

SIRIUS soft starter 200-600 V 370 A, 110-250 V AC 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 • of HMI-Modul high-feature 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 	<ul style="list-style-type: none"> 3RW5980-0HS00 3RW5980-0HF00 3RW5980-0CS00 3RW5980-0CP00 3RW5980-0CT00 3RW5980-0CR00 3RW5980-0CE00 3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10 3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10 3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10 3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 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

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 ... 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
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
• PROFINET	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	370 A
• at 50 °C rated value	328 A
• at 60 °C rated value	300 A
Operating current at inside-delta circuit	
• at 40 °C rated value	641 A
• at 50 °C rated value	568 A
• at 60 °C rated value	519 A
Operating voltage	
• rated value	200 ... 600 V
• at inside-delta circuit rated value	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 three-phase motors	
• at 230 V at 40 °C rated value	110 kW
• at 230 V at inside-delta circuit at 40 °C rated value	200 kW
• 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
<ul style="list-style-type: none"> • at 500 V at 40 °C rated value 	250 kW
<ul style="list-style-type: none"> • at 500 V at inside-delta circuit at 40 °C rated value 	450 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 	160 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 3 	188 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 4 	202 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 5 	216 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 6 	230 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 7 	244 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 8 	258 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 9 	272 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 10 	286 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 11 	300 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 12 	314 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 13 	328 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 14 	342 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 15 	356 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 16 	370 A
<ul style="list-style-type: none"> • minimum 	160 A
<ul style="list-style-type: none"> • at inside-delta circuit minimum 	277 A
Adjustable motor current for inside-delta circuit	
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 1 	277 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 2 	301 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 3 	326 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 4 	350 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 5 	374 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 6 	398 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 7 	423 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 8 	447 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 9 	471 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 10 	495 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 11 	520 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 12 	544 A
<ul style="list-style-type: none"> • at rotary encoding switch on switch position 13 	568 A

<ul style="list-style-type: none"> • at rotary encoding switch on switch position 14 • at rotary encoding switch on switch position 15 • at rotary encoding switch on switch position 16 	592 A 617 A 641 A
Minimum load [%]	15 %; Relative to smallest settable Ie
Power loss [W] for rated value of the current at AC	
<ul style="list-style-type: none"> • at 40 °C to power-up • at 50 °C to power-up • at 60 °C to power-up 	123 W 110 W 102 W
Power loss [W] at AC at AC	
<ul style="list-style-type: none"> • at 40 °C during startup • at 50 °C during startup • at 60 °C during startup 	5 575 W 4 706 W 4 157 W

Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	110 ... 250 V 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 the by-pass mode operating rated value	100 mA
Starting current at close of by-pass contact maximum	2.2 A
Inrush current peak at connect of control supply voltage maximum	12.2 A
Duration of inrush current peak at connect 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	1; Type A PTC or Klixon / Thermoclick
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 	3 A
<ul style="list-style-type: none"> 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	393 mm
Width	210 mm
Depth	203 mm
Required spacing with side-by-side mounting	
<ul style="list-style-type: none"> forwards 	10 mm
<ul style="list-style-type: none"> Backwards 	0 mm
<ul style="list-style-type: none"> upwards 	100 mm
<ul style="list-style-type: none"> downwards 	75 mm
<ul style="list-style-type: none"> at the side 	5 mm
Installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog
Weight without packaging	9.9 kg

Connections/ Terminals

Type of electrical connection	
<ul style="list-style-type: none"> for main current circuit 	busbar connection
<ul style="list-style-type: none"> 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 	2x (50 ... 240 mm ²)
<ul style="list-style-type: none"> for DIN cable lug for main contacts finely stranded 	2x (70 ... 240 mm ²)
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for control circuit solid 	2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> for control circuit finely stranded with core end processing 	2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> at AWG conductors for control circuit solid 	2x (24 ... 16)
<ul style="list-style-type: none"> at AWG conductors for control circuit finely stranded with core end processing 	2x (24 ... 16)
Wire length	
<ul style="list-style-type: none"> between soft starter and motor maximum 	800 m

<ul style="list-style-type: none"> • at the digital inputs at AC maximum 	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

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 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 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 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 	100 hp 125 hp

- at 460/480 V at 50 °C rated value 250 hp
- at 575/600 V at 50 °C rated value 300 hp
- at 200/208 V at inside-delta circuit at 50 °C rated value 200 hp
- at 220/230 V at inside-delta circuit at 50 °C rated value 200 hp
- at 460/480 V at inside-delta circuit at 50 °C rated value 450 hp
- at 575/600 V at inside-delta circuit at 50 °C rated value 600 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



CCC



CSA



UL



RCM



EG-Konf.

Declaration of Conformity

[Miscellaneous](#)

Test Certificates

[Type Test Certificates/Test Report](#)

Marine / Shipping



ABS



LRS



PRS



DNVGL.COM/AF

other

[Confirmation](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

www.siemens.com/ic10

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5246-2TC15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5246-2TC15>

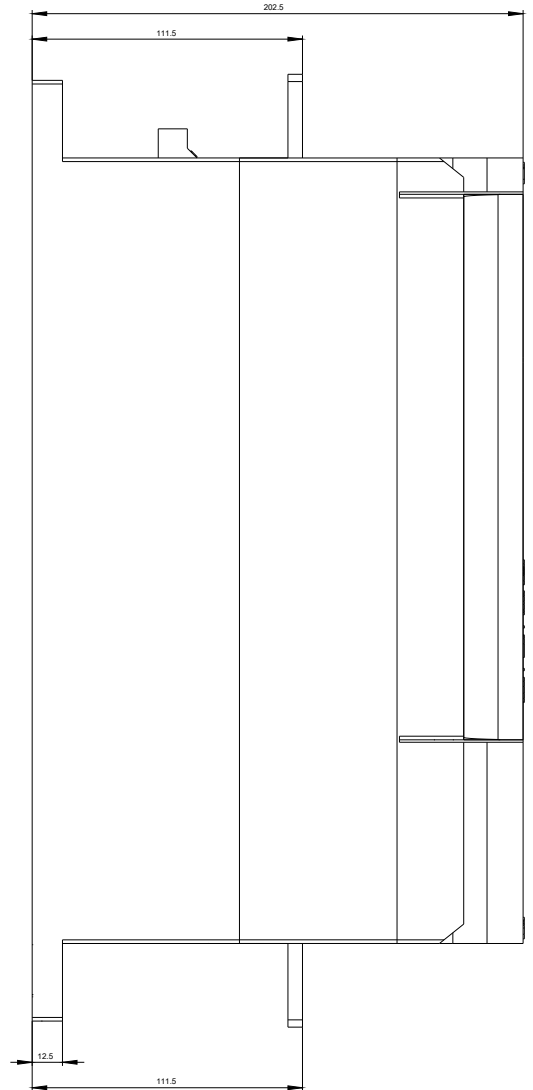
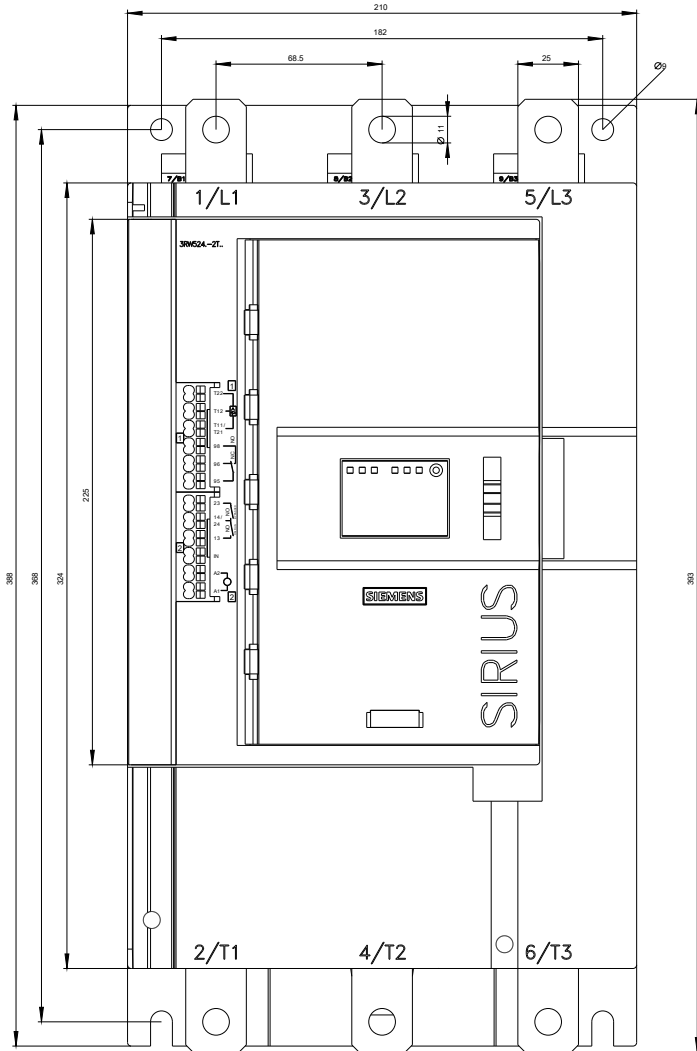
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

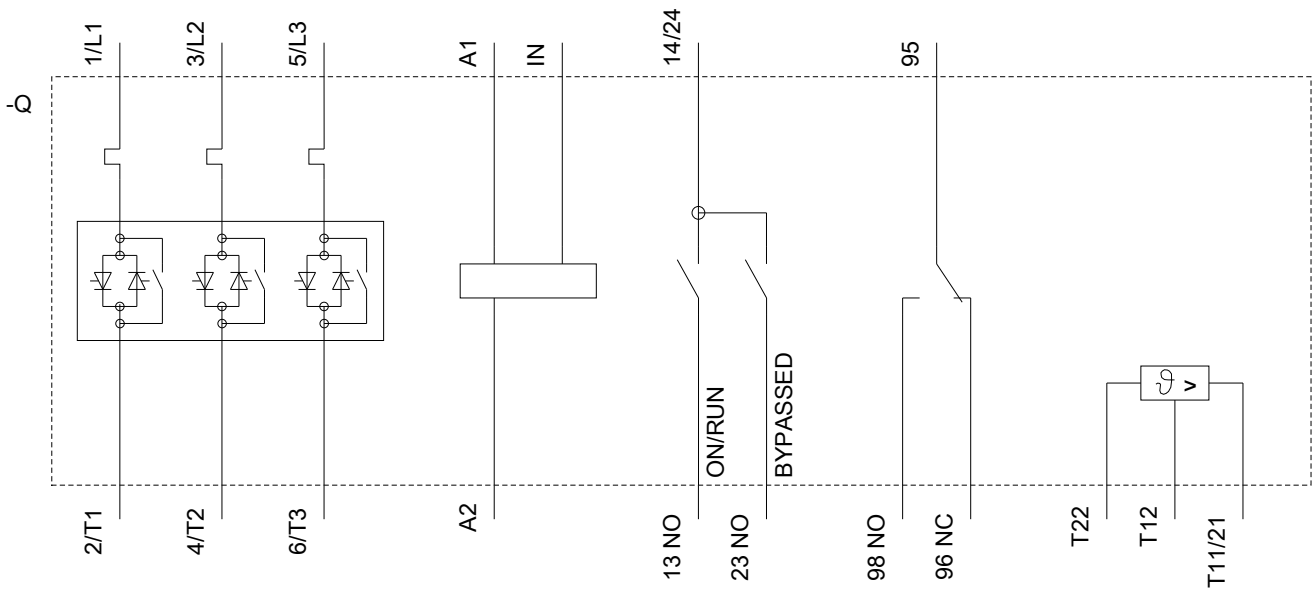
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-2TC15>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5246-2TC15&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-2TC15/char>

Characteristic: Installation altitude
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5246-2TC15&objecttype=14&gridview=view1>





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