



Figure similar

SIRIUS soft starter 200-480 V 570 A, 24 V AC/DC Screw terminals Fail-safe

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

Failsafe soft starters

3RW55

[3RW5980-0HF00](#)

[3RW5980-0CS00](#)

[3RW5950-0CH00](#)

[3RW5980-0CP00](#)

[3RW5980-0CT00](#)

[3RW5980-0CR00](#)

[3RW5980-0CE00](#)

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

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

[3VA2510-6HN32-0AA0](#); Type of coordination 1, Iq = 65 kA, CLASS 10

[3VA2510-6HN32-0AA0](#); Type of coordination 1, Iq = 65 kA, CLASS 10

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

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

[3NE1437-2](#); Type of coordination 2, Iq = 65 kA

[3NC3342-1U](#); Type of coordination 2, Iq = 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 • CSA approval	Yes
product component	Yes
• HMI-High Feature • is supported HMI-High Feature	Yes
product feature integrated bypass contact system	Yes
number of controlled phases	3
trip class	CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2
current unbalance limiting value [%]	10 ... 60 %
ground-fault monitoring limiting value [%]	10 ... 95 %
buffering time in the event of power failure	
• for main current circuit • for control circuit	100 ms
idle time adjustable	100 ms
insulation voltage rated value	0 ... 255 s
degree of pollution	480 V
impulse voltage rated value	3, acc. to IEC 60947-4-2
blocking voltage of the thyristor maximum	6 kV
service factor	1 400 V
surge voltage resistance rated value	1.15
maximum permissible voltage for safe isolation	6 kV
• between main and auxiliary circuit	480 V; does not apply for thermistor connection
shock resistance	15 g / 11 ms, from 6 g / 11 ms with potential contact lifting
vibration resistance	15 mm up to 6 Hz; 2 g up to 500 Hz
recovery time after overload trip adjustable	60 ... 1 800 s
utilization category according to IEC 60947-4-2	AC 53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	11/22/2019
product function	
• ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse • adjustable current limitation • creep speed in both directions of rotation • pump ramp down • DC braking • motor heating • slave pointer function • trace function • intrinsic device protection • motor overload protection	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) / When using the motor overload protection according to ATEX, an upstream contactor is required in inside-delta circuit.
	Yes; Type A PTC or Klixon / Thermoclick
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	No
	Yes; in connection with the PROFINET Standard and PROFINET High-Feature communication modules
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes; 4 ... 20 mA (default) / 0 ... 10 V
• evaluation of thermistor motor protection • inside-delta circuit • auto-RESET • manual RESET • remote reset • communication function • operating measured value display • event list • error logbook • via software parameterizable • via software configurable • screw terminal • spring-loaded terminal • PROFInergy	
• firmware update • removable terminal for control circuit • voltage ramp • torque control • combined braking • analog output	

• programmable control inputs/outputs	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	570 A
• at 40 °C rated value minimum	114 A
• at 50 °C rated value	504 A
• at 60 °C rated value	460 A

operational current at inside-delta circuit

• at 40 °C rated value	987 A
• at 50 °C rated value	873 A
• at 60 °C rated value	796 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	160 kW
• at 230 V at inside-delta circuit at 40 °C rated value	315 kW
• at 400 V at 40 °C rated value	315 kW
• at 400 V at inside-delta circuit at 40 °C rated value	560 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	171 W
• at 50 °C after startup	151 W
• at 60 °C after startup	141 W

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

• at 40 °C during startup	10 229 W
• at 50 °C during startup	8 488 W
• at 60 °C during startup	7 651 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	440 mA
holding current in bypass operation rated value	720 mA
inrush current by closing the bypass contacts maximum	6.7 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 (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	4
• with fail-safe	1
• parameterizable	4
• number of digital outputs	3
• Number of digital outputs with fail-safe	1
• number of digital outputs parameterizable	2
• number of digital outputs not parameterizable	1
digital output version	2 normally-open contacts (NO) / 1 normally-closed contact (NC) / 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

Response times

OFF-delay time with safety-related request when switched off via control inputs maximum	100 ms
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Installation/ mounting/ dimensions

mounting position	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)
fastening method	screw fixing
height	393 mm
width	210 mm
depth	203 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	10.9 kg

Connections/ Terminals

type of electrical connection	busbar connection
• for main current circuit	screw-type terminals
• for control circuit	
width of connection bar maximum	45 mm
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 DIN cable lug for main contacts stranded	2x (50 ... 240 mm²)
• for DIN cable lug for main contacts finely stranded	2x (70 ... 240 mm²)
type of connectable conductor cross-sections	
• for control circuit solid	1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)
• for control circuit finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
• at AWG cables for control circuit solid	1x (20 ... 12), 2x (20 ... 14)
wire length	

• between soft starter and motor maximum • at the digital inputs at DC maximum	800 m 1 000 m
tightening torque • 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] • 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	2 000 m; Derating as of 1000 m, see catalog
ambient temperature • during operation • during storage and transport	-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above -40 ... +80 °C
environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according 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) acc. to IEC 60947-4-2: Class A
EMC emitted interference	
Communication/ Protocol	
communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS	Yes Yes Yes Yes Yes Yes
UL/CSA ratings	
manufacturer's article number • of the fuse — 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. 1600 A; Iq = 30 kA Type: Class J / L, max. 1200 A; Iq = 100 kA Type: Class J / L, max. 1600 A; Iq = 30 kA Type: Class J / L, max. 1200 A; Iq = 100 kA
operating power [hp] for 3-phase motors • 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 • at 200/208 V at inside-delta circuit at 50 °C rated value • at 220/230 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value	150 hp 200 hp 400 hp 300 hp 350 hp 750 hp
contact rating of auxiliary contacts according to UL	R300-B300
Safety related data	
safety device type according to IEC 61508-2	Type B
B10d value	648 000
Safety Integrity Level (SIL)	
• according to IEC 61508	SIL1
SIL Claim Limit (subsystem) according to EN 62061	SIL 1
performance level (PL) according to EN ISO 13849-1	c
category according to EN ISO 13849-1	2
stop category according to EN 60204-1	0
Safe failure fraction (SFF)	60 %
average diagnostic coverage level (DCavg)	90 %
diagnostics test interval by internal test function	1 000 s

maximum

PFHD with high demand rate according to EN 62061

PFDAvg with low demand rate according to IEC 61508**hardware fault tolerance according to IEC 61508**

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

safe state**protection class IP on the front according to IEC 60529****touch protection on the front according to IEC 60529****electromagnetic compatibility**

1E-6 1/h

0.09

0

20 a

Open load circuit

IP00; IP20 with cover

finger-safe, for vertical contact from the front with cover

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****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**

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

0.008

5E-7 1/h

SIL1

3 a

Certificates/ approvals**General Product Approval**[Confirmation](#)

EMC	For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

[Type Test Certificates/Test Report](#)

Marine / Shipping	other
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[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?mlfb=3RW5548-6HF04>**Cax online generator**<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5548-6HF04>**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**<https://support.industry.siemens.com/cs/ww/en/ps/3RW5548-6HF04>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5548-6HF04&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current

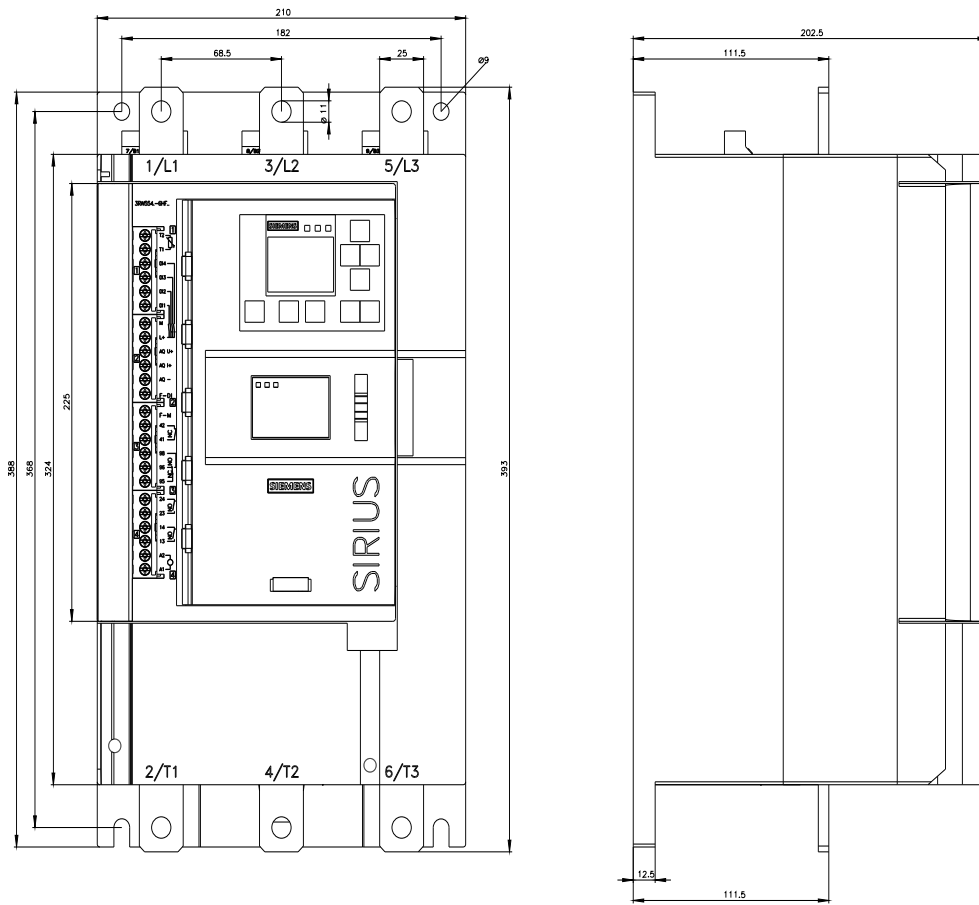
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5548-6HF04/char>

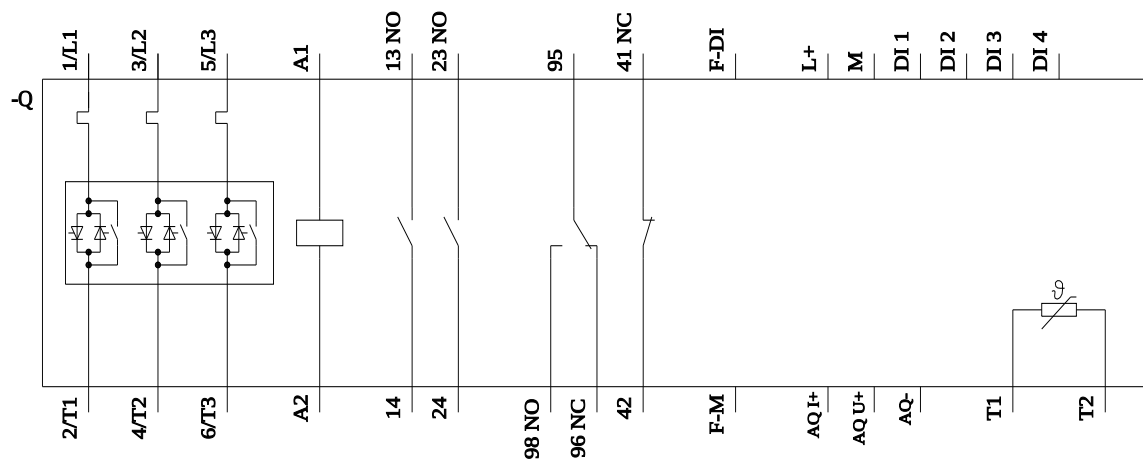
Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5548-6HF04&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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





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