

SIRIUS soft starter 200-480 V 143 A, 110-250 V AC Screw terminals  
Thermistor input



Figure similar

Product brand name	SIRIUS
Product category	Hybrid switching devices
Product designation	Soft starter
Manufacturer's article number	<div><ul style="list-style-type: none"><li>• of HMI module usable</li><li>• of HMI-Modul high-feature usable</li><li>• of communication module PROFINET standard usable</li><li>• of communication module PROFIBUS usable</li><li>• of communication module Modbus TCP usable</li><li>• of circuit breaker usable at 400 V</li><li>• of circuit breaker usable at 400 V at inside-delta circuit</li><li>• of the gG fuse usable up to 690 V</li><li>• of the gG fuse usable at inside-delta circuit up to 500 V</li><li>• of full range R fuse link for semiconductor protection usable up to 690 V</li></ul></div>

- [3RW5980-0HS00](#)
- [3RW5980-0HF00](#)
- [3RW5980-0CS00](#)
- [3RW5980-0CP00](#)
- [3RW5980-0CT00](#)
- [3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10](#)
- [3VA2325-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10](#)
- [3NA3244-6; Type of coordination 1, Iq = 65 kA](#)
- [3NA3244-6; Type of coordination 1, Iq = 65 kA](#)
- [3NE1227-0; Type of coordination 2, Iq = 65 kA](#)

- of back-up R fuse link for semiconductor protection usable up to 690 V

[3NE3334-0B; Type of coordination 2, I<sub>q</sub> = 65 kA](#)

#### General technical data

<b>Starting voltage [%]</b>	30 ... 100 %
<b>Start-up ramp time of soft starter</b>	0 ... 20 s
<b>Product component</b>	
• is supported HMI-Standard	Yes
• is supported HMI-High Feature	Yes
<b>Product feature integrated bypass contact system</b>	Yes
<b>Number of controlled phases</b>	3
<b>Trip class</b>	CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2
<b>Insulation voltage</b>	
• rated value	600 V
<b>Degree of pollution</b>	3
<b>Impulse voltage rated value</b>	6 kV
<b>Blocking voltage of the thyristor maximum</b>	1 400 V
<b>Service factor</b>	1
<b>Surge voltage resistance rated value</b>	6 kV
<b>maximum permissible voltage for safe isolation</b>	
• between main and auxiliary circuit	600 V
<b>Protection class IP</b>	IP00; IP20 with additional terminal covers for vertical touching from the front
<b>Usage category acc. to IEC 60947-4-2</b>	AC 53a
<b>Shock resistance</b>	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting
<b>Vibration resistance</b>	15 mm to 6 Hz; 2g to 500 Hz
<b>Reference code acc. to DIN EN 81346-2</b>	Q
<b>Product function</b>	
• 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; Full motor protection (thermistor motor protection and electronic motor overload protection)
• Evaluation of thermistor motor protection	Yes; Type A PTC or Klixon / Thermoclick
• inside-delta circuit	Yes
• Auto-reset	Yes
• Manual RESET	Yes
• remote reset	Yes; By turning off the control supply voltage
• communication function	Yes
• via software configurable	Yes

- firmware update
- removable terminal for control circuit
- analog output

Yes  
Yes  
No

## Power Electronics

<b>Operating current</b>	
• at 40 °C rated value	143 A
• at 50 °C rated value	128 A
• at 60 °C rated value	118 A
<b>Operating current at inside-delta circuit</b>	
• at 40 °C rated value	248 A
• at 50 °C rated value	222 A
• at 60 °C rated value	204 A
<b>Operating voltage</b>	
• rated value	200 ... 480 V
• at inside-delta circuit rated value	200 ... 480 V
<b>Relative negative tolerance of the operating voltage</b>	-15 %
<b>Relative positive tolerance of the operating voltage</b>	10 %
<b>Relative negative tolerance of the operating voltage at inside-delta circuit</b>	-15 %
<b>Relative positive tolerance of the operating voltage at inside-delta circuit</b>	10 %
<b>Operating power for three-phase motors</b>	
• at 230 V at 40 °C rated value	37 kW
• at 230 V at inside-delta circuit at 40 °C rated value	75 kW
• at 400 V at 40 °C rated value	75 kW
• at 400 V at inside-delta circuit at 40 °C rated value	132 kW
<b>Operating frequency 1 rated value</b>	50 Hz
<b>Operating frequency 2 rated value</b>	60 Hz
<b>Relative negative tolerance of the operating frequency</b>	-10 %
<b>Relative positive tolerance of the operating frequency</b>	10 %
<b>Adjustable motor current</b>	
• minimum	68 A
• at inside-delta circuit minimum	118 A
<b>Minimum load [%]</b>	15 %; Relative to smallest settable I <sub>e</sub>
<b>Power loss [W] for rated value of the current at AC</b>	
• at 40 °C to power-up	55 W
• at 50 °C to power-up	50 W
• at 60 °C to power-up	47 W

## Control circuit/ Control

Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz	110 ... 250 V
• 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 the by-pass mode operating rated value	75 mA
Starting current at close of by-pass contact maximum	2.5 A
Inrush current peak at connect of control supply voltage maximum	12.2 A
Duration of inrush current peak at connect 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 (I <sub>cu</sub> =1 kA), 6 A quick-acting fuse (I <sub>cu</sub> =1 kA), C1 miniature circuit breaker (I <sub>cu</sub> = 600 A), C6 miniature circuit breaker (I <sub>cu</sub> = 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 inputs for thermistor connection	1; Type A PTC or Klaxon / Thermoclick
Number of analog outputs	0
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	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
Mounting type	screw fixing
Height	306 mm

<b>Width</b>	185 mm
<b>Depth</b>	203 mm
<b>Required spacing with side-by-side mounting</b>	
• forwards	10 mm
• Backwards	0 mm
• upwards	100 mm
• downwards	75 mm
• at the side	5 mm
<b>Installation altitude at height above sea level maximum</b>	5 000 m; Derating as of 1000 m, see catalog
<b>Weight without packaging</b>	6.6 kg

#### Connections/Terminals

<b>Type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for control circuit	screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
• for DIN cable lug for main contacts stranded	2x (16 ... 95 mm <sup>2</sup> )
• for DIN cable lug for main contacts finely stranded	2x (25 ... 120 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections at AWG conductors for control circuit</b>	
• solid	1x (20 ... 12), 2x (20 ... 14)
<b>Wire length</b>	
• between soft starter and motor maximum	800 m
• at the digital inputs at AC maximum	100 m

#### Ambient conditions

<b>Ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage and transport	-40 ... +80 °C
<b>Environmental category</b>	
• 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)
EMC emitted interference acc. to IEC 60947-1	CISPR11, ambience A (industrial sector)

#### Communication/ Protocol

<b>Communication module is supported</b>	
• PROFINET standard	Yes
• Modbus TCP	Yes
• PROFIBUS	Yes

## UL/CSA ratings

Manufacturer's article number		
<ul style="list-style-type: none"><li>• of the fuse usable up to 575/600 V according to UL</li><li>• of the fuse usable at inside-delta circuit up to 575/600 V according to UL</li></ul>	Type: Class RK5 / K5, max. 350 A; Standard fault, Iq = 10 kA	
Type: Class RK5 / K5, max. 350 A		
Operating power [hp] for three-phase motors		
<ul style="list-style-type: none"><li>• at 200/208 V at 50 °C rated value</li></ul>	40 hp	
<ul style="list-style-type: none"><li>• at 220/230 V at 50 °C rated value</li></ul>	40 hp	
<ul style="list-style-type: none"><li>• at 460/480 V at 50 °C rated value</li></ul>	100 hp	
<ul style="list-style-type: none"><li>• at 200/208 V at inside-delta circuit at 50 °C rated value</li></ul>	75 hp	
<ul style="list-style-type: none"><li>• at 220/230 V at inside-delta circuit at 50 °C rated value</li></ul>	75 hp	
<ul style="list-style-type: none"><li>• at 460/480 V at inside-delta circuit at 50 °C rated value</li></ul>	150 hp	
Contact rating of auxiliary contacts according to UL		
R300-B300		
General Product Approval		Declaration of Conformity
		other



[Confirmation](#)

## 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=3RW5235-6TC14>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5235-6TC14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5235-6TC14>

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

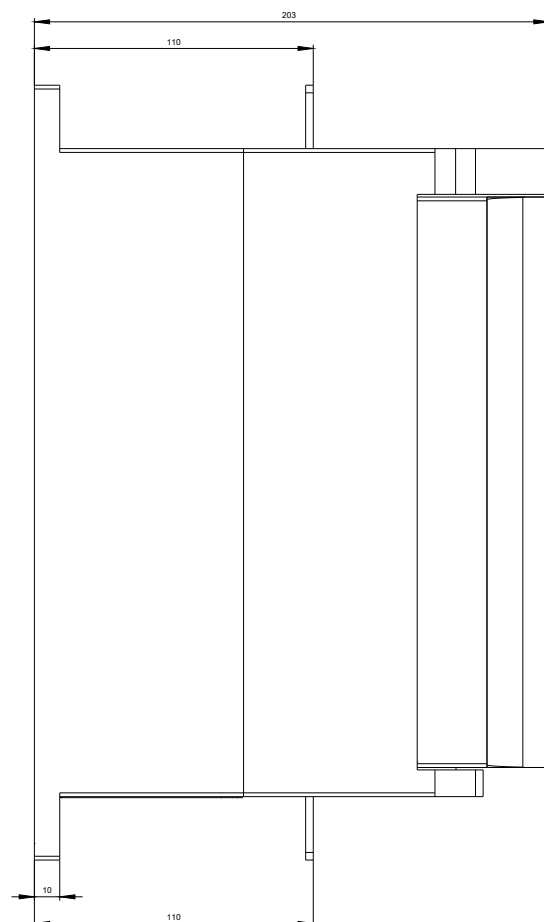
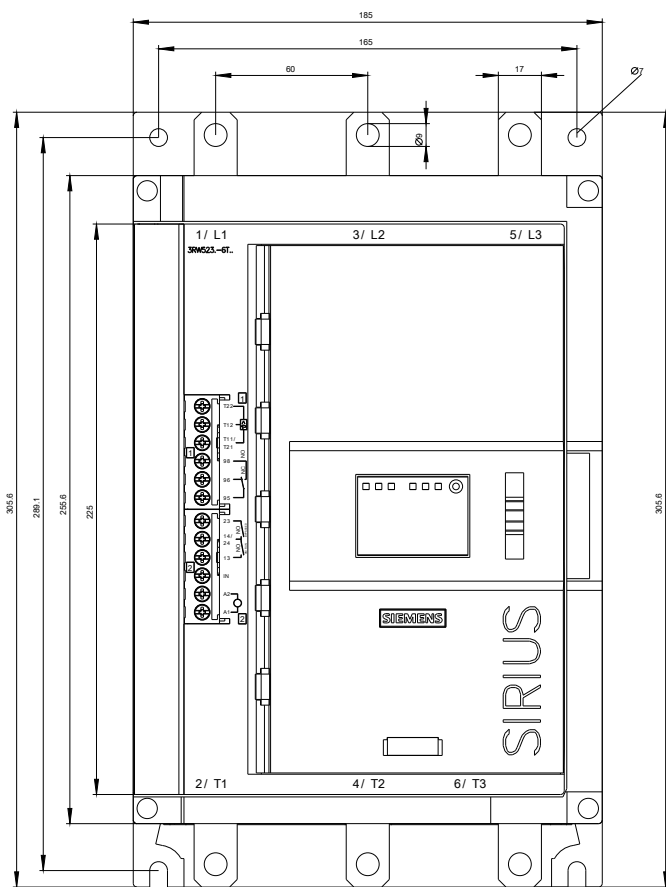
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5235-6TC14&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5235-6TC14&lang=en)

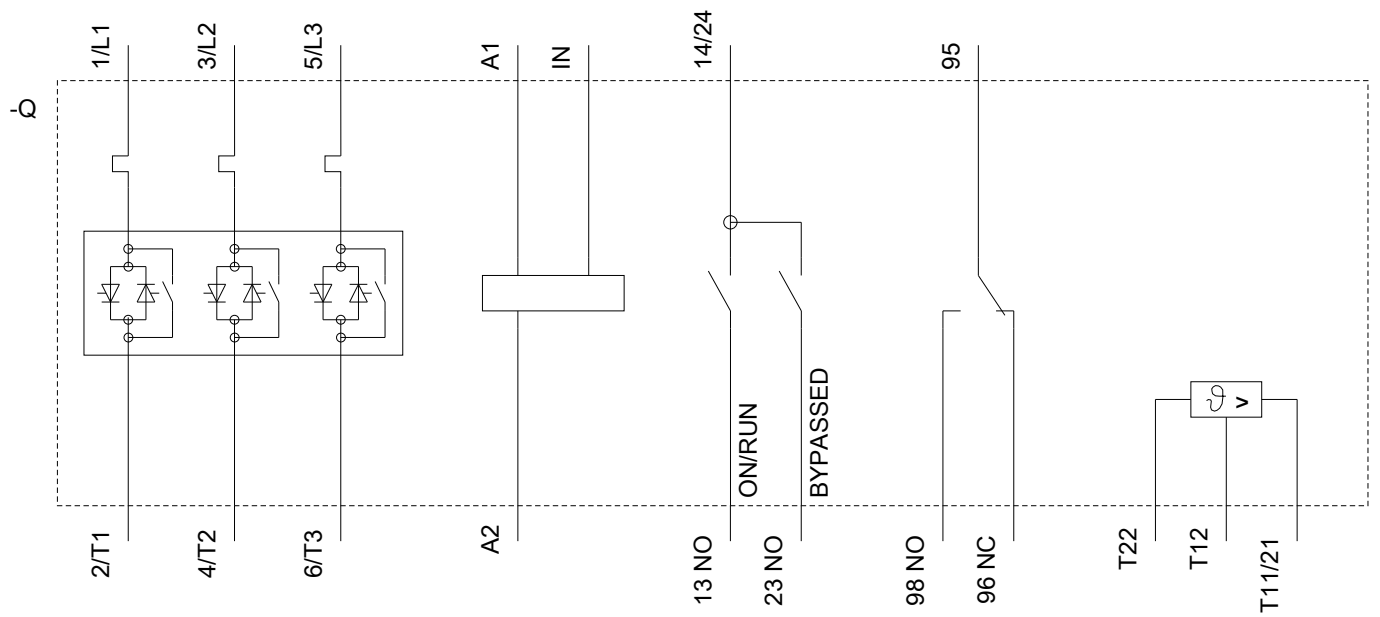
**Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5235-6TC14/char>

**Characteristic: Installation altitude**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5235-6TC14&objecttype=14&gridview=view1>





last modified:

07/04/2018