



SIRIUS soft starter 200-600 V 63 A, 24 V AC/DC 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](#)

[3VA2163-7MN32-0AA0](#); Type of coordination 1, I_q = 65 kA, CLASS 10

[3VA2163-7MN32-0AA0](#); Type of coordination 1, I_q = 20 kA, CLASS 10

[3VA2110-7MN32-0AA0](#); Type of coordination 1, I_q = 65 kA, CLASS 10

[3VA2110-7MN32-0AA0](#); Type of coordination 1, I_q = 20 kA, CLASS 10

[3NA3830-6](#); Type of coordination 1, I_q = 65 kA

[3NA3830-6](#); Type of coordination 1, I_q = 65 kA

[3NE1022-0](#); Type of coordination 2, I_q = 65 kA

[3NE8024-1](#); 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

• 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	1 800 V
surge voltage resistance rated value	1
maximum permissible voltage for safe isolation	6 kV
• 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	
• 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; Electronic motor overload protection
• evaluation of thermistor motor protection	No
• 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
• PROFenergy	Yes; in connection with the PROFINET Standard communication module
• firmware update	Yes
• removable terminal for control circuit	Yes
• torque control	No
• analog output	Yes; 4 ... 20 mA (default) / 0 ... 10 V (parameterizable with High Feature HMI)
Power Electronics	
operational current	
• at 40 °C rated value	63 A
• at 50 °C rated value	55.5 A
• at 60 °C rated value	50.5 A
operational current at inside-delta circuit	
• at 40 °C rated value	109 A
• at 50 °C rated value	96 A
• at 60 °C rated value	87.5 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	18.5 kW
• at 230 V at inside-delta circuit at 40 °C rated value	30 kW
• at 400 V at 40 °C rated value	30 kW
• at 400 V at inside-delta circuit at 40 °C rated value	55 kW
• at 500 V at 40 °C rated value	37 kW

• at 500 V at inside-delta circuit at 40 °C rated value	55 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	
• at rotary coding switch on switch position 1	25.5 A
• at rotary coding switch on switch position 2	28 A
• at rotary coding switch on switch position 3	30.5 A
• at rotary coding switch on switch position 4	33 A
• at rotary coding switch on switch position 5	35.5 A
• at rotary coding switch on switch position 6	38 A
• at rotary coding switch on switch position 7	40.5 A
• at rotary coding switch on switch position 8	43 A
• at rotary coding switch on switch position 9	45.5 A
• at rotary coding switch on switch position 10	48 A
• at rotary coding switch on switch position 11	50.5 A
• at rotary coding switch on switch position 12	53 A
• at rotary coding switch on switch position 13	55.5 A
• at rotary coding switch on switch position 14	58 A
• at rotary coding switch on switch position 15	60.5 A
• at rotary coding switch on switch position 16	63 A
• minimum	25.5 A
adjustable motor current	
• for inside-delta circuit at rotary coding switch on switch position 1	44.2 A
• for inside-delta circuit at rotary coding switch on switch position 2	48.5 A
• for inside-delta circuit at rotary coding switch on switch position 3	52.8 A
• for inside-delta circuit at rotary coding switch on switch position 4	57.2 A
• for inside-delta circuit at rotary coding switch on switch position 5	61.5 A
• for inside-delta circuit at rotary coding switch on switch position 6	65.8 A
• for inside-delta circuit at rotary coding switch on switch position 7	70.1 A
• for inside-delta circuit at rotary coding switch on switch position 8	74.5 A
• for inside-delta circuit at rotary coding switch on switch position 9	78.8 A
• for inside-delta circuit at rotary coding switch on switch position 10	83.1 A
• for inside-delta circuit at rotary coding switch on switch position 11	87.5 A
• for inside-delta circuit at rotary coding switch on switch position 12	91.8 A
• for inside-delta circuit at rotary coding switch on switch position 13	96.1 A
• for inside-delta circuit at rotary coding switch on switch position 14	100 A
• for inside-delta circuit at rotary coding switch on switch position 15	105 A
• for inside-delta circuit at rotary coding switch on switch position 16	109 A
• at inside-delta circuit minimum	44.2 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	31 W
• at 50 °C after startup	29 W
• at 60 °C after startup	27 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	882 W
• at 50 °C during startup	744 W
• at 60 °C during startup	659 W

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	160 mA
holding current in bypass operation rated value	380 mA
inrush current peak at application of control supply voltage maximum	3.3 A
duration of inrush current peak at application of control supply voltage	12.1 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	1
number of digital outputs	3
• 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	
• 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	+/- 10° rotation possible and can be tilted forward or backward on vertical mounting surface
fastening method	screw fixing
height	306 mm
width	185 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	5.6 kg

Connections/ Terminals

type of electrical connection	
• for main current circuit	box terminal
• for control circuit	spring-loaded terminals
width of connection bar maximum	25 mm
type of connectable conductor cross-sections	
• for main contacts for box terminal using the front clamping point solid	1x (2.5 ... 16 mm²)
• for main contacts for box terminal using the front clamping point finely stranded with core end	1x (2.5 ... 50 mm²)

processing

- for main contacts for box terminal using the front clamping point stranded
- at AWG cables for main contacts for box terminal using the front clamping point
- for main contacts for box terminal using the back clamping point solid
- at AWG cables for main contacts for box terminal using the back clamping point
- for main contacts for box terminal using both clamping points solid
- for main contacts for box terminal using both clamping points finely stranded with core end processing
- for main contacts for box terminal using both clamping points stranded
- for main contacts for box terminal using the back clamping point finely stranded with core end processing
- for main contacts for box terminal using the back clamping point stranded

type of connectable conductor cross-sections

- 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

wire length

- between soft starter and motor maximum
- at the digital inputs at AC maximum
- at the digital inputs at DC maximum

tightening torque

- for main contacts with screw-type terminals
- for auxiliary and control contacts with screw-type terminals

tightening torque [lbf·in]

- for main contacts with screw-type terminals
- for auxiliary and control contacts with screw-type terminals

1x (10 ... 70 mm²)

1x (10 ... 2/0)

1x (2.5 ... 16 mm²)

1x (10 ... 2/0)

2x (2.5 ... 16 mm²)

2x (2.5 ... 35 mm²)

2x (6 ... 16 mm²), 2x (10 ... 50 mm²)

1x (2.5 ... 50 mm²)

1x (10 ... 70 mm²)

2x (0.25 ... 1.5 mm²)

2x (0.25 ... 1.5 mm²)

2x (24 ... 16)

2x (24 ... 16)

800 m

100 m

1 000 m

4.5 ... 6 N·m

0.8 ... 1.2 N·m

40 ... 53 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

- during operation

-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above

- during storage and transport

-40 ... +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
- EtherNet/IP
- Modbus RTU
- Modbus TCP
- PROFIBUS

Yes

Yes

Yes

Yes

Yes

UL/CSA ratings

manufacturer's article number

• of circuit breaker

- usable for Standard Faults at 460/480 V according to UL
- usable for High Faults at 460/480 V according to UL

Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; I_q = 10 kA

Siemens type: 3VA51, max. 125 A; I_q max = 65 kA

- 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 Standard Faults at 575/600 V at inside-delta circuit according to UL

• 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

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 575/600 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
- at 575/600 V at inside-delta circuit at 50 °C rated value

contact rating of auxiliary contacts according to UL

Siemens type: 3VA51, max. 125 A; Iq = 10 kA

Siemens type: 3VA51, max. 125 A; Iq max = 65 kA

Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 10 kA

Siemens type: 3VA51, max. 125 A; Iq = 10 kA

Type: Class RK5 / K5, max. 200 A; Iq = 10 kA

Type: Class J / L, max. 225 A; Iq = 100 kA

Type: Class RK5 / K5, max. 200 A; Iq = 10 kA

Type: Class J / L, max. 225 A; Iq = 100 kA

15 hp

20 hp

40 hp

50 hp

30 hp

30 hp

75 hp

75 hp

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
electromagnetic compatibility

finger-safe, for vertical contact from the front with cover
in accordance with IEC 60947-4-2

Certificates/ approvals

General Product Approval

EMC



[Confirmation](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[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=3RW5225-3AC05>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5225-3AC05>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5225-3AC05>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5225-3AC05&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

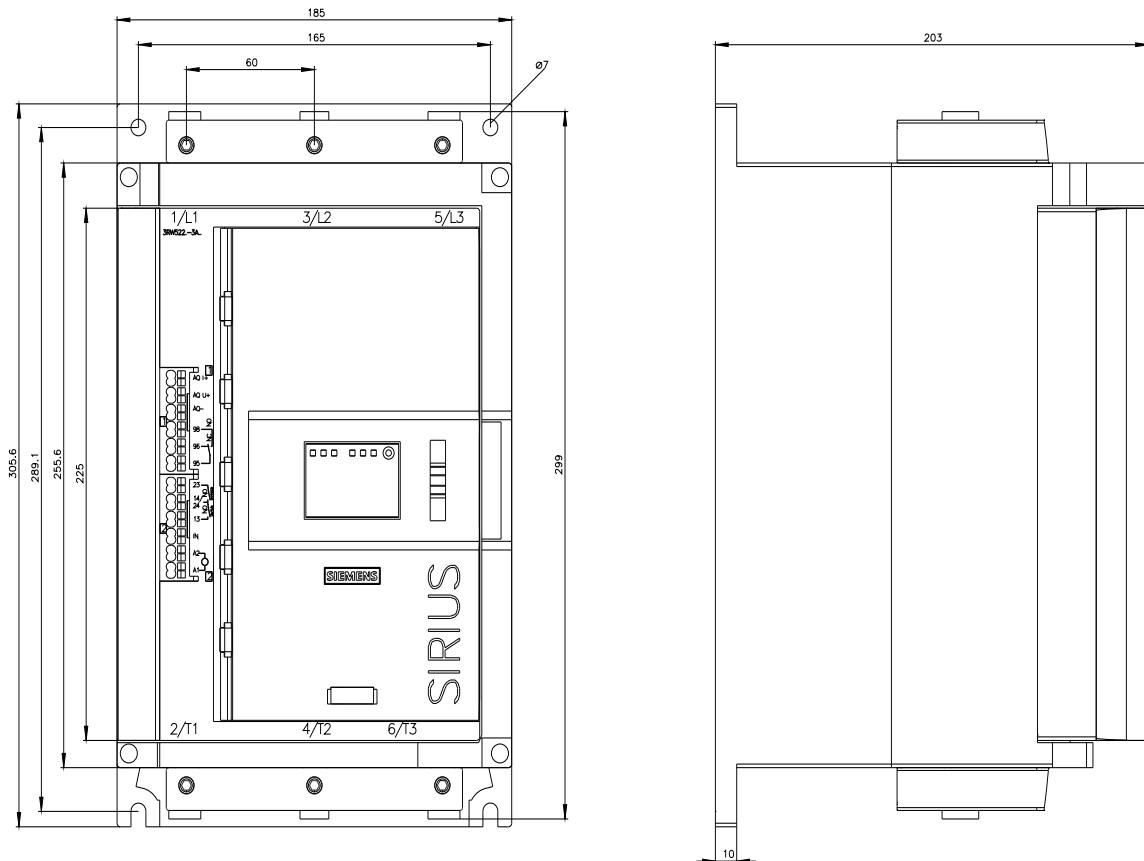
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5225-3AC05/char>

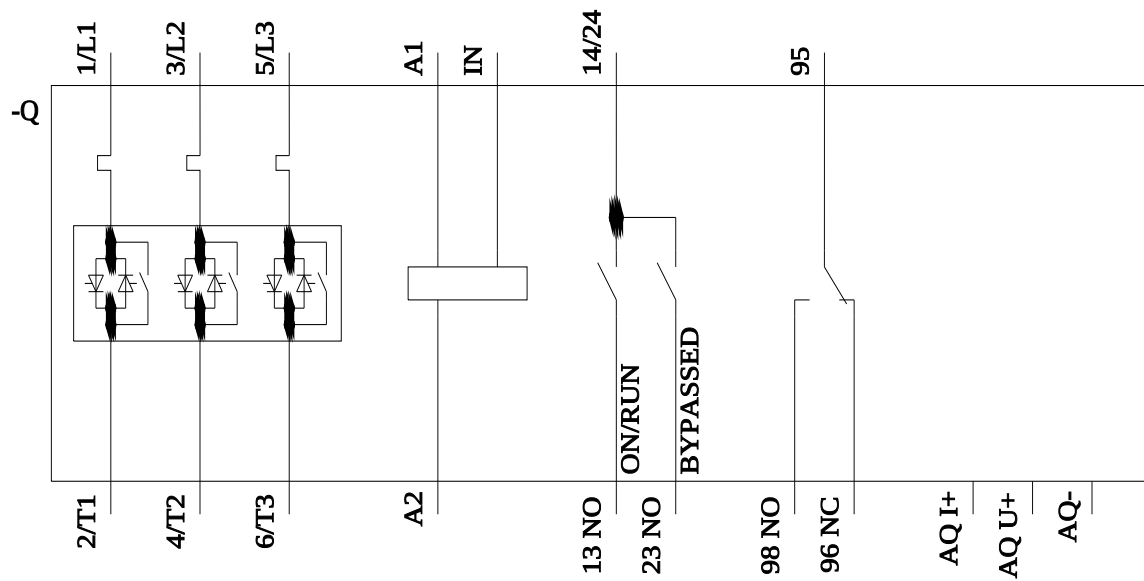
Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5225-3AC05&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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





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