



SIRIUS soft starter 200-600 V 47 A, 110-250 V AC Screw 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](#)

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

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

[3RV2032-4RA10](#); Type of coordination 1, I_q = 65 kA, CLASS 10

[3RV2032-4RA10](#); 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

[3NE1021-2](#); 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	Yes
• UL approval	Yes
• CSA approval	Yes
product component	
• HMI-High Feature	No
• 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
buffering time in the event of power failure	

<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • ramp-up (soft starting) • ramp-down (soft stop) • Soft Torque • adjustable current limitation • pump ramp down • intrinsic device protection • motor overload protection • evaluation of thermistor motor protection • inside-delta circuit • auto-RESET • manual RESET • remote reset • communication function • operating measured value display • error logbook • via software parameterizable • via software configurable • PROFInergy 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes; Electronic motor overload protection</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes; By turning off the control supply voltage</p> <p>Yes</p> <p>Yes; Only in conjunction with special accessories</p> <p>Yes; Only in conjunction with special accessories</p> <p>No</p> <p>Yes</p> <p>Yes; in connection with the PROFINET Standard communication module</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes; 4 ... 20 mA (default) / 0 ... 10 V (parameterizable with High Feature HMI)</p>
<ul style="list-style-type: none"> • firmware update • removable terminal for control circuit • torque control • analog output 	

Power Electronics

operational current	
<ul style="list-style-type: none"> • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value 	<p>47 A</p> <p>41.6 A</p> <p>36.2 A</p>
operational current at inside-delta circuit	
<ul style="list-style-type: none"> • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value 	<p>81.4 A</p> <p>72 A</p> <p>62.7 A</p>
operating voltage	
<ul style="list-style-type: none"> • rated value • at inside-delta circuit rated value 	<p>200 ... 600 V</p> <p>200 ... 600 V</p>
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	
<ul style="list-style-type: none"> • at 230 V at 40 °C rated value • at 230 V at inside-delta circuit at 40 °C rated value • at 400 V at 40 °C rated value • at 400 V at inside-delta circuit at 40 °C rated value • at 500 V at 40 °C rated value 	<p>11 kW</p> <p>22 kW</p> <p>22 kW</p> <p>45 kW</p> <p>30 kW</p>

<ul style="list-style-type: none"> • at 500 V at inside-delta circuit at 40 °C rated value 	45 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 coding switch on switch position 1 • at rotary coding switch on switch position 2 • at rotary coding switch on switch position 3 • at rotary coding switch on switch position 4 • at rotary coding switch on switch position 5 • at rotary coding switch on switch position 6 • at rotary coding switch on switch position 7 • at rotary coding switch on switch position 8 • at rotary coding switch on switch position 9 • at rotary coding switch on switch position 10 • at rotary coding switch on switch position 11 • at rotary coding switch on switch position 12 • at rotary coding switch on switch position 13 • at rotary coding switch on switch position 14 • at rotary coding switch on switch position 15 • at rotary coding switch on switch position 16 • minimum 	20 A 21.8 A 23.6 A 25.4 A 27.2 A 29 A 30.8 A 32.6 A 34.4 A 36.2 A 38 A 39.8 A 41.6 A 43.4 A 45.2 A 47 A 20 A
adjustable motor current	
<ul style="list-style-type: none"> • for inside-delta circuit at rotary coding switch on switch position 1 • for inside-delta circuit at rotary coding switch on switch position 2 • for inside-delta circuit at rotary coding switch on switch position 3 • for inside-delta circuit at rotary coding switch on switch position 4 • for inside-delta circuit at rotary coding switch on switch position 5 • for inside-delta circuit at rotary coding switch on switch position 6 • for inside-delta circuit at rotary coding switch on switch position 7 • for inside-delta circuit at rotary coding switch on switch position 8 • for inside-delta circuit at rotary coding switch on switch position 9 • for inside-delta circuit at rotary coding switch on switch position 10 • for inside-delta circuit at rotary coding switch on switch position 11 • for inside-delta circuit at rotary coding switch on switch position 12 • for inside-delta circuit at rotary coding switch on switch position 13 • for inside-delta circuit at rotary coding switch on switch position 14 • for inside-delta circuit at rotary coding switch on switch position 15 • for inside-delta circuit at rotary coding switch on switch position 16 • at inside-delta circuit minimum 	34.6 A 37.8 A 40.9 A 44 A 47.1 A 50.2 A 53.3 A 56.5 A 59.6 A 62.7 A 65.8 A 68.9 A 72.1 A 75.2 A 78.3 A 81.4 A 34.6 A
minimum load [%]	15 %; Relative to smallest settable I _e
power loss [W] for rated value of the current at AC	
<ul style="list-style-type: none"> • at 40 °C after startup • at 50 °C after startup • at 60 °C after startup 	26 W 24 W 23 W
power loss [W] at AC at current limitation 350 %	
<ul style="list-style-type: none"> • at 40 °C during startup • at 50 °C during startup • at 60 °C during startup 	606 W 522 W 438 W

type of voltage of the control supply voltage	AC
control supply voltage at AC	110 ... 250 V
<ul style="list-style-type: none"> • at 50 Hz • 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	30 mA
holding current in bypass operation rated value	75 mA
inrush current peak at application of control supply voltage maximum	12.2 A
duration of inrush current peak at application 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 (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
<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	1
switching capacity current of the relay outputs	
<ul style="list-style-type: none"> • at AC-15 at 250 V rated value • at DC-13 at 24 V rated value 	3 A
	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	
<ul style="list-style-type: none"> • forwards • backwards • upwards • downwards • at the side 	10 mm 0 mm 100 mm 75 mm 5 mm
weight without packaging	5.2 kg

Connections/ Terminals

type of electrical connection	box terminal
<ul style="list-style-type: none"> • for main current circuit • for control circuit 	screw-type terminals
width of connection bar maximum	25 mm
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts for box terminal using the front clamping point solid • for main contacts for box terminal using the front clamping point finely stranded with core end 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 	1x (2.5 ... 16 mm ²) 1x (2.5 ... 50 mm ²) 1x (10 ... 70 mm ²) 1x (10 ... 2/0) 1x (2.5 ... 16 mm ²)

clamping point solid	
<ul style="list-style-type: none"> • 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 	<p>1x (10 ... 2/0)</p> <p>2x (2.5 ... 16 mm²)</p> <p>2x (2.5 ... 35 mm²)</p> <p>2x (6 ... 16 mm²), 2x (10 ... 50 mm²)</p> <p>1x (2.5 ... 50 mm²)</p> <p>1x (10 ... 70 mm²)</p>
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for control circuit solid • for control circuit finely stranded with core end processing • at AWG cables for control circuit solid 	<p>1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)</p> <p>1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)</p> <p>1x (20 ... 12), 2x (20 ... 14)</p>
wire length	
<ul style="list-style-type: none"> • between soft starter and motor maximum • at the digital inputs at AC maximum 	<p>800 m</p> <p>100 m</p>
tightening torque	
<ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals 	<p>4.5 ... 6 N·m</p> <p>0.8 ... 1.2 N·m</p>
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 	<p>40 ... 53 lbf·in</p> <p>7 ... 10.3 lbf·in</p>
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 • during storage and transport 	<p>-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above</p> <p>-40 ... +80 °C</p>
environmental category	
<ul style="list-style-type: none"> • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 	<p>3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6</p> <p>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4</p> <p>2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)</p> <p>acc. to IEC 60947-4-2: Class A</p>
EMC emitted interference	
Communication/ Protocol	
communication module is supported	
<ul style="list-style-type: none"> • PROFINET standard • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
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 Standard Faults at 575/600 V at inside-delta circuit according to UL • of the fuse 	<p>Siemens type: 3RV2742, max. 70 A or 3VA51, max. 90 A; Iq = 5 kA</p> <p>Siemens type: 3VA51, max. 60 A; Iq max = 65 kA</p> <p>Siemens type: 3VA51, max. 90 A; Iq = 5 kA</p> <p>Siemens type: 3VA51, max. 60 A; Iq max = 65 kA</p> <p>Siemens type: 3RV2742, max. 70 A or 3VA51, max. 90 A; Iq = 5 kA</p> <p>Siemens type: 3VA51, max. 90 A; Iq = 5 kA</p>

- 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. 175 A; Iq = 5 kA
 Type: Class J / L, max. 175 A; Iq = 100 kA
 Type: Class RK5 / K5, max. 175 A; Iq = 5 kA
 Type: Class J / L, max. 175 A; Iq = 100 kA

operating power [hp] for 3-phase motors

- at 200/208 V at 50 °C rated value 10 hp
- at 220/230 V at 50 °C rated value 10 hp
- at 460/480 V at 50 °C rated value 30 hp
- at 575/600 V at 50 °C rated value 40 hp
- at 200/208 V at inside-delta circuit at 50 °C rated value 20 hp
- at 220/230 V at inside-delta circuit at 50 °C rated value 25 hp
- at 460/480 V at inside-delta circuit at 50 °C rated value 50 hp
- at 575/600 V at inside-delta circuit at 50 °C rated value 60 hp

contact rating of auxiliary contacts according to UL 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 finger-safe, for vertical contact from the front with cover
electromagnetic compatibility 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=3RW5224-1AC15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5224-1AC15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5224-1AC15>

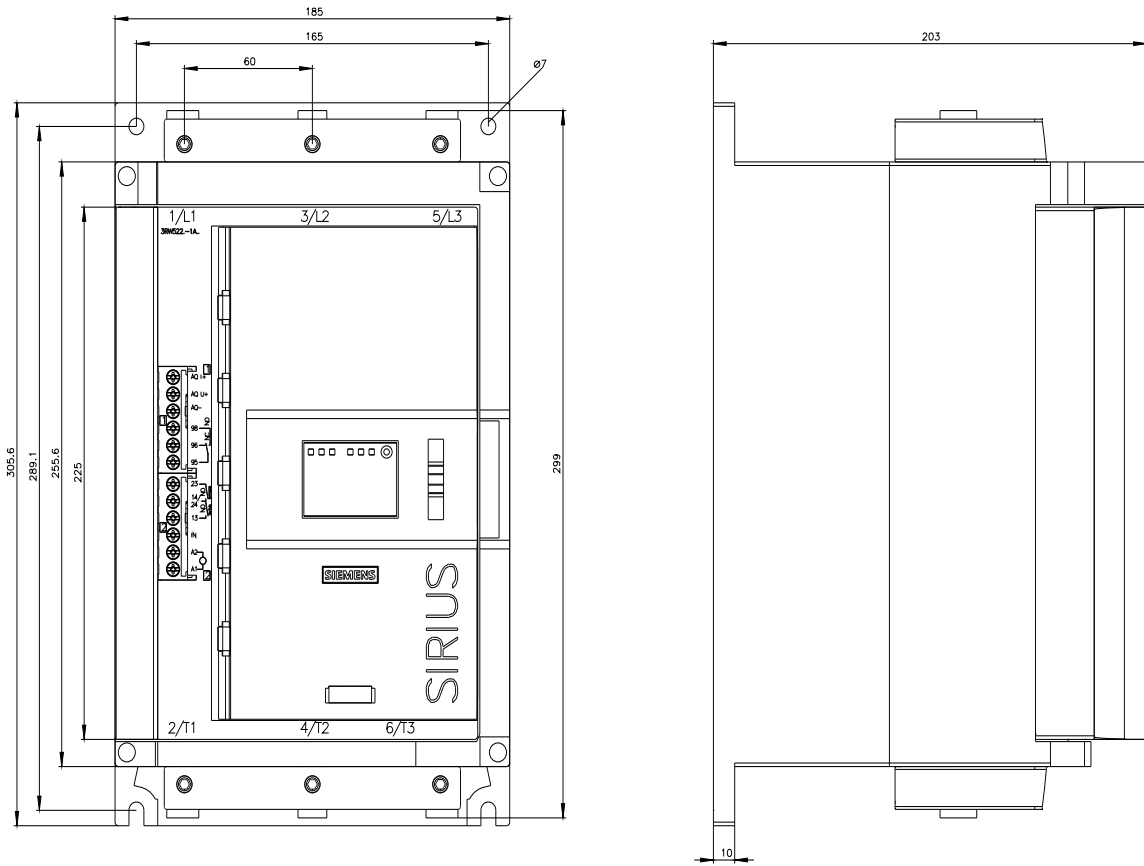
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

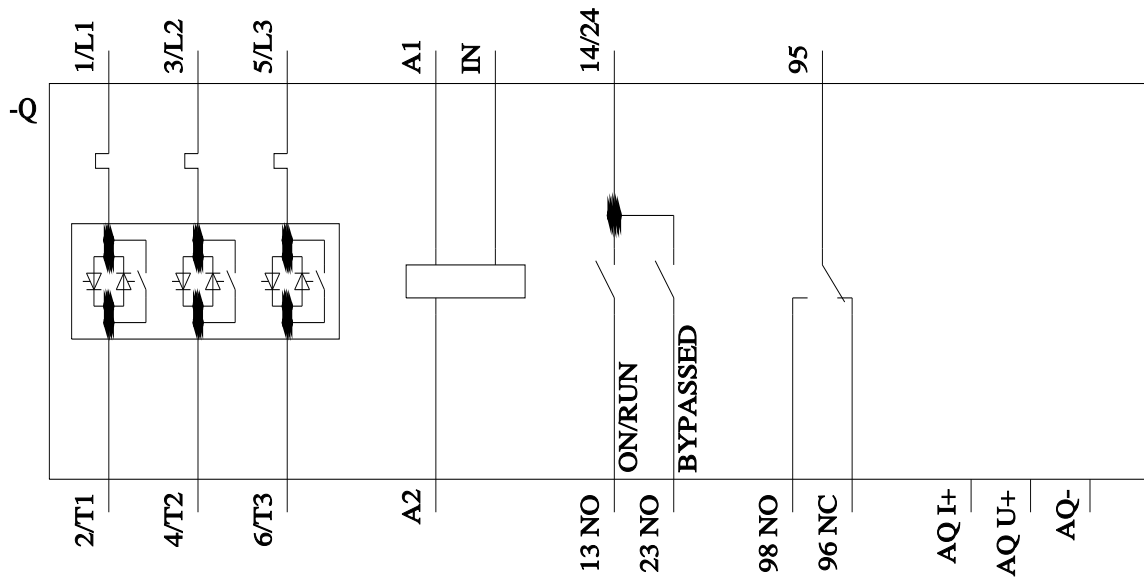
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5224-1AC15&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5224-1AC15/char>

Characteristic: Installation altitude





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