



SIRIUS soft starter 200-480 V 370 A, 110-250 V AC spring-type terminals
Analog output

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](#)

[3VA2440-7MN32-0AA0](#); Type of coordination 1, I_q = 65 kA, CLASS 10

[3VA2440-7MN32-0AA0](#); Type of coordination 1, I_q = 65 kA, CLASS 10

[3VA2580-6HN32-0AA0](#); Type of coordination 1, I_q = 65 kA, CLASS 10

[3VA2580-6HN32-0AA0](#); Type of coordination 1, I_q = 65 kA, CLASS 10

2x3NA3365-6; Type of coordination 1, I_q = 65 kA

2x3NA3365-6; Type of coordination 1, I_q = 65 kA

[3NE1334-2](#); Type of coordination 2, I_q = 65 kA

[3NE3336](#); Type of coordination 2, I_q = 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

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) 	Yes
<ul style="list-style-type: none"> • ramp-down (soft stop) 	Yes
<ul style="list-style-type: none"> • Soft Torque 	Yes
<ul style="list-style-type: none"> • adjustable current limitation 	Yes
<ul style="list-style-type: none"> • pump ramp down 	Yes
<ul style="list-style-type: none"> • intrinsic device protection 	Yes
<ul style="list-style-type: none"> • motor overload protection 	Yes; Electronic motor overload protection
<ul style="list-style-type: none"> • evaluation of thermistor motor protection 	No
<ul style="list-style-type: none"> • inside-delta circuit 	Yes
<ul style="list-style-type: none"> • auto-RESET 	Yes
<ul style="list-style-type: none"> • manual RESET 	Yes
<ul style="list-style-type: none"> • remote reset 	Yes; By turning off the control supply voltage
<ul style="list-style-type: none"> • communication function 	Yes
<ul style="list-style-type: none"> • operating measured value display 	Yes; Only in conjunction with special accessories
<ul style="list-style-type: none"> • error logbook 	Yes; Only in conjunction with special accessories
<ul style="list-style-type: none"> • via software parameterizable 	No
<ul style="list-style-type: none"> • via software configurable 	Yes
<ul style="list-style-type: none"> • PROFenergy 	Yes; in connection with the PROFINET Standard communication module
<ul style="list-style-type: none"> • firmware update 	Yes
<ul style="list-style-type: none"> • removable terminal for control circuit 	Yes
<ul style="list-style-type: none"> • torque control 	No
<ul style="list-style-type: none"> • analog output 	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 	370 A
<ul style="list-style-type: none"> • at 50 °C rated value 	328 A
<ul style="list-style-type: none"> • at 60 °C rated value 	300 A
operational current at inside-delta circuit	
<ul style="list-style-type: none"> • at 40 °C rated value 	641 A
<ul style="list-style-type: none"> • at 50 °C rated value 	568 A
<ul style="list-style-type: none"> • at 60 °C rated value 	519 A
operating voltage	
<ul style="list-style-type: none"> • rated value 	200 ... 480 V
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • at 230 V at 40 °C rated value 	110 kW
<ul style="list-style-type: none"> • at 230 V at inside-delta circuit at 40 °C rated value 	200 kW
<ul style="list-style-type: none"> • at 400 V at 40 °C rated value 	200 kW
<ul style="list-style-type: none"> • at 400 V at inside-delta circuit at 40 °C rated value 	355 kW
Operating frequency 1 rated value	50 Hz

Operating frequency 2 rated value
relative negative tolerance of the operating frequency
relative positive tolerance of the operating frequency
adjustable motor current

- at rotary coding switch on switch position 1 160 A
- at rotary coding switch on switch position 2 174 A
- at rotary coding switch on switch position 3 188 A
- at rotary coding switch on switch position 4 202 A
- at rotary coding switch on switch position 5 216 A
- at rotary coding switch on switch position 6 230 A
- at rotary coding switch on switch position 7 244 A
- at rotary coding switch on switch position 8 258 A
- at rotary coding switch on switch position 9 272 A
- at rotary coding switch on switch position 10 286 A
- at rotary coding switch on switch position 11 300 A
- at rotary coding switch on switch position 12 314 A
- at rotary coding switch on switch position 13 328 A
- at rotary coding switch on switch position 14 342 A
- at rotary coding switch on switch position 15 356 A
- at rotary coding switch on switch position 16 370 A
- minimum 160 A

adjustable motor current

- for inside-delta circuit at rotary coding switch on switch position 1 277 A
- for inside-delta circuit at rotary coding switch on switch position 2 301 A
- for inside-delta circuit at rotary coding switch on switch position 3 326 A
- for inside-delta circuit at rotary coding switch on switch position 4 350 A
- for inside-delta circuit at rotary coding switch on switch position 5 374 A
- for inside-delta circuit at rotary coding switch on switch position 6 398 A
- for inside-delta circuit at rotary coding switch on switch position 7 423 A
- for inside-delta circuit at rotary coding switch on switch position 8 447 A
- for inside-delta circuit at rotary coding switch on switch position 9 471 A
- for inside-delta circuit at rotary coding switch on switch position 10 495 A
- for inside-delta circuit at rotary coding switch on switch position 11 520 A
- for inside-delta circuit at rotary coding switch on switch position 12 544 A
- for inside-delta circuit at rotary coding switch on switch position 13 568 A
- for inside-delta circuit at rotary coding switch on switch position 14 592 A
- for inside-delta circuit at rotary coding switch on switch position 15 617 A
- for inside-delta circuit at rotary coding switch on switch position 16 641 A
- at inside-delta circuit minimum 277 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 123 W
- at 50 °C after startup 110 W
- at 60 °C after startup 102 W

power loss [W] at AC at current limitation 350 %

- at 40 °C during startup 5 575 W
- at 50 °C during startup 4 706 W
- at 60 °C during startup 4 157 W

Control circuit/ Control

type of voltage of the control supply voltage
control supply voltage at AC

AC

<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	110 ... 250 V
relative negative tolerance of the control supply voltage at AC at 50 Hz	110 ... 250 V
relative positive tolerance of the control supply voltage at AC at 50 Hz	-15 %
relative negative tolerance of the control supply voltage at AC at 60 Hz	10 %
relative positive tolerance of the control supply voltage at AC at 60 Hz	-15 %
control supply voltage frequency	10 %
relative negative tolerance of the control supply voltage frequency	50 ... 60 Hz
relative positive tolerance of the control supply voltage frequency	-10 %
control supply current in standby mode rated value	10 %
holding current in bypass operation rated value	30 mA
inrush current peak at application of control supply voltage maximum	100 mA
duration of inrush current peak at application of control supply voltage	12.2 A
design of the overvoltage protection	2.2 ms
design of short-circuit protection for control circuit	Varistor
	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
<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	1
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	393 mm
width	210 mm
depth	203 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	9.9 kg

Connections/ Terminals

type of electrical connection	busbar connection
<ul style="list-style-type: none"> • for main current circuit • for control circuit 	spring-loaded terminals
width of connection bar maximum	45 mm
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded 	2x (50 ... 240 mm²)
	2x (70 ... 240 mm²)
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 cables for control circuit solid • at AWG cables for control circuit finely stranded with core end processing 	2x (0.25 ... 1.5 mm²)
	2x (0.25 ... 1.5 mm²)
	2x (24 ... 16)
	2x (24 ... 16)
wire length	
<ul style="list-style-type: none"> • between soft starter and motor maximum • at the digital inputs at AC maximum 	800 m
	100 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 	14 ... 24 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 	124 ... 210 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 	-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 according to IEC 60721 	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6		
<ul style="list-style-type: none"> • during storage according to IEC 60721 	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4		
<ul style="list-style-type: none"> • during transport according 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			
<ul style="list-style-type: none"> • PROFINET standard 	Yes		
<ul style="list-style-type: none"> • EtherNet/IP 	Yes		
<ul style="list-style-type: none"> • Modbus RTU 	Yes		
<ul style="list-style-type: none"> • Modbus TCP 	Yes		
<ul style="list-style-type: none"> • PROFIBUS 	Yes		
UL/CSA ratings			
manufacturer's article number			
<ul style="list-style-type: none"> • 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 	Type: Class J / L, max. 1200 A; Iq = 18 kA Type: Class J / L, max. 1200 A; Iq = 100 kA Type: Class J / L, max. 1200 A; Iq = 18 kA Type: Class J / L, max. 1200 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 	100 hp		
<ul style="list-style-type: none"> • at 220/230 V at 50 °C rated value 	125 hp		
<ul style="list-style-type: none"> • at 460/480 V at 50 °C rated value 	250 hp		
<ul style="list-style-type: none"> • at 200/208 V at inside-delta circuit at 50 °C rated value 	200 hp		
<ul style="list-style-type: none"> • at 220/230 V at inside-delta circuit at 50 °C rated value 	200 hp		
<ul style="list-style-type: none"> • at 460/480 V at inside-delta circuit at 50 °C rated value 	450 hp		
contact rating of auxiliary contacts according to UL	R300-B300		
Safety related data			
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		
electromagnetic compatibility	in accordance with IEC 60947-4-2		
Certificates/ approvals			
<table> <tr> <td>General Product Approval</td><td>EMC</td></tr> </table>		General Product Approval	EMC
General Product Approval	EMC		



[Confirmation](#)





[Type Test Certificates/Test Report](#)



[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=3RW5246-2AC14>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5246-2AC14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-2AC14>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5246-2AC14&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

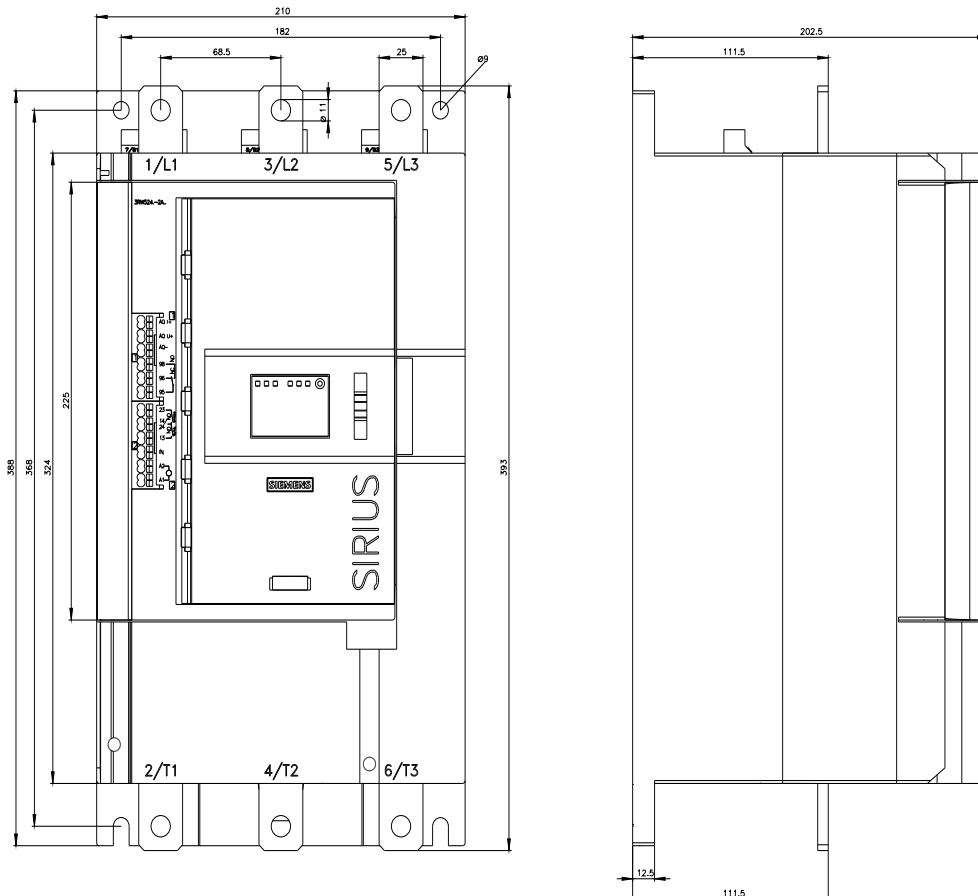
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-2AC14/char>

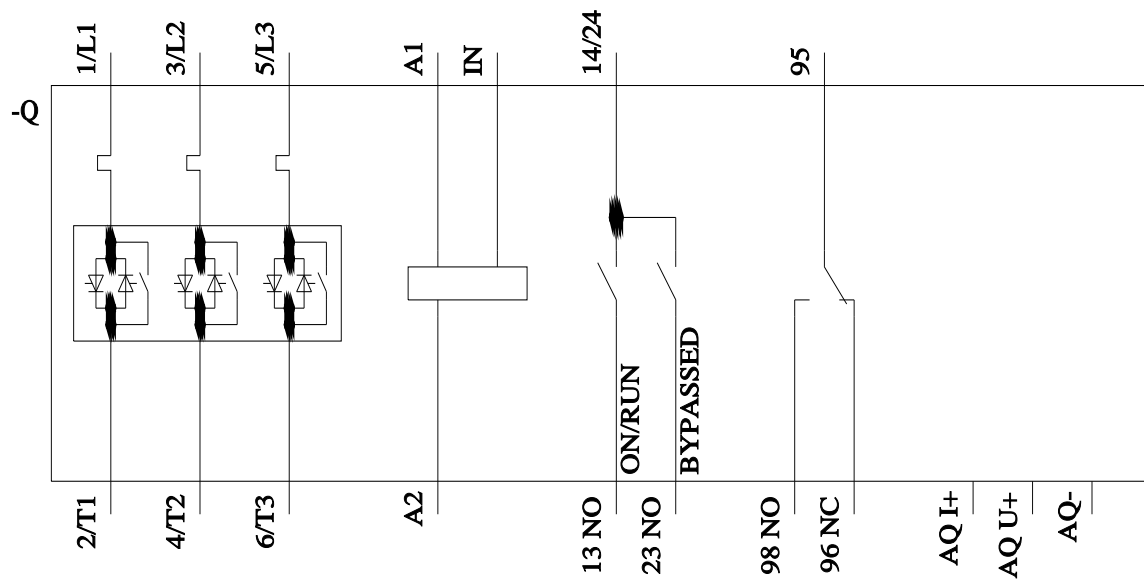
Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5246-2AC14&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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





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