

SIRIUS soft starter 200-480 V 32 A, 110-250 V AC spring-type 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 500 V</li><li>• of circuit breaker usable at 400 V at inside-delta circuit</li><li>• of circuit breaker usable at 500 V at inside-delta circuit</li><li>• of the gG fuse usable up to 690 V</li></ul></div>

- [3RW5980-0HS00](#)
- [3RW5980-0HF00](#)
- [3RW5980-0CS00](#)
- [3RW5980-0CP00](#)
- [3RW5980-0CT00](#)
- [3RV2032-4VA10; Type of coordination 1, Iq = 65 kA, CLASS 10](#)
- [3RV2032-4VA10; Type of coordination 1, Iq = 10 kA, CLASS 10](#)
- [3RV2032-4JA10; Type of coordination 1, Iq = 65 kA, CLASS 10](#)
- [3RV2032-4JA10; Type of coordination 1, Iq = 10 kA, CLASS 10](#)
- [3NA3824-6; Type of coordination 1, Iq = 65 kA](#)

- 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

[3NA3824-6; Type of coordination 1, I<sub>q</sub> = 65 kA](#)

[3NE1818-0; Type of coordination 2, I<sub>q</sub> = 65 kA](#)

[3NE8022-1; 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>	1 600 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 Klaxon / 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	Yes
• removable terminal for control circuit	Yes
• analog output	No

## Power Electronics

<b>Operating current</b>	
• at 40 °C rated value	32 A
• at 50 °C rated value	28.4 A
• at 60 °C rated value	26 A
<b>Operating current at inside-delta circuit</b>	
• at 40 °C rated value	55.4 A
• at 50 °C rated value	49 A
• at 60 °C rated value	45 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	7.5 kW
• at 230 V at inside-delta circuit at 40 °C rated value	15 kW
• at 400 V at 40 °C rated value	15 kW
• at 400 V at inside-delta circuit at 40 °C rated value	22 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	14 A
• at inside-delta circuit minimum	24.2 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	22 W

- at 50 °C to power-up
- at 60 °C to power-up

21 W

20 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	0.17 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

<b>Mounting position</b>	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
<b>Mounting type</b>	screw fixing
<b>Height</b>	275 mm
<b>Width</b>	170 mm
<b>Depth</b>	152 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>	2.3 kg

#### Connections/Terminals

<b>Type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for control circuit	spring-loaded terminals
<b>Type of connectable conductor cross-sections</b>	
• for main contacts	
— solid	2x (1.0 ... 2.5 mm²), 2x (2.5 ... 10 mm²)
— finely stranded with core end processing	2x (1.0 ... 2.5 mm²), 2x (2.5 ... 6.0 mm²)
<b>Type of connectable conductor cross-sections at AWG conductors for control circuit</b>	
• solid	2x (24 ... 16)
• finely stranded with core end processing	2x (24 ... 16)
<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

<b>Manufacturer's article number</b>	
• of the fuse usable up to 575/600 V according to UL	Type: Class RK5 / K5, max. 125 A; Standard fault, I <sub>q</sub> = 5 kA
• of the fuse usable at inside-delta circuit up to 575/600 V according to UL	Type: Class RK5 / K5, max. 125 A
<b>Operating power [hp] for three-phase motors</b>	
• at 200/208 V at 50 °C rated value	7.5 hp
• at 220/230 V at 50 °C rated value	10 hp
• at 460/480 V at 50 °C rated value	20 hp
• at 200/208 V at inside-delta circuit at 50 °C rated value	15 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	15 hp
• at 460/480 V at inside-delta circuit at 50 °C rated value	30 hp
<b>Contact rating of auxiliary contacts according to UL</b>	R300-B300

<b>General Product Approval</b>	<b>Declaration of Conformity</b>	<b>other</b>
---------------------------------	----------------------------------	--------------



[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=3RW5216-3TC14>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5216-3TC14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5216-3TC14>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5216-3TC14&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5216-3TC14&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5216-3TC14/char>

**Characteristic: Installation altitude**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5216-3TC14&objecttype=14&gridview=view1>



