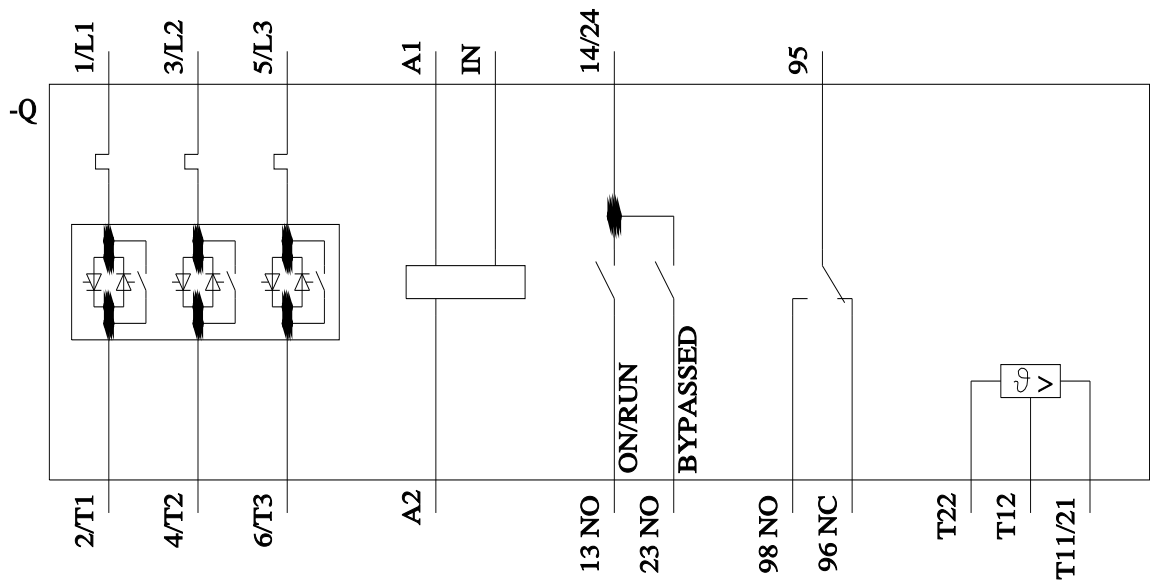
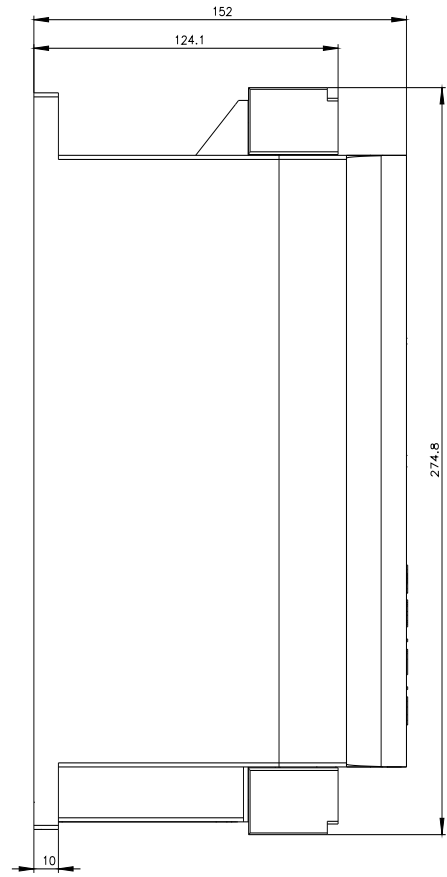
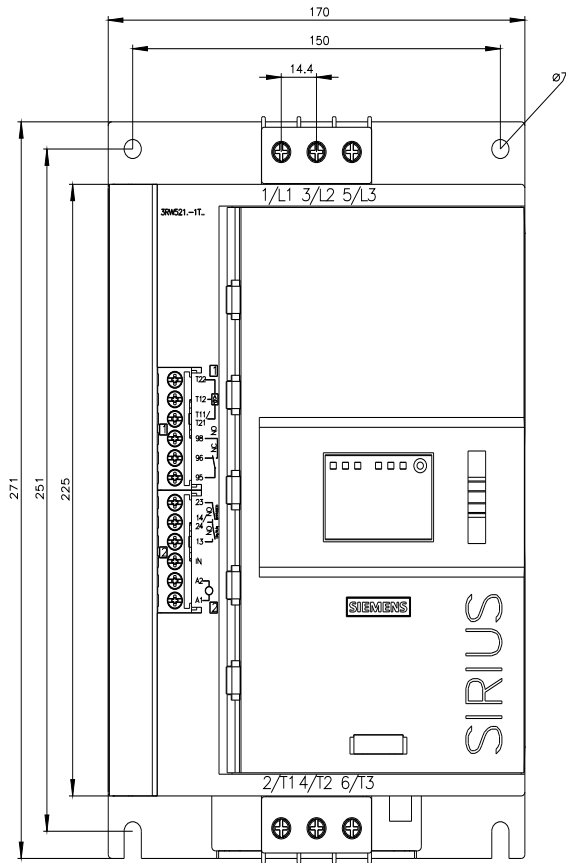
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5216-1TC04/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5216-1TC04&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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



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