



SIRIUS soft starter 200-600 V 32 A, 24 V AC/DC spring-type 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](#)

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

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

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

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

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

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

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

[3NE8022-1](#); 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

certificate of suitability

- CE marking
- UL approval
- CSA approval

Yes

Yes

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	32 A
• at 40 °C rated value minimum	6.5 A
• at 50 °C rated value	28.4 A
• at 60 °C rated value	26 A

operational current at inside-delta circuit

• at 40 °C rated value	55.4 A
• at 50 °C rated value	49 A
• at 60 °C rated value	45 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 3-phase motors

• at 230 V at 40 °C rated value	7.5 kW
• at 230 V at inside-delta circuit at 40 °C rated value	15 kW
• at 400 V at 40 °C rated value	15 kW
• at 400 V at inside-delta circuit at 40 °C rated value	22 kW
• at 500 V at 40 °C rated value	18.5 kW
• at 500 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 %

minimum load [%]

10 %; Relative to set I_e

power loss [W] for rated value of the current at AC

• at 40 °C after startup	10 W
• at 50 °C after startup	9 W
• at 60 °C after startup	8 W

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

• at 40 °C during startup	519 W
• at 50 °C during startup	437 W
• at 60 °C during startup	386 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/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	420 mA
holding current in bypass operation rated value	820 mA
inrush current by closing the bypass contacts maximum	0.91 A
inrush current peak at application of control supply voltage maximum	7.5 A
duration of inrush current peak at application of control supply voltage	20 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	2.6 kg
Connections/ Terminals	
type of electrical connection	
• for main current circuit	screw-type terminals
• for control circuit	spring-loaded terminals
wire length for thermistor connection	
• with conductor cross-section = 0.5 mm² maximum	50 m
• with conductor cross-section = 1.5 mm² maximum	150 m
• with conductor cross-section = 2.5 mm² maximum	250 m
type of connectable conductor cross-sections	
• for main contacts — solid	2x (1.0 ... 2.5 mm²), 2x (2.5 ... 10 mm²)
— finely stranded with core end processing	2x (1.0 ... 2.5 mm²), 2x (2.5 ... 6.0 mm²)
• at AWG cables for main current circuit solid	2x (16 ... 12), 2x (14 ... 8)
type of connectable conductor cross-sections	
• for control circuit solid	2x (0.25 ... 1.5 mm²)
• for control circuit finely stranded with core end processing	2x (0.25 ... 1.5 mm²)
• at AWG cables for control circuit solid	2x (24 ... 16)
• at AWG cables for control circuit finely stranded with core end processing	2x (24 ... 16)
wire length	
• between soft starter and motor maximum	800 m
• at the digital inputs at DC maximum	1 000 m

Ambient conditions	
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog
ambient temperature	
• during operation	-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above
• during storage and transport	-25 ... +80 °C
environmental category	
• 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
• during storage according to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
• 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	
• PROFINET standard	Yes
• PROFINET high-feature	No
• EtherNet/IP	No
• Modbus RTU	No
• Modbus TCP	Yes
• PROFIBUS	Yes
UL/CSA ratings	
manufacturer's article number	
• of circuit breaker	
— usable for Standard Faults at 460/480 V according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 100 A; Iq = 5 kA
— usable for High Faults at 460/480 V according to UL	Siemens type: 3RV2742, max. 40 A or 3VA51, max. 60 A; Iq max = 65 kA
— usable for Standard Faults at 460/480 V at inside-delta circuit according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 100 A; Iq = 5 kA
— usable for High Faults at 460/480 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 60 A; Iq max = 65 kA
— usable for Standard Faults at 575/600 V according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 100 A; Iq = 5 kA
— usable for High Faults at 575/600 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 60 A; Iq max = 65 kA
— usable for Standard Faults at 575/600 V at inside-delta circuit according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 100 A; Iq = 5 kA
• of the fuse	
— usable for Standard Faults up to 575/600 V according to UL	Type: Class RK5 / K5, max. 125 A; Iq = 5 kA
— usable for High Faults up to 575/600 V according to UL	Type: Class J / L, max. 125 A; Iq = 100 kA
— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class RK5 / K5, max. 125 A; Iq = 5 kA
— usable for High Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 125 A; Iq = 100 kA
operating power [hp] for 3-phase motors	
• at 200/208 V at 50 °C rated value	7.5 hp
• at 220/230 V at 50 °C rated value	10 hp
• at 460/480 V at 50 °C rated value	20 hp
• at 575/600 V at 50 °C rated value	25 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
• at 575/600 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	
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

- ATEX
- IECEx
- 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

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

Yes

Yes

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

SIL1

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

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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?mlfb=3RW5516-3HA05>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5516-3HA05>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5516-3HA05>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5516-3HA05&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

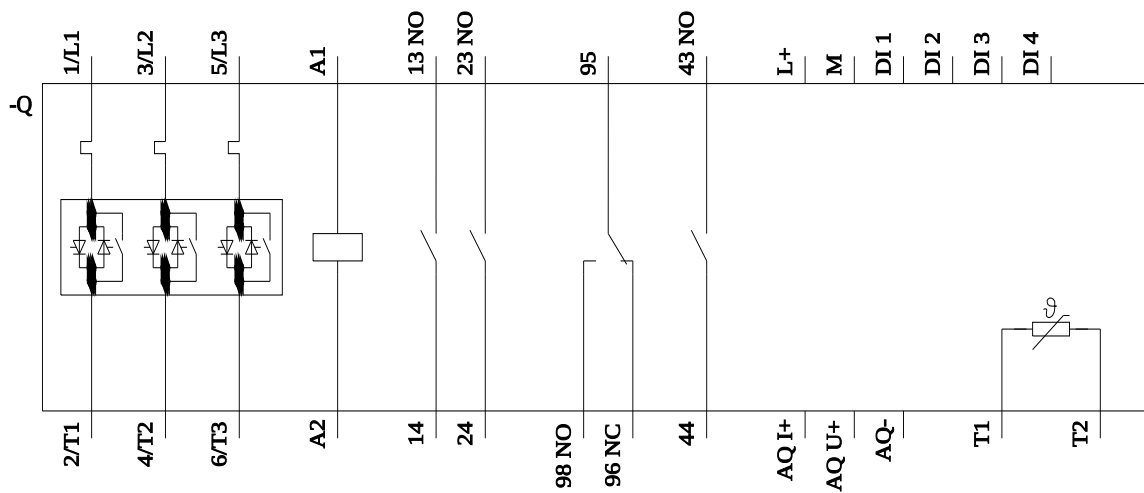
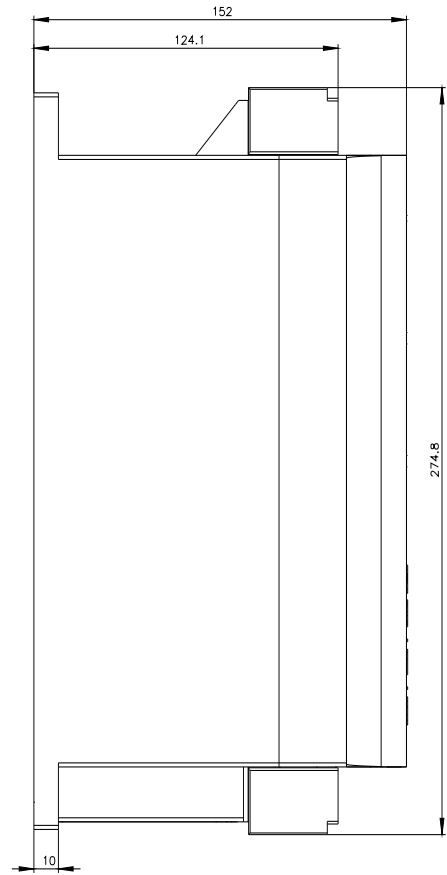
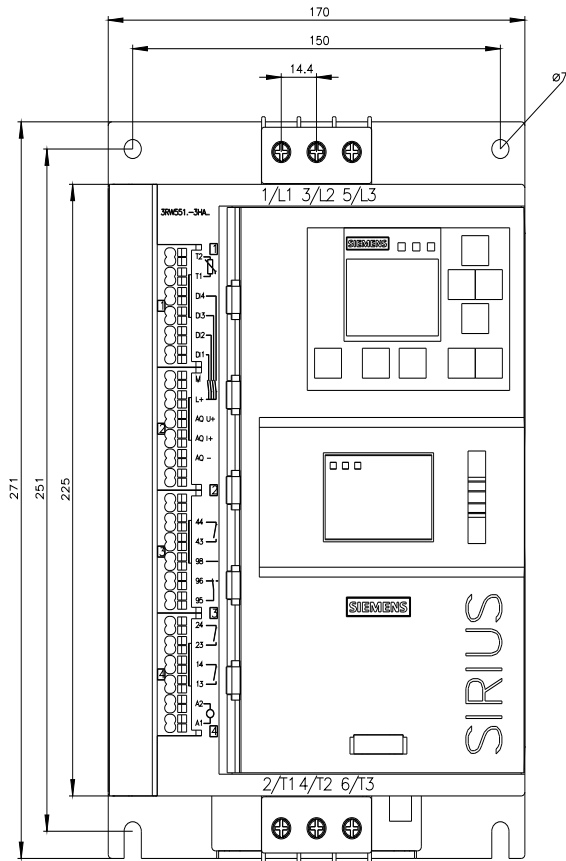
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5516-3HA05/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5516-3HA05&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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



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