

SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 5.2A  
 40 DEGREES C 48-480V / 110-230V AC 2-PH.  
 CONTROLLED INSTANTANEOUS SPRING-LOADED  
 TERMINALS



General technical data		
product brandname		SIRIUS
Protection class IP		IP20
Insulation voltage rated value	V	600
Installation altitude at height above sea level maximum	m	1 000
Ambient temperature		
• during storage	°C	-55 ... +80
• during operation	°C	-25 ... +60
Shock resistance acc. to IEC 60068-2-27		15g / 11 ms
Vibration resistance acc. to IEC 60068-2-6		2g
Surge current resistance rated value	A	200
Power loss [W] total typical	W	10
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		K
Equipment marking acc. to DIN EN 61346-2		Q
Product function		instantaneous switching
Main circuit		
Number of poles for main current circuit		3

<b>Number of NO contacts for main contacts</b>		2
<b>Operating frequency rated value</b>	Hz	60 ... 50
<b>Operating voltage at AC</b>		
• at 60 Hz rated value	V	48 ... 480
• at 50 Hz rated value	V	48 ... 480
<b>Operating current</b>		
• minimum	mA	100
• at AC-53a at 400 V at ambient temperature 40 °C rated value	A	5.2
<b>Operating range relative to the operating voltage at AC</b>		
• at 50 Hz	V	40 ... 506
• at 60 Hz	V	40 ... 506
<b>Operating power at AC-3 at 400 V rated value</b>	kW	2.2
<b>Derating temperature</b>	°C	40
<b>Symmetrical line frequency tolerance</b>	Hz	5
<b>Relative symmetrical tolerance of the operating frequency</b>	%	10
<b>I<sup>2</sup>t value maximum</b>	A <sup>2</sup> ·s	200
<b>Rate of voltage rise at the thyristor for main contacts maximum permissible</b>	V/μs	1 000
<b>Blocking voltage at the thyristor for main contacts maximum permissible</b>	V	1 200
<b>Reverse current of the thyristor</b>	mA	10

#### Control circuit/ Control

<b>Type of voltage of the control supply voltage</b>		AC
<b>Control supply voltage frequency</b>		
• 1 rated value	Hz	50
• 2 rated value	Hz	60
<b>Relative symmetrical tolerance</b>		
• of the control supply voltage frequency	%	10
• of the supply voltage frequency	%	10
<b>Control supply voltage 1</b>		
• at AC		
— at 50 Hz Initial rated value	V	90
— at 50 Hz Final rated value	V	253
— at 60 Hz Initial rated value	V	90
— at 60 Hz Final rated value	V	253
<b>Control supply voltage at AC</b>		
• initial value for signal <1> detection	V	90
• at 50 Hz Full-scale value for signal <0> recognition	V	40

<ul style="list-style-type: none"> <li>• at 60 Hz Full-scale value for signal&lt;0&gt; recognition</li> </ul>	V	40
<b>Control current</b> <ul style="list-style-type: none"> <li>• at AC rated value</li> <li>• at minimum control supply voltage <ul style="list-style-type: none"> <li>— at AC</li> </ul> </li> </ul>	mA	15
<b>switching times</b> <ul style="list-style-type: none"> <li>• ON delay</li> <li>• OFF delay</li> </ul>		5 ms 30 ms + in addition max. one half-wave

### Installation/ mounting/ dimensions

<b>Mounting position</b>		vertical
<b>Mounting type</b>		screw and snap-on mounting onto 35 mm standard mounting rail
<b>Mounting type Side-by-side mounting</b>		Yes
<b>Tightening torque of the screw for securing the equipment</b>	N·m	1.5
<b>Design of the thread of the screw for securing the equipment</b>		M4
<b>Width</b>	mm	45
<b>Height</b>	mm	95
<b>Depth</b>	mm	100.8
<b>Required spacing with side-by-side mounting</b> <ul style="list-style-type: none"> <li>• upwards</li> <li>• downwards</li> </ul>	mm	70 50

### Connections/Terminals

<b>Type of electrical connection</b> <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>		spring-loaded terminals spring-loaded terminals
<b>Product function removable terminal for auxiliary and control circuit</b>		Yes
<b>Type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded <ul style="list-style-type: none"> <li>— with core end processing</li> <li>— without core end processing</li> </ul> </li> </ul> </li> <li>• at AWG conductors <ul style="list-style-type: none"> <li>— for main contacts</li> <li>— for auxiliary and control contacts</li> </ul> </li> <li>• for auxiliary and control contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded</li> </ul> </li> </ul>		2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ) 2x (0.5 ... 2.5 mm <sup>2</sup> )  2x (18 ... 14) 1x (AWG 20 ... 12)  0.5 ... 1.5 mm <sup>2</sup>

— with core end processing		0.5 ... 2.5 mm <sup>2</sup>
— without core end processing		0.5 ... 2.5 mm <sup>2</sup>
<b>Wire stripping length of the cable</b>		
• for main contacts	mm	10
• for auxiliary and control contacts	mm	10

### UL/CSA ratings

<b>Full-load current (FLA) for three-phase AC motor</b>		
• at 480 V rated value	A	3.4
<b>Yielded mechanical performance [hp] for three-phase AC motor</b>		
• at 200/208 V rated value	hp	0.5
• at 220/230 V rated value	hp	0.75
• at 460/480 V rated value	hp	2

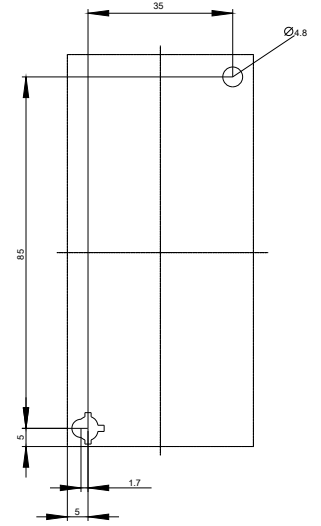
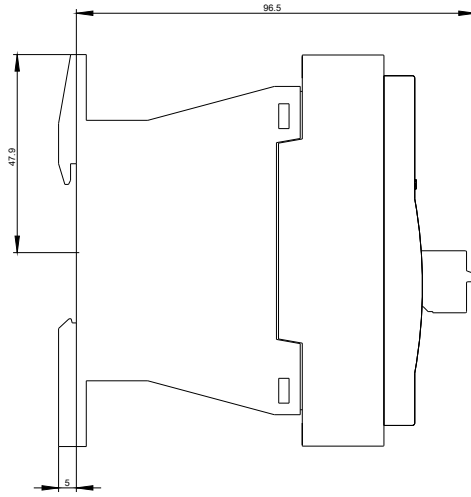
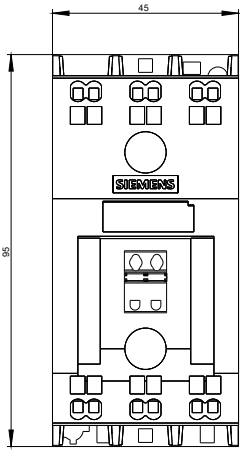
### Certificates/approvals

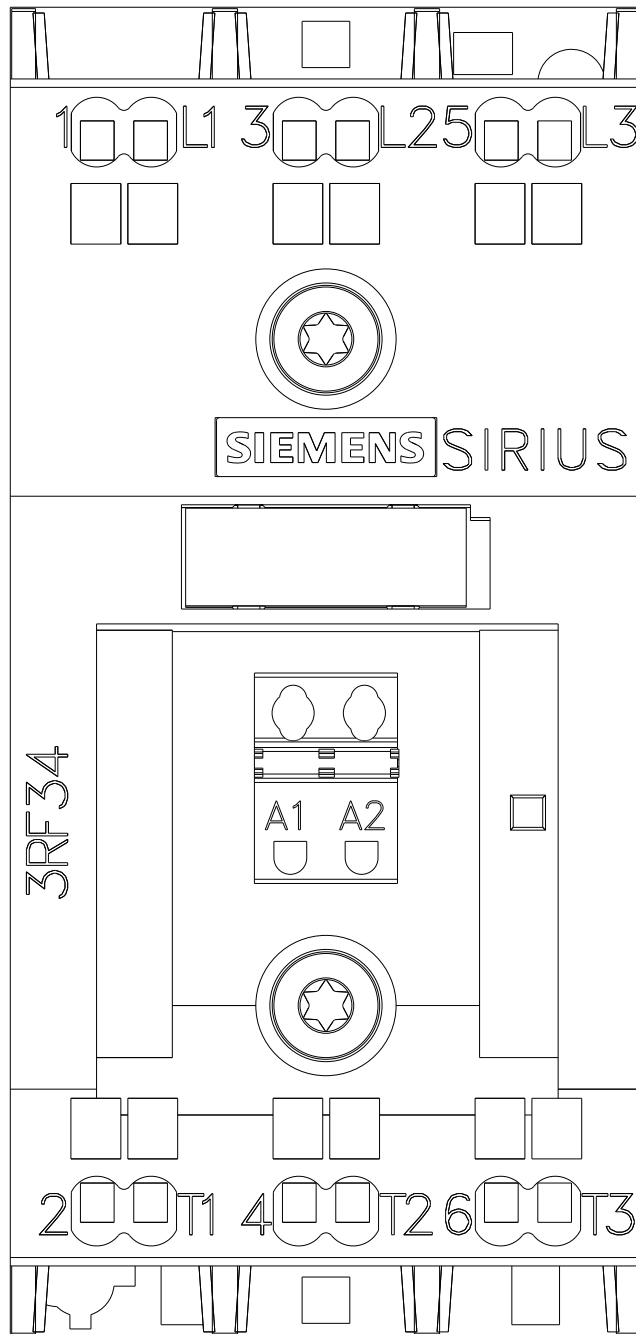
<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>
 CCC	 CSA	 UL
		
 C-Tick		
 EG-Konf.		

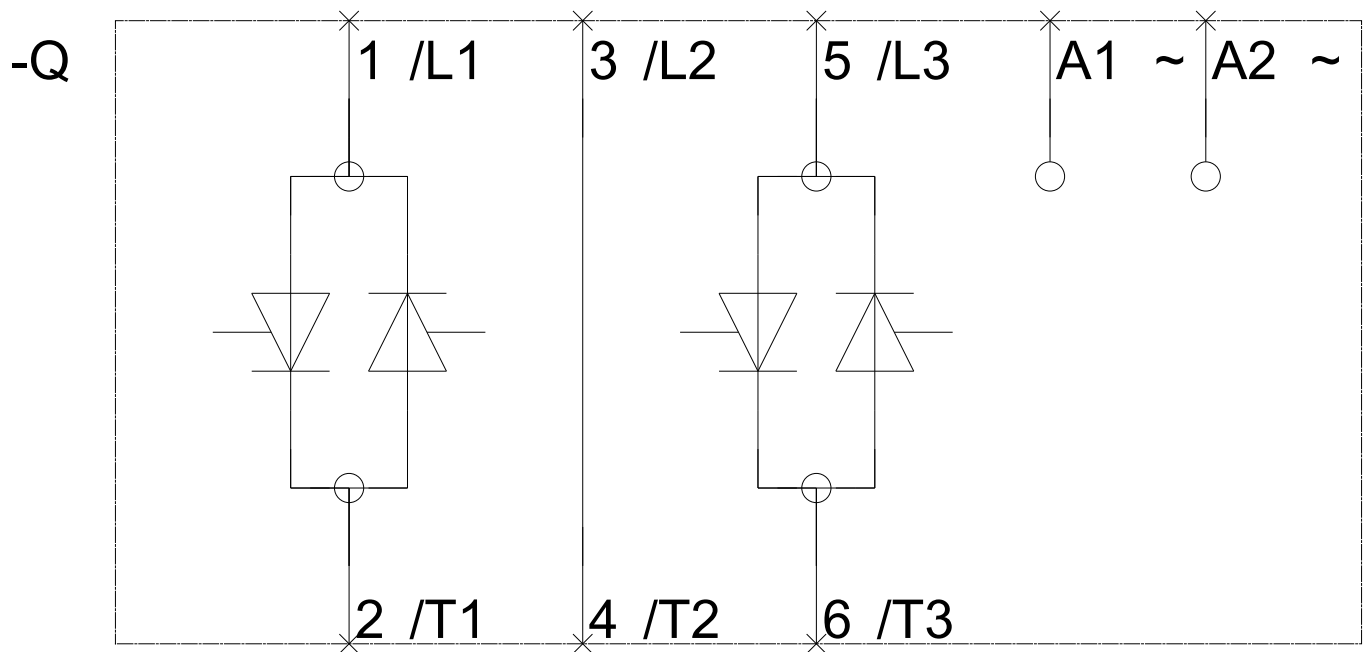
<b>Test Certificates</b>	<b>other</b>
<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Environmental Confirmations</a>
	<a href="#">Confirmation</a>

### 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=3RF3405-2BB24>
- Cax online generator**  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF3405-2BB24>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RF3405-2BB24>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RF3405-2BB24&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF3405-2BB24&lang=en)







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