

Siemens
EcoTech



SIRIUS soft starter 200-480 V 470 A, 110-250 V AC screw terminals without bypass, analog output with HMI standard

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 RTU usable
- 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

[3RW5980-0HS00](#)

[3RW5980-0HF00](#)

[3RW5980-0CS00](#)

[3RW5980-0CP00](#)

[3RW5980-0CR00](#)

[3VA2450-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10](#)

[3VA2450-7MN32-0AA0; 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

[3NE1436-2; Type of coordination 2, Iq = 65 kA](#)

[3NE3340-8; Type of coordination 2, \(soft starter in conjunction with the associated protective device circuit breaker/fuse\), Iq = 65 kA](#)

General technical data

starting voltage [%]	30 ... 100 %
stopping voltage [%]	50 %; non-adjustable
start-up ramp time of soft starter	0 ... 20 s
ramp-down time of soft starter	0 ... 20 s
current limiting value [%] adjustable	130 ... 700 %
product component is supported	
• HMI-Standard	Yes
• HMI-High Feature	Yes
product feature integrated bypass contact system	No
number of controlled phases	3
buffering time in the event of power failure	
• for main current circuit	100 ms
• for control circuit	100 ms
insulation voltage rated value	480 V
degree of pollution	3, acc. to IEC 60947-4-2
impulse voltage rated value	6 V
blocking voltage of the thyristor maximum	1 400 V
service factor	1
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	

• between main and auxiliary circuit	480 V
shock resistance	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting
vibration resistance	15 mm to 6 Hz; 2 g to 500 Hz
utilization category according to IEC 60947-4-2	AC-53b
reference code according to IEC 81346-2	Q
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol CAS-No. 79-94-7 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1 Dibutylbis(pentane-2,4-dionato-O,O')tin CAS-No. 22673-19-4
Net Weight	9.6 kg
product function	
• ramp-up (soft starting)	Yes
• soft stopping	Yes
• Soft Torque	Yes
• adjustable current limitation	Yes
• intrinsic device protection	Yes
• motor overload protection	Yes
• 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; with optional HMI
• error logbook	Yes
• via software parameterizable	No
• via software configurable	No
• firmware update	Yes
• removable terminal for control circuit	Yes
• voltage ramp	Yes
• analog output	Yes; 4 ... 20 mA (default) / 0 ... 10 V (parameterizable with High Feature HMI)
Power Electronics	
operational current	
• at 40 °C rated value	470 A
• at 50 °C rated value	416 A
• at 60 °C rated value	380 A
operational current at inside-delta circuit	
• at 40 °C rated value	814 A
• at 50 °C rated value	721 A
• at 60 °C rated value	650 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	132 W
• at 230 V at inside-delta circuit at 40 °C rated value	250 W
• at 400 V at 40 °C rated value	250 W
• at 400 V at inside-delta circuit at 40 °C rated value	400 W
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	200 A
• at rotary coding switch on switch position 2	218 A
• at rotary coding switch on switch position 3	236 A
• at rotary coding switch on switch position 4	254 A
• at rotary coding switch on switch position 5	272 A
• at rotary coding switch on switch position 6	290 A
• at rotary coding switch on switch position 7	308 A
• at rotary coding switch on switch position 8	326 A
• at rotary coding switch on switch position 9	344 A
• at rotary coding switch on switch position 10	362 A
• at rotary coding switch on switch position 11	380 A
• at rotary coding switch on switch position 12	398 A
• at rotary coding switch on switch position 13	416 A
• at rotary coding switch on switch position 14	434 A
• at rotary coding switch on switch position 15	452 A
• at rotary coding switch on switch position 16	470 A
• minimum	200 A
adjustable motor current	
• for inside-delta circuit at rotary coding switch on switch position 1	346 A
• for inside-delta circuit at rotary coding switch on switch position 2	378 A
• for inside-delta circuit at rotary coding switch on switch position 3	409 A
• for inside-delta circuit at rotary coding switch on switch position 4	440 A
• for inside-delta circuit at rotary coding switch on switch position 5	471 A
• for inside-delta circuit at rotary coding switch on switch position 6	502 A
• for inside-delta circuit at rotary coding switch on switch position 7	533 A
• for inside-delta circuit at rotary coding switch on switch position 8	565 A
• for inside-delta circuit at rotary coding switch on switch position 9	596 A
• for inside-delta circuit at rotary coding switch on switch position 10	627 A
• for inside-delta circuit at rotary coding switch on switch position 11	658 A
• for inside-delta circuit at rotary coding switch on switch position 12	689 A
• for inside-delta circuit at rotary coding switch on switch position 13	721 A
• for inside-delta circuit at rotary coding switch on switch position 14	752 A
• for inside-delta circuit at rotary coding switch on switch position 15	783 A
• for inside-delta circuit at rotary coding switch on switch position 16	814 A
• at inside-delta circuit minimum	346 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	14 W
• at 50 °C after startup	14 W
• at 60 °C after startup	14 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	7 903 W
• at 50 °C during startup	6 604 W
• at 60 °C during startup	5 794 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	

• at 50 Hz • at 60 Hz	110 ... 250 V 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
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
• 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 • at DC-13 at 24 V rated value	3 A 1 A
Installation/ mounting/ dimensions	
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
fastening method	screw fixing
height	417 mm
width	210 mm
depth	203 mm
required spacing with side-by-side mounting	
• forwards • backwards • upwards • downwards • at the side	10 mm 0 mm 100 mm 75 mm 5 mm
weight without packaging	9.75 kg
Connections/ Terminals	
type of electrical connection	
• for main current circuit • for control circuit	busbar connection screw-type terminals
width of connection bar maximum	45 mm
type of connectable conductor cross-sections	
• for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded	2x (50 ... 240 mm²) 2x (70 ... 240 mm²)
type of connectable conductor cross-sections	
• for control circuit solid • for control circuit finely stranded with core end processing	1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
wire length	
• between soft starter and motor maximum • at the digital inputs at AC maximum	800 m 100 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	5 000 mm
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)

Communication/ Protocol

communication module is supported • PROFINET standard • Modbus RTU • PROFIBUS	Yes Yes Yes
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Approvals Certificates

Environment	General Product Approval	EMV
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[Environmental Confirmations](#)

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other

[Confirmation](#)

[Confirmation](#)



Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RW5147-1XC14-0S>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5147-1XC14-0S>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5147-1XC14-0S&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5147-1XC14-0S>

Characteristic curves

https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5147-1XC14-0S/char>

Characteristic: Installation altitude

https://www.automation.siemens.com/bilddb/index.aspx?gridview=view2&objkey=G_NSB0_XX_01704&showdetail=true&view=Search

Simulation Tool for Soft Starters (STS)

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



