



SIRIUS soft starter 200-480 V 18 A, 110-250 V AC Screw terminals

product brand name
product category
product designation
product type designation
manufacturer's article number

- of high feature HMI module usable
- of communication module PROFINET standard usable
- of communication module PROFINET high-feature 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
 3RW55

[3RW5980-0HF00](#)

[3RW5980-0CS00](#)

[3RW5950-0CH00](#)

[3RW5980-0CP00](#)

[3RW5980-0CT00](#)

[3RW5980-0CR00](#)

[3RW5980-0CE00](#)

[3RV2032-4DA10](#); Type of coordination 1, I_q = 65 kA, CLASS 10

[3RV2032-4DA10](#); Type of coordination 1, I_q = 15 kA, CLASS 10

[3RV2032-4EA10](#); Type of coordination 1, I_q = 65 kA, CLASS 10

[3RV2032-4EA10](#); Type of coordination 1, I_q = 15 kA, CLASS 10

[3NA3820-6](#); Type of coordination 1, I_q = 65 kA

[3NA3820-6](#); Type of coordination 1, I_q = 65 kA

[3NE1802-0](#); Type of coordination 2, I_q = 65 kA

[3NE8020-1](#); Type of coordination 2, I_q = 65 kA

General technical data

starting voltage [%]	20 ... 100 %
stopping voltage [%]	50 %; non-adjustable
start-up ramp time of soft starter	0 ... 360 s
ramp-down time of soft starter	0 ... 360 s
start torque [%]	10 ... 100 %
stopping torque [%]	10 ... 100 %
torque limitation [%]	20 ... 200 %
current limiting value [%] adjustable	125 ... 800 %
breakaway voltage [%] adjustable	40 ... 100 %
breakaway time adjustable	0 ... 2 s
number of parameter sets	3
accuracy class according to IEC 61557-12	5 %
certificate of suitability	
• CE marking	Yes
• UL approval	Yes

• condition monitoring	Yes
• automatic parameterisation	Yes
• application wizards	Yes
• alternative run-down	Yes
• emergency operation mode	Yes
• reversing operation	Yes
• soft starting at heavy starting conditions	Yes

Power Electronics

operational current	
• at 40 °C rated value	18 A
• at 40 °C rated value minimum	3.5 A
• at 50 °C rated value	15.9 A
• at 60 °C rated value	13.8 A
operational current at inside-delta circuit	
• at 40 °C rated value	31.5 A
• at 50 °C rated value	28 A
• at 60 °C rated value	23.9 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 3-phase motors	
• at 230 V at 40 °C rated value	4 kW
• at 230 V at inside-delta circuit at 40 °C rated value	7.5 kW
• at 400 V at 40 °C rated value	7.5 kW
• at 400 V at inside-delta circuit at 40 °C rated value	15 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 %
minimum load [%]	10 %; Relative to set le
power loss [W] for rated value of the current at AC	
• at 40 °C after startup	5 W
• at 50 °C after startup	5 W
• at 60 °C after startup	4 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	266 W
• at 50 °C during startup	229 W
• at 60 °C during startup	188 W
type of the motor protection	Electronic, tripping in the event of thermal overload of the motor

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	100 mA
holding current in bypass operation rated value	165 mA

inrush current by closing the bypass contacts maximum	0.2 A
inrush current peak at application of control supply voltage maximum	43 A
duration of inrush current peak at application of control supply voltage	1.6 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	4
• parameterizable	4
• number of digital outputs	4
• number of digital outputs parameterizable	3
• number of digital outputs not parameterizable	1
digital output version	3 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	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)
fastening method	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

Connections/ Terminals

type of electrical connection	
• for main current circuit	screw-type terminals
• for control circuit	screw-type terminals
wire length for thermistor connection	
• with conductor cross-section = 0.5 mm ² maximum	50 m
• with conductor cross-section = 1.5 mm ² maximum	150 m
• with conductor cross-section = 2.5 mm ² maximum	250 m
type of connectable conductor cross-sections	
• 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)
• at AWG cables for main current circuit solid	2x (16 ... 12), 2x (14 ... 8)
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 DC maximum	1 000 m
tightening torque	
• for main contacts with screw-type terminals	2 ... 2.5 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	18 ... 22 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	
<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, Class B on request
Communication/ Protocol	
communication module is supported	
<ul style="list-style-type: none"> PROFINET standard 	Yes
<ul style="list-style-type: none"> PROFINET high-feature 	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 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 High Faults at 575/600 V at inside-delta circuit according to UL — usable for Standard Faults at 575/600 V at inside-delta circuit according to UL 	Siemens type: 3RV2742, max. 60 A or 3VA51, max. 60 A; Iq = 5 kA
	Siemens type: 3RV2742, max. 30 A or 3VA51, max. 35 A; Iq max = 65 kA
	Siemens type: 3RV2742, max. 60 A or 3VA51, max. 60 A; Iq = 5 kA
	Siemens type: 3VA51, max. 35 A; Iq max = 65 kA
	Siemens type: 3RV2742, max. 60 A or 3VA51, max. 60 A; Iq = 5 kA
	Siemens type: 3VA51, max. 35 A; Iq max = 65 kA
	Siemens type: 3RV2742, max. 60 A or 3VA51, max. 60 A; Iq = 5 kA
<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 RK5 / K5, max. 70 A; Iq = 5 kA
	Type: Class J / L, max. 70 A; Iq = 100 kA
	Type: Class RK5 / K5, max. 70 A; Iq = 5 kA
	Type: Class J / L, max. 70 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 	3 hp
<ul style="list-style-type: none"> at 220/230 V at 50 °C rated value 	5 hp
<ul style="list-style-type: none"> at 460/480 V at 50 °C rated value 	10 hp
<ul style="list-style-type: none"> at 200/208 V at inside-delta circuit at 50 °C rated value 	7.5 hp
<ul style="list-style-type: none"> at 220/230 V at inside-delta circuit at 50 °C rated value 	7.5 hp
<ul style="list-style-type: none"> at 460/480 V at inside-delta circuit at 50 °C rated value 	20 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	acc. to IEC 60947-4-2
ATEX	
certificate of suitability	
<ul style="list-style-type: none"> ATEX 	Yes
<ul style="list-style-type: none"> IECEx 	Yes

- according to ATEX directive 2014/34/EU

type of protection according to ATEX directive 2014/34/EU

hardware fault tolerance according to IEC 61508 relating to ATEX

PFDAvg with low demand rate according to IEC 61508 relating to ATEX

PFHD with high demand rate according to EN 62061 relating to ATEX

Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX

T1 value for proof test interval or service life according to IEC 61508 relating to ATEX

BVS 18 ATEX F 003 X

II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]

0

0.008

5E-7 1/h

SIL1

3 a

Certificates/ approvals

General Product Approval

EMC



[Confirmation](#)



For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping



[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[Confirmation](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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?mfb=3RW5514-1HA14>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RW5514-1HA14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5514-1HA14>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RW5514-1HA14&lang=en

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

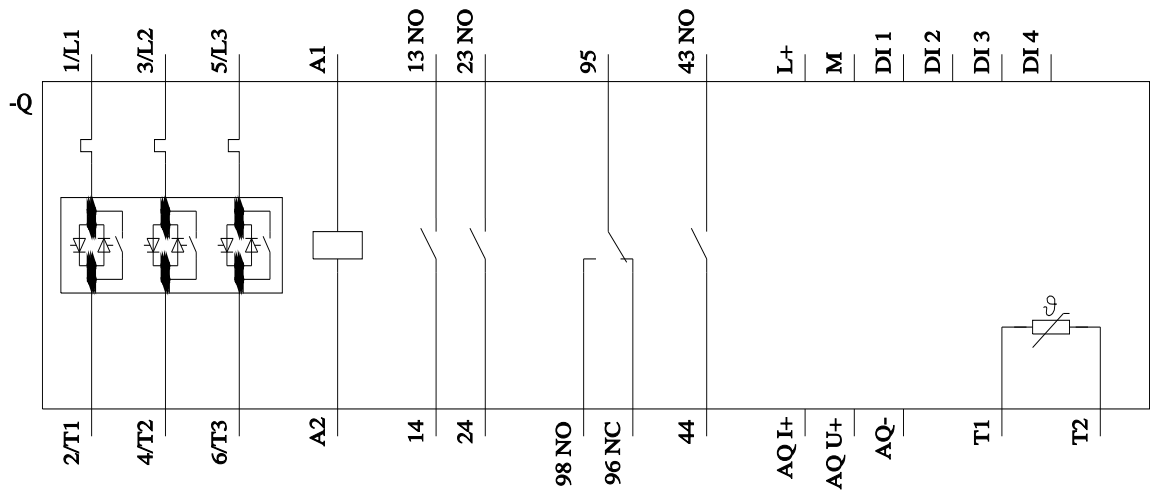
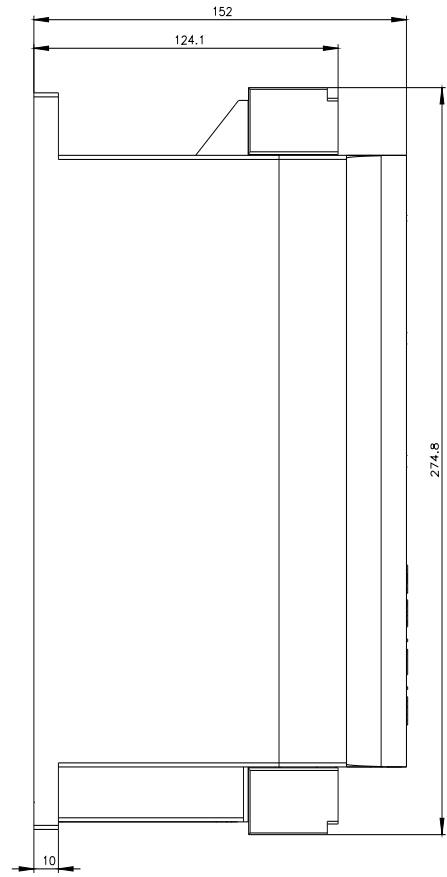
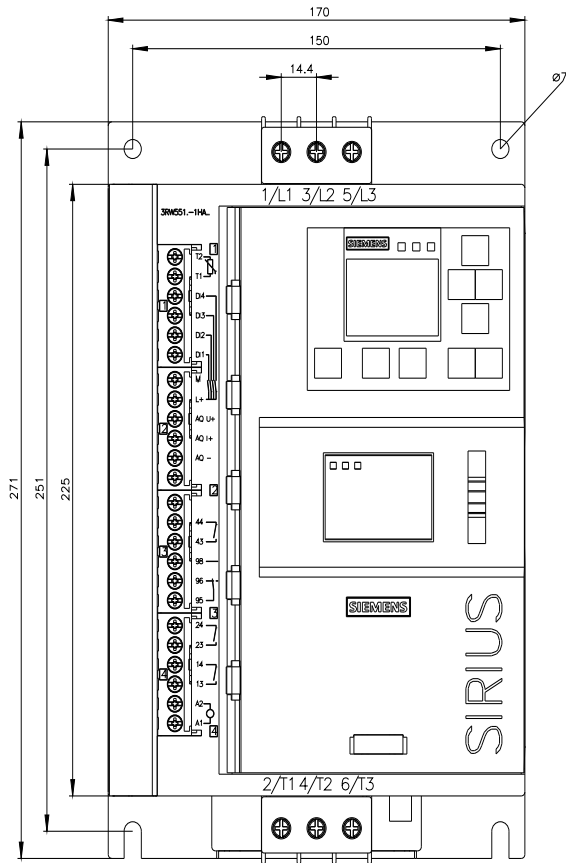
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5514-1HA14/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mfb=3RW5514-1HA14&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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



last modified:

1/13/2023 