

SIRIUS soft starter 200-480 V 38 A, 24 V AC/DC spring-type terminals Thermistor input



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 HMI module usable 3RW5980-0HS00 • of HMI-Modul high-feature 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 3RV2032-4WA10; Type of coordination 1, Iq = 65 kA, CLASS 10 • of circuit breaker usable at 500 V 3RV2032-4WA10; Type of coordination 1, Iq = 10 kA, CLASS 10 • of circuit breaker usable at 400 V at inside-delta circuit 3RV2032-4RA10; Type of coordination 1, Iq = 65 kA, CLASS 10 • of circuit breaker usable at 500 V at inside-delta circuit 3RV2032-4RA10; Type of coordination 1, Iq = 10 kA, CLASS 10 	

- 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

[3NA3824-6; Type of coordination 1, Iq = 65 kA](#)

[3NA3824-6; Type of coordination 1, Iq = 65 kA](#)

[3NE1820-0; 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 ... 50 %
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	
• 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	
• 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 safe isolation	
• between main and auxiliary circuit	600 V
protection class IP	IP00
usage category acc. to IEC 60947-4-2	AC 53a
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
reference code acc. to DIN EN 81346-2	Q
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
• PROFINergy	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

operating current	
• at 40 °C rated value	38 A
• at 50 °C rated value	33.5 A
• at 60 °C rated value	30.5 A
operating current at inside-delta circuit	
• at 40 °C rated value	65.8 A
• at 50 °C rated value	58 A
• at 60 °C rated value	52.8 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 three-phase motors	
• at 230 V at 40 °C rated value	11 kW

<ul style="list-style-type: none"> • at 230 V at inside-delta circuit at 40 °C rated value 	18.5 kW
<ul style="list-style-type: none"> • at 400 V at 40 °C rated value 	18.5 kW
<ul style="list-style-type: none"> • at 400 V at inside-delta circuit at 40 °C rated value 	30 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	
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 1 	15.5 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 2 	17 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 3 	18.5 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 4 	20 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 5 	21.5 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 6 	23 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 7 	24.5 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 8 	26 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 9 	27.5 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 10 	29 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 11 	30.5 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 12 	32 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 13 	33.5 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 14 	35 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 15 	36.5 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 16 	38 A
<ul style="list-style-type: none"> • minimum 	15.5 A
adjustable motor current	
<ul style="list-style-type: none"> • for inside-delta circuit at rotary encoding switch on switch position 1 	26.8 A
<ul style="list-style-type: none"> • for inside-delta circuit at rotary encoding switch on switch position 2 	29.4 A
<ul style="list-style-type: none"> • for inside-delta circuit at rotary encoding switch on switch position 3 	32 A
<ul style="list-style-type: none"> • for inside-delta circuit at rotary encoding switch on switch position 4 	34.6 A
<ul style="list-style-type: none"> • for inside-delta circuit at rotary encoding switch on switch position 5 	37.2 A
<ul style="list-style-type: none"> • for inside-delta circuit at rotary encoding switch on switch position 6 	39.8 A
<ul style="list-style-type: none"> • for inside-delta circuit at rotary encoding switch on switch position 7 	42.4 A

• for inside-delta circuit at rotary encoding switch on switch position 8	45 A
• for inside-delta circuit at rotary encoding switch on switch position 9	47.6 A
• for inside-delta circuit at rotary encoding switch on switch position 10	50.2 A
• for inside-delta circuit at rotary encoding switch on switch position 11	52.8 A
• for inside-delta circuit at rotary encoding switch on switch position 12	55.4 A
• for inside-delta circuit at rotary encoding switch on switch position 13	58 A
• for inside-delta circuit at rotary encoding switch on switch position 14	60.6 A
• for inside-delta circuit at rotary encoding switch on switch position 15	63.2 A
• for inside-delta circuit at rotary encoding switch on switch position 16	65.8 A
• at inside-delta circuit minimum	26.8 A
minimum load [%]	15 %; Relative to smallest settable le
power loss [W] for rated value of the current at AC	
• at 40 °C after startup	23 W
• at 50 °C after startup	22 W
• at 60 °C after startup	21 W
power loss [W] at AC at AC	
• at 40 °C during startup	628 W
• at 50 °C during startup	526 W
• at 60 °C during startup	464 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 the by-pass mode operating rated value	360 mA
starting current at close of by-pass contact maximum	0.75 A
inrush current peak at connect of control supply voltage maximum	3.3 A
duration of inrush current peak at connect 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 inputs for thermistor connection	1; Type A PTC or Klixon / Thermoclick
• number of digital outputs	3
• number of digital outputs 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
mounting type	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	2.3 kg
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Connections/ Terminals

type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for control circuit 	<p>screw-type terminals</p> <p>spring-loaded terminals</p>
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 	<p>50 m</p> <p>150 m</p> <p>250 m</p>
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing • at AWG conductors for main current circuit solid 	<p>2x (1.0 ... 2.5 mm²), 2x (2.5 ... 10 mm²)</p> <p>2x (1.0 ... 2.5 mm²), 2x (2.5 ... 6.0 mm²)</p> <p>2x (16 ... 12), 2x (14 ... 8)</p>
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 • at AWG conductors for control circuit solid • at AWG conductors for control circuit finely stranded with core end processing 	<p>2x (0.25 ... 1.5 mm²)</p> <p>2x (0.25 ... 1.5 mm²)</p> <p>2x (24 ... 16)</p> <p>2x (24 ... 16)</p>
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 	<p>800 m</p> <p>100 m</p> <p>1 000 m</p>
tightening torque	
<ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals 	<p>2 ... 2.5 N·m</p> <p>0.8 ... 1.2 N·m</p>
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 	<p>18 ... 22 lbf·in</p> <p>7 ... 10.3 lbf·in</p>

Ambient conditions

installation altitude at height above sea level	
<ul style="list-style-type: none"> • maximum 	5 000 m; Derating as of 1000 m, see catalog
ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above

<ul style="list-style-type: none"> during storage and transport 	-40 ... +80 °C
environmental category <ul style="list-style-type: none"> during operation acc. to IEC 60721 during storage acc. to IEC 60721 during transport acc. 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)
EMC emitted interference	acc. to IEC 60947-4-2: Class A

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
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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. 125 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. 125 A; Iq = 5 kA Siemens type: 3VA51, max. 60 A; Iq max = 65 kA Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 5 kA Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 5 kA Type: Class RK5 / K5, max. 150 A; Iq = 5 kA Type: Class J / L, max. 150 A; Iq = 100 kA Type: Class RK5 / K5, max. 150 A; Iq = 5 kA Type: Class J / L, max. 150 A; Iq = 100 kA
operating power [hp] for three-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 	10 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 20 hp
- at 460/480 V at inside-delta circuit at 50 °C rated value 40 hp

contact rating of auxiliary contacts according to UL R300-B300

Safety related data

electromagnetic compatibility in accordance with IEC 60947-4-2

Certificates/ approvals

General Product Approval

EMC

Declaration of Conformity



Declaration of Conformity

Test Certificates

Marine / Shipping

[Miscellaneous](#)

[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=3RW5217-3TC04>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5217-3TC04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5217-3TC04>

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

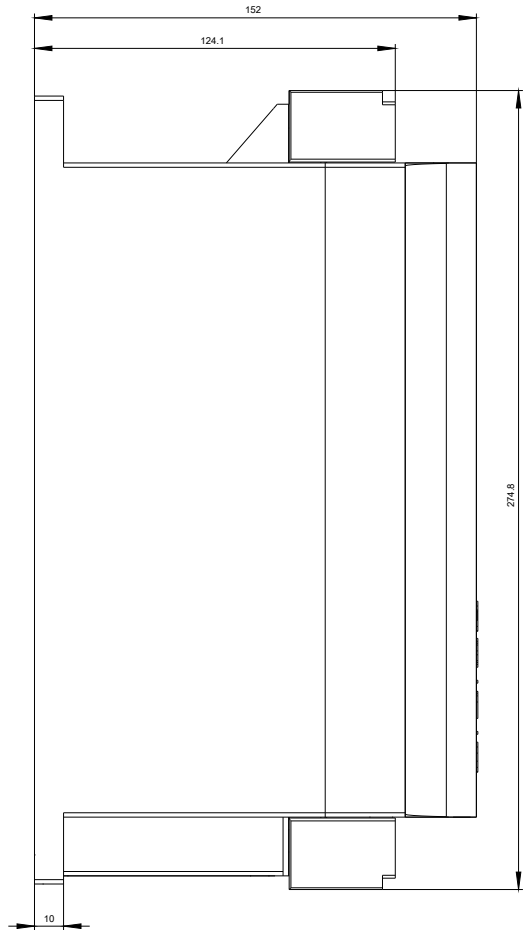
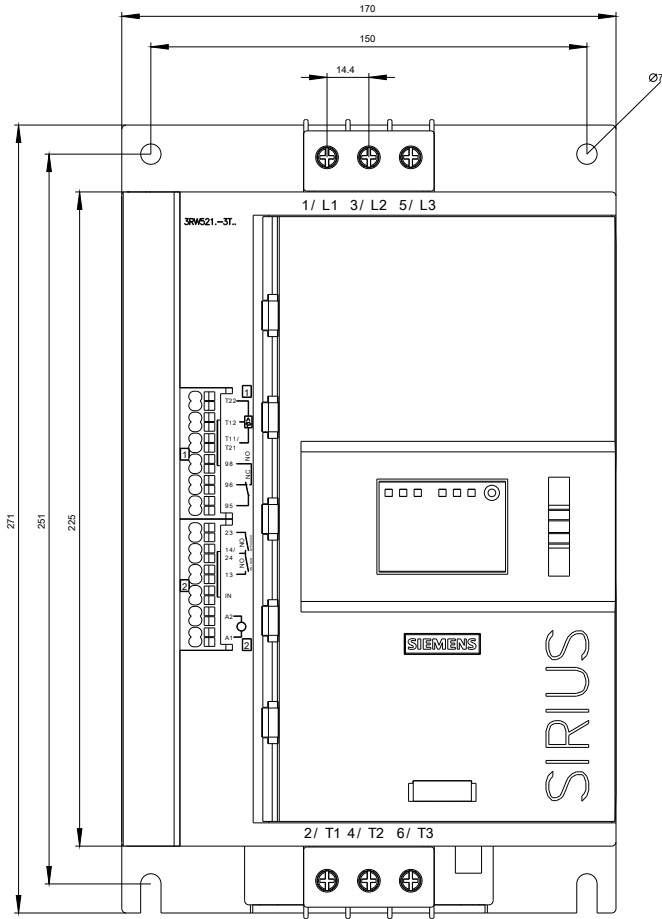
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5217-3TC04&lang=en

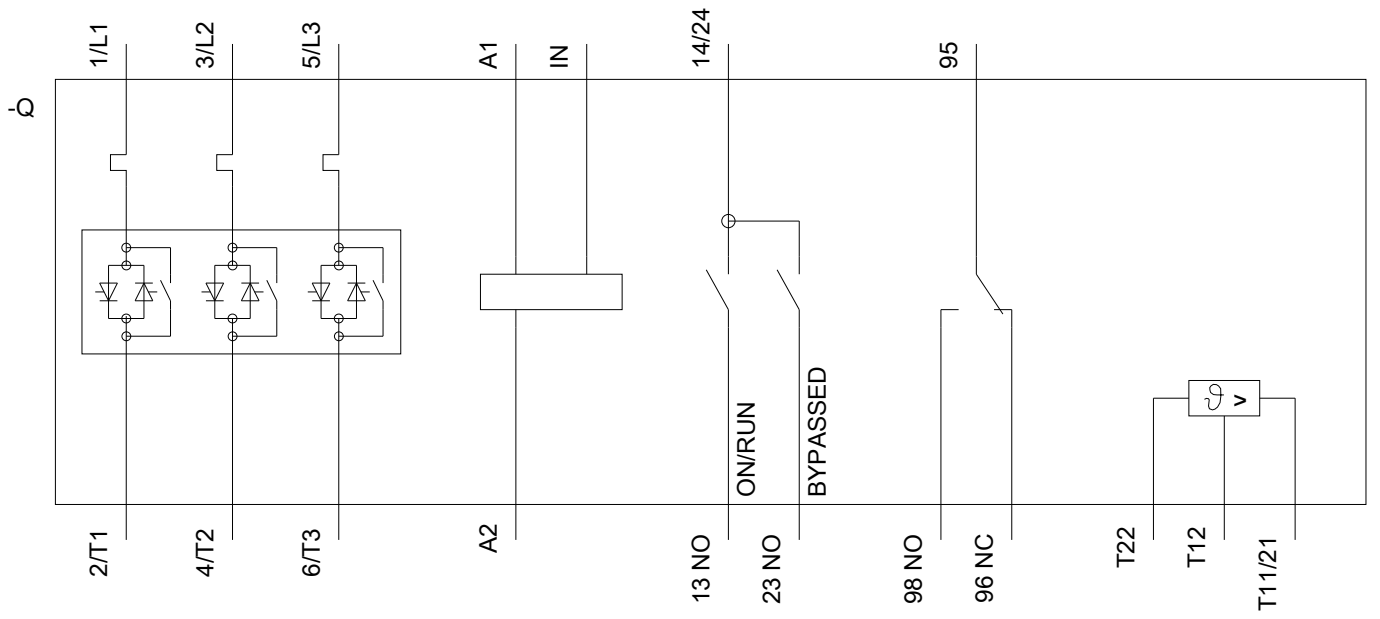
Characteristic: Tripping characteristics, I^{Δt}, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5217-3TC04/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5217-3TC04&objecttype=14&gridview=view1>





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