

SIRIUS soft starter 200-690 V 63 A, 24 V AC/DC Screw terminals



Product brand name	SIRIUS
Product category	Hybrid switching devices
Product designation	Soft starter
Manufacturer's article number	• of HMI-Modul high-feature usable • of communication module PROFINET standard usable • of communication module PROFIBUS usable • of communication module Modbus TCP 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

[3NE3227; Type of coordination 2, I_q = 65 kA](#)

General technical data

Starting voltage [%]	20 ... 100 %
Start-up ramp time of soft starter	0 ... 360 s
Stopping time of soft starter	0 ... 360 s
Start torque [%]	10 ... 100 %
Stopping torque [%]	10 ... 100 %
Torque limit [%]	20 ... 200 %
Current limiting value [%] adjustable	125 ... 1 000 %
Breakaway voltage [%] adjustable	40 ... 100 %
Breakaway time adjustable	0 ... 2 s
Number of parameter sets	3
Accuracy class acc. to IEC 61557-12	5 %
Product component	
• HMI-High Feature	Yes
• 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 %
• Recovery time after overload trip adjustable	60 ... 1 800 s
Idle time adjustable	0 ... 255 s
Insulation voltage	
• rated value	690 V
Degree of pollution	3
Impulse voltage rated value	8 kV
Blocking voltage of the thyristor maximum	1 800 V
Service factor	1.15
Protection class IP	IP00
Reference code acc. to DIN EN 81346-2	Q
Product function	
• ramp-up (soft starting)	Yes
• ramp-down (soft stop)	Yes
• breakaway pulse	Yes
• torque control	Yes
• Adjustable current limitation	Yes
• creep speed in both directions of rotation	Yes
• pump ramp down	Yes
• DC braking	Yes
• motor heating	Yes
• slave pointer function	Yes

• trace function	Yes
• voltage ramp	Yes
• Intrinsic device protection	Yes
• motor overload protection	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection)
• Evaluation of thermistor motor protection	Yes; Type A PTC or Klaxon / Thermoclick
• inside-delta circuit	No
• Auto-reset	Yes
• Manual RESET	Yes
• remote reset	Yes
• communication function	Yes
• operating measured value display	Yes
• event list	Yes
• error logbook	Yes
• via software parameterizable	Yes
• via software configurable	Yes
• PROFINET	Yes; in connection with the PROFINET Standard and PROFINET High-Feature communication modules
• firmware update	Yes
• removable terminal for control circuit	Yes
• combined braking	Yes
• analog output	Yes; 4 ... 20 mA (default) / 0 ... 10 V
• programmable control input-/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

Operating current	
• at 40 °C rated value	63 A
• at 50 °C rated value	55.5 A
• at 60 °C rated value	50.5 A
Operating 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 ... 690 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 three-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	
• minimum	13 A
• at inside-delta circuit minimum	22.5 A
Minimum load [%]	10 %; Relative to set I _e
Power loss [W] for rated value of the current at AC	
• at 40 °C to power-up	19 W
• at 50 °C to power-up	17 W
• at 60 °C to power-up	15 W

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 %
Inrush current peak at connect of control supply voltage maximum	7.5 A
Duration of inrush current peak at connect 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 • with fail-safe • parameterizable	4 0 4
Number of digital outputs • with fail-safe • parameterizable • not parameterizable	4 0 3 1
Digital output version	3 normally-open contacts (NO) / 1 changeover contact (CO)
Number of inputs for thermistor connection	1; Type A PTC or Klaxon / Thermoclick
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	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)
Mounting type	screw fixing
Height	306 mm
Width	185 mm
Depth	203 mm
Required spacing with side-by-side mounting • forwards • Backwards • upwards	10 mm 0 mm 100 mm

• downwards • at the side	75 mm 5 mm
Installation altitude at height above sea level maximum	2 000 m; Derating as of 1000 m, see catalog
Weight without packaging	5.9 kg

Connections/Terminals

Type of electrical connection • for main current circuit • for control circuit	box terminals screw-type terminals
Type of connectable conductor cross-sections • 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 conductors 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 conductors 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	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) 1x (10 ... 2/0) 2x (2.5 ... 16 mm ²) 2x (2.5 ... 35 mm ²) 2x (6 ... 16 mm ²), 2x (10 ... 50 mm ²) 1x (2.5 ... 50 mm ²) 1x (10 ... 70 mm ²)
Type of connectable conductor cross-sections at AWG conductors 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

Ambient conditions

Ambient temperature • during operation	-25 ... +60 °C
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• during storage and transport	-25 ... +80 °C
Environmental category	
• during operation acc. 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 acc. to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
• during transport acc. to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)

Communication/ Protocol

Communication module is supported	
• PROFINET standard	Yes
• Modbus TCP	Yes
• PROFIBUS	Yes

UL/CSA ratings

Manufacturer's article number	
• of the fuse usable up to 575/600 V according to UL	Type: Class RK5 / K5, max. 200 A; Standard fault, I _q = 10 kA
• of the fuse usable at inside-delta circuit up to 575/600 V according to UL	Type: Class RK5 / K5, max. 200 A
Operating power [hp] for three-phase motors	
• at 200/208 V at 50 °C rated value	15 hp
• at 220/230 V at 50 °C rated value	20 hp
• at 460/480 V at 50 °C rated value	40 hp
• at 575/600 V at 50 °C rated value	50 hp
• at 200/208 V at inside-delta circuit at 50 °C rated value	30 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	30 hp
• at 460/480 V at inside-delta circuit at 50 °C rated value	75 hp
• at 575/600 V at inside-delta circuit at 50 °C rated value	75 hp
Contact rating of auxiliary contacts according to UL	R300-B300

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5525-1HA06>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5525-1HA06>

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

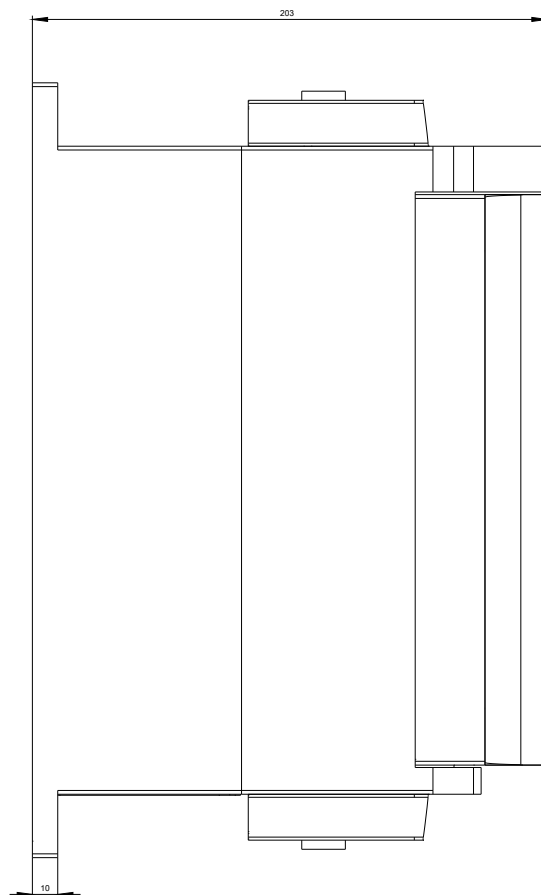
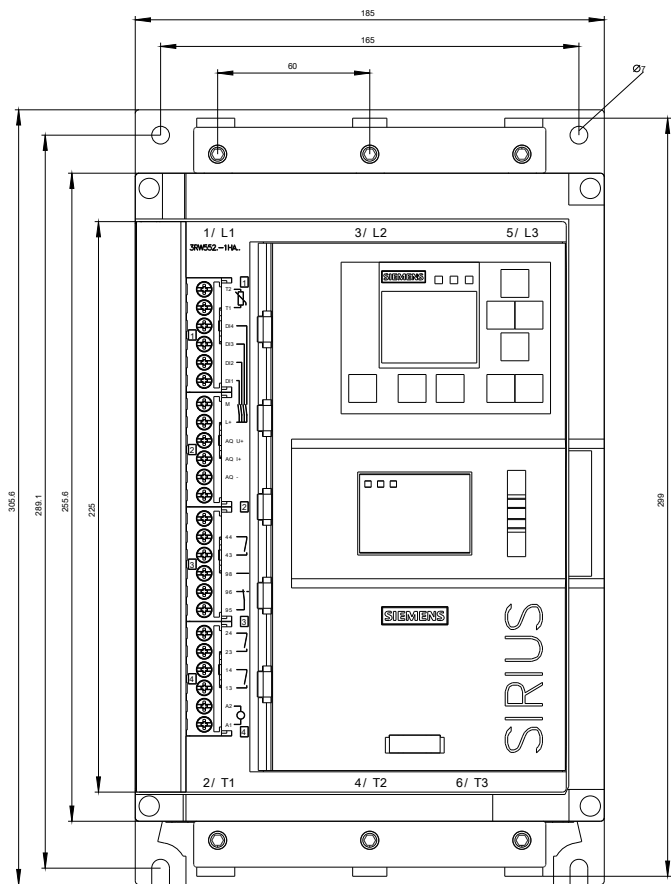
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5525-1HA06>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5525-1HA06&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5525-1HA06/char>



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