

SIRIUS soft starter 200-480 V 171 A, 110-250 V AC Screw terminals  
Analog output



product brand name	SIRIUS
product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW52
manufacturer's article number	<div><ul style="list-style-type: none"><li>• of standard HMI module usable</li><li>• of high feature HMI module 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 communication module Modbus RTU usable</li><li>• of communication module Ethernet/IP</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></ul></div>

- 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

[3NA3365-6; Type of coordination 1, I<sub>q</sub> = 65 kA](#)

[3NA3365-6; Type of coordination 1, I<sub>q</sub> = 65 kA](#)

[3NE1230-0; Type of coordination 2, I<sub>q</sub> = 65 kA](#)

[3NE3335; Type of coordination 2, I<sub>q</sub> = 65 kA](#)

## General technical data

<b>starting voltage [%]</b>	30 ... 100 %
<b>stopping voltage [%]</b>	50 ... 50 %
<b>start-up ramp time of soft starter</b>	0 ... 20 s
<b>current limiting value [%] adjustable</b>	130 ... 700 %
<b>certificate of suitability</b>	
• CE marking	Yes
• UL approval	Yes
• CSA approval	Yes
<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>buffering time in the event of power failure</b>	
• for main current circuit	100 ms
• for control circuit	100 ms
<b>insulation voltage</b>	
• rated value	600 V
<b>degree of pollution</b>	3, acc. to IEC 60947-4-2
<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
<b>utilization 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 IEC 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; Electronic motor overload protection
• evaluation of thermistor motor protection	No
• 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; Only in conjunction with special accessories
• error logbook	Yes; Only in conjunction with special accessories
• via software parameterizable	No
• via software configurable	Yes
• PROFINET	Yes; in connection with the PROFINET Standard communication module
• firmware update	Yes
• removable terminal for control circuit	Yes
• torque control	No
• analog output	Yes; 4 ... 20 mA (default) / 0 ... 10 V (parameterizable with High Feature HMI)

## Power Electronics

<b>operational current</b>	
• at 40 °C rated value	171 A
• at 50 °C rated value	153 A
• at 60 °C rated value	141 A
<b>operational current at inside-delta circuit</b>	
• at 40 °C rated value	296 A
• at 50 °C rated value	265 A
• at 60 °C rated value	244 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</b>	
• for 3-phase motors at 230 V at 40 °C rated value	45 kW

<ul style="list-style-type: none"> <li>• for 3-phase motors at 230 V at inside-delta circuit at 40 °C rated value</li> </ul>	90 kW
<ul style="list-style-type: none"> <li>• for 3-phase motors at 400 V at 40 °C rated value</li> </ul>	90 kW
<ul style="list-style-type: none"> <li>• for 3-phase motors at 400 V at inside-delta circuit at 40 °C rated value</li> </ul>	160 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>	
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 1</li> </ul>	81 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 2</li> </ul>	87 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 3</li> </ul>	93 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 4</li> </ul>	99 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 5</li> </ul>	105 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 6</li> </ul>	111 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 7</li> </ul>	117 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 8</li> </ul>	123 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 9</li> </ul>	129 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 10</li> </ul>	135 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 11</li> </ul>	141 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 12</li> </ul>	147 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 13</li> </ul>	153 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 14</li> </ul>	159 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 15</li> </ul>	165 A
<ul style="list-style-type: none"> <li>• at rotary coding switch on switch position 16</li> </ul>	171 A
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	81 A
<b>adjustable motor current</b>	
<ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 1</li> </ul>	140 A
<ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 2</li> </ul>	151 A
<ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 3</li> </ul>	161 A
<ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 4</li> </ul>	171 A
<ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 5</li> </ul>	182 A
<ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 6</li> </ul>	192 A
<ul style="list-style-type: none"> <li>• for inside-delta circuit at rotary coding switch on switch position 7</li> </ul>	203 A

• for inside-delta circuit at rotary coding switch on switch position 8	213 A
• for inside-delta circuit at rotary coding switch on switch position 9	223 A
• for inside-delta circuit at rotary coding switch on switch position 10	234 A
• for inside-delta circuit at rotary coding switch on switch position 11	244 A
• for inside-delta circuit at rotary coding switch on switch position 12	255 A
• for inside-delta circuit at rotary coding switch on switch position 13	265 A
• for inside-delta circuit at rotary coding switch on switch position 14	275 A
• for inside-delta circuit at rotary coding switch on switch position 15	286 A
• for inside-delta circuit at rotary coding switch on switch position 16	296 A
• at inside-delta circuit minimum	140 A
<b>minimum load [%]</b>	15 %; Relative to smallest settable le
<b>power loss [W] for rated value of the current at AC</b>	
• at 40 °C after startup	63 W
• at 50 °C after startup	58 W
• at 60 °C after startup	54 W
<b>power loss [W] at AC at AC</b>	
• at 40 °C during startup	2 405 W
• at 50 °C during startup	2 037 W
• at 60 °C during startup	1 826 W

#### Control circuit/ Control

<b>type of voltage of the control supply voltage</b>	AC
<b>control supply voltage at AC</b>	
• at 50 Hz	110 ... 250 V
• at 60 Hz	110 ... 250 V
<b>relative negative tolerance of the control supply voltage at AC at 50 Hz</b>	-15 %
<b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b>	10 %
<b>relative negative tolerance of the control supply voltage at AC at 60 Hz</b>	-15 %
<b>relative positive tolerance of the control supply voltage at AC at 60 Hz</b>	10 %
<b>control supply voltage frequency</b>	50 ... 60 Hz
<b>relative negative tolerance of the control supply voltage frequency</b>	-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 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 (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 inputs for thermistor connection	0
<ul style="list-style-type: none"> <li>number of digital outputs</li> </ul>	3
<ul style="list-style-type: none"> <li>number of digital outputs not parameterizable</li> </ul>	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"> <li>at AC-15 at 250 V rated value</li> </ul>	3 A
<ul style="list-style-type: none"> <li>at DC-13 at 24 V rated value</li> </ul>	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	306 mm
width	185 mm
depth	203 mm
required spacing with side-by-side mounting	
<ul style="list-style-type: none"> <li>forwards</li> </ul>	10 mm
<ul style="list-style-type: none"> <li>backwards</li> </ul>	0 mm
<ul style="list-style-type: none"> <li>upwards</li> </ul>	100 mm
<ul style="list-style-type: none"> <li>downwards</li> </ul>	75 mm
<ul style="list-style-type: none"> <li>at the side</li> </ul>	5 mm
weight without packaging	7.15 kg

Connections/ Terminals	
type of electrical connection	
<ul style="list-style-type: none"> <li>for main current circuit</li> </ul>	busbar connection
<ul style="list-style-type: none"> <li>for control circuit</li> </ul>	screw-type terminals
width of connection bar maximum	25 mm

<b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for DIN cable lug for main contacts stranded</li> <li>• for DIN cable lug for main contacts finely stranded</li> </ul>	2x (16 ... 95 mm <sup>2</sup> ) 2x (25 ... 120 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for control circuit solid</li> <li>• for control circuit finely stranded with core end processing</li> <li>• at AWG cables for control circuit solid</li> </ul>	1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> ) 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ) 1x (20 ... 12), 2x (20 ... 14)
<b>wire length</b> <ul style="list-style-type: none"> <li>• between soft starter and motor maximum</li> <li>• at the digital inputs at AC maximum</li> </ul>	800 m 100 m
<b>tightening torque</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>	10 ... 14 N·m 0.8 ... 1.2 N·m
<b>tightening torque [lbf·in]</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>	89 ... 124 lbf·in 7 ... 10.3 lbf·in

#### Ambient conditions

<b>installation altitude at height above sea level</b> <ul style="list-style-type: none"> <li>• maximum</li> </ul>	5 000 m; Derating as of 1000 m, see catalog
<b>ambient temperature</b> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage and transport</li> </ul>	-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above -40 ... +80 °C
<b>environmental category</b> <ul style="list-style-type: none"> <li>• during operation acc. to IEC 60721</li> <li>• during storage acc. to IEC 60721</li> <li>• during transport acc. to IEC 60721</li> </ul>	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)
EMC emitted interference	acc. to IEC 60947-4-2: Class A

#### Communication/ Protocol

<b>communication module is supported</b> <ul style="list-style-type: none"> <li>• PROFINET standard</li> <li>• EtherNet/IP</li> <li>• Modbus RTU</li> <li>• Modbus TCP</li> <li>• PROFIBUS</li> </ul>	Yes Yes Yes Yes Yes
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#### UL/CSA ratings

<b>manufacturer's article number</b> <ul style="list-style-type: none"> <li>• <b>of circuit breaker</b> <ul style="list-style-type: none"> <li>— usable for Standard Faults at 460/480 V according to UL</li> <li>— usable for High Faults at 460/480 V according to UL</li> <li>— usable for Standard Faults at 460/480 V at inside-delta circuit according to UL</li> <li>— usable for High Faults at 460/480 V at inside-delta circuit according to UL</li> <li>— usable for Standard Faults at 575/600 V according to UL</li> <li>— usable for Standard Faults at 575/600 V at inside-delta circuit according to UL</li> </ul> </li> <li>• <b>of the fuse</b> <ul style="list-style-type: none"> <li>— usable for Standard Faults up to 575/600 V according to UL</li> <li>— usable for High Faults up to 575/600 V according to UL</li> <li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</li> <li>— usable for High Faults at inside-delta circuit up to 575/600 V according to UL</li> </ul> </li> </ul>	<p>Siemens type: 3VA52, max. 250 A; I<sub>q</sub> = 10 kA</p> <p>Siemens type: 3VA52, max. 250 A; I<sub>q</sub> max = 65 kA</p> <p>Siemens type: 3VA52, max. 250 A; I<sub>q</sub> = 10 kA</p> <p>Siemens type: 3VA52, max. 250 A; I<sub>q</sub> max = 65 kA</p> <p>Siemens type: 3VA52, max. 250 A; I<sub>q</sub> = 10 kA</p> <p>Siemens type: 3VA52, max. 250 A; I<sub>q</sub> = 10 kA</p> <p>Type: Class RK5 / K5, max. 400 A; I<sub>q</sub> = 10 kA</p> <p>Type: Class J / L, max. 350 A; I<sub>q</sub> = 100 kA</p> <p>Type: Class RK5 / K5, max. 400 A; I<sub>q</sub> = 10 kA</p> <p>Type: Class J / L, max. 350 A; I<sub>q</sub> = 100 kA</p>
<b>operating power [hp] for three-phase motors</b> <ul style="list-style-type: none"> <li>• at 200/208 V at 50 °C rated value</li> <li>• at 220/230 V at 50 °C rated value</li> <li>• at 460/480 V at 50 °C rated value</li> <li>• at 200/208 V at inside-delta circuit at 50 °C rated value</li> <li>• at 220/230 V at inside-delta circuit at 50 °C rated value</li> <li>• at 460/480 V at inside-delta circuit at 50 °C rated value</li> </ul>	<p>50 hp</p> <p>50 hp</p> <p>100 hp</p> <p>75 hp</p> <p>100 hp</p> <p>200 hp</p>
<b>contact rating of auxiliary contacts according to UL</b>	<p>R300-B300</p>
<b>Safety related data</b>	
<b>electromagnetic compatibility</b>	<p>in accordance with IEC 60947-4-2</p>
<b>Certificates/ approvals</b>	



General Product Approval			EMC	Declaration of Conformity	
					
CSA	CCC	UL		RCM	EG-Konf.

Declaration of Conformity	Test Certificates	Marine / Shipping			
<a href="#">Miscellaneous</a>	<a href="#">Type Test Certificates/Test Report</a>				
		ABS	LRS	PRS	DNVGL.COM/AF

other
<a href="#">Confirmation</a>

#### 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=3RW5236-6AC14>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5236-6AC14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5236-6AC14>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW5236-6AC14&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5236-6AC14&lang=en)

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

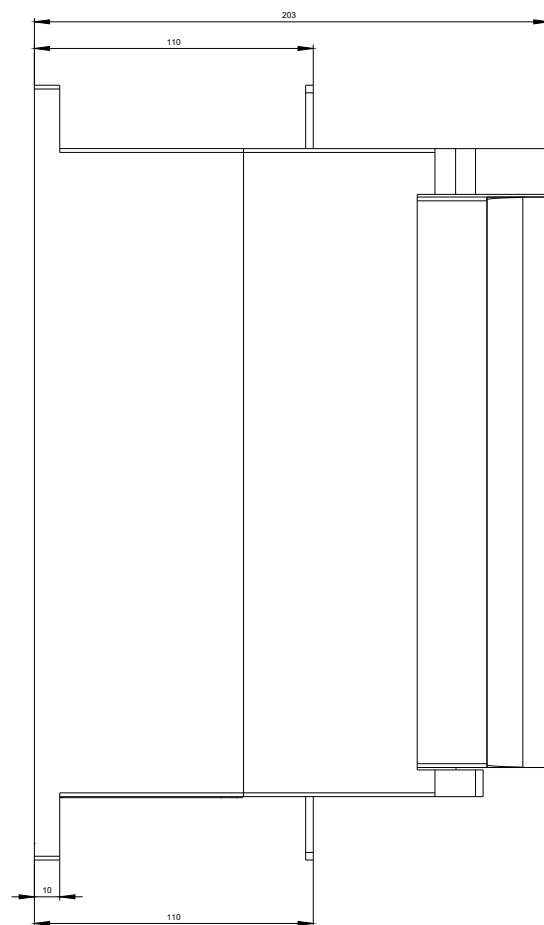
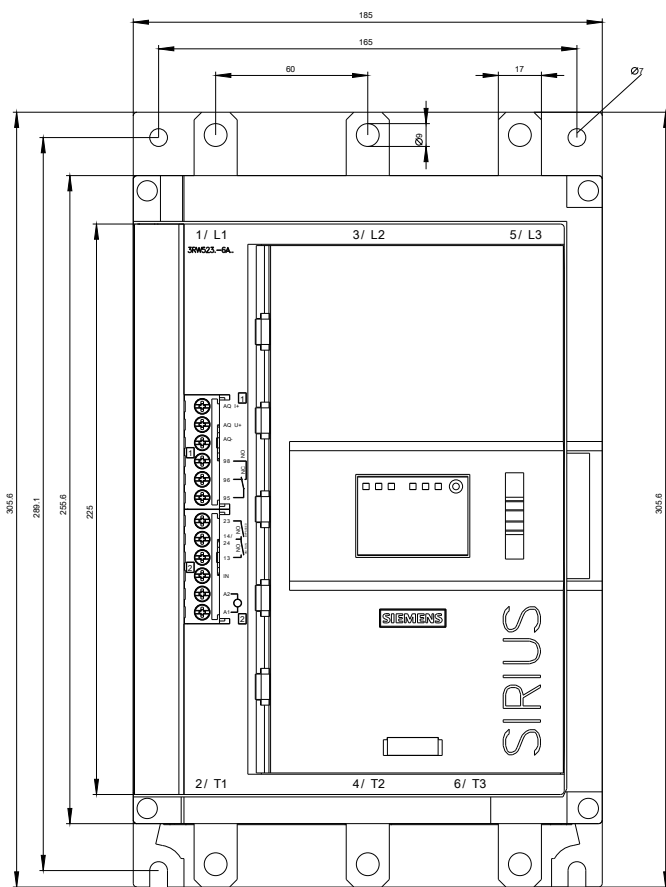
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5236-6AC14/char>

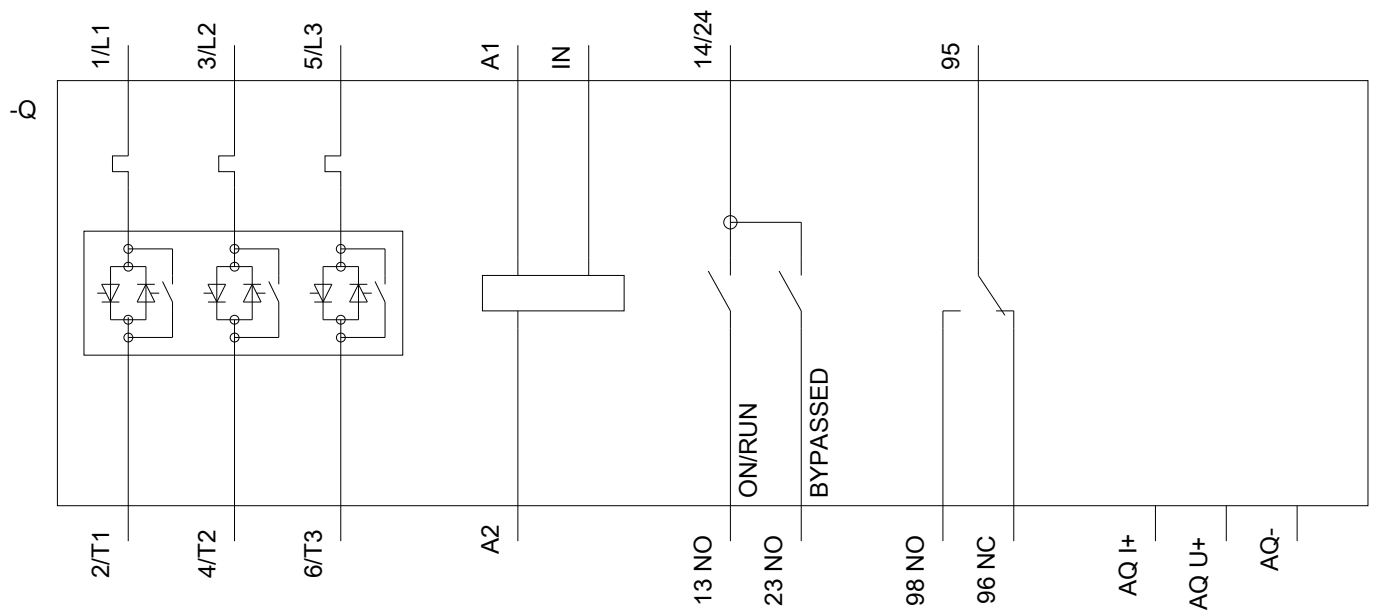
##### Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5236-6AC14&objecttype=14&gridview=view1>

##### Simulation Tool for Soft Starters (STS)

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





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