



SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 16A 40  
DEGREES C 48-480V / 24V DC 2-PH. CONTROLLED  
INSTANTANEOUS SCREW TERMINALS

### General technical data:

<b>Product brand name</b>		SIRIUS
<b>product designation</b>		solid-state motor contactor
<b>Protection class IP</b>		IP20
<b>Insulation voltage / rated value</b>	V	600
<b>Installation altitude / at a height over sea level / maximum</b>	m	1,000
<b>Ambient temperature</b>		
• during storage	°C	-55 ... 80
• during operating	°C	-25 ... 60
<b>Resistance against shock</b>		
• according to IEC 60068-2-27		15g / 11 ms
<b>Resistance against vibration</b>		
• according to IEC 60068-2-6		2g
<b>Resistance against the impulse current / rated value</b>	A	1,150
<b>Active power loss / total / typical</b>	W	28
<b>Item designation</b>		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		K
• according to DIN EN 61346-2		Q
<b>Product function</b>		instantaneous switching

Main circuit:		
Number of poles / for main current circuit		3
Number of NC contacts / for main contacts		0
Number of NO contacts / for main contacts		2
Operating frequency		
• rated value	Hz	60 ... 50
Operating voltage		
• at 60 Hz / at AC / rated value	V	48 ... 480
• at 50 Hz / at AC / rated value	V	48 ... 480
Operating current		
• minimum	mA	500
• at AC-3 / at 400 V / rated value	A	16
Working area related to the operating voltage		
• at 50 Hz / for AC	V	40 ... 506
• at 60 Hz / for AC	V	40 ... 506
Service power / at AC-3 / at 400 V		
• rated value	kW	7.5
Derating temperature	°C	40
Tolerance of the line frequency	Hz	5
Relative symmetrical tolerance / of the operation frequency	%	10
I <sup>2</sup> t-level / maximum	A <sup>2</sup> ·s	6,600
Voltage slew rate / at the thyristor / for main contacts		
• maximum permissible	V/μs	1,000
Block voltage / at the thyristor / for main contacts		
• maximum permissible	V	1,200
Reverse current / of the thyristor	mA	10
Control circuit:		
Type of voltage / of the controlled supply voltage		DC
Control supply voltage		
• 1		
• for DC		
• initial rated value	V	15
• final rated value	V	30
• for DC / final value for signal<0>-recognition	V	5
Control current		
• for DC / rated value	mA	15
• at minimum control supply voltage / for DC	mA	2
Auxiliary circuit:		

<b>Number of NC contacts / for auxiliary contacts</b>		0
<b>Number of NO contacts / for auxiliary contacts</b>		0
<b>Number of change-over switches / for auxiliary contacts</b>		0

<b>Installation/mounting/dimensions:</b>		
<b>Built in orientation</b>		vertical
<b>Type of mounting</b>		screw and snap-on mounting onto 35 mm standard mounting rail
<b>Type of fixing/fixation / series installation</b>		Yes
<b>Tightening torque / of the screw for fastening of the operating resource</b>	N·m	1.5
<b>Design of the thread / of the screw for fastening of the operating resource</b>		M4
<b>Width</b>	mm	90
<b>Height</b>	mm	95
<b>Depth</b>	mm	100.8
<b>Distance, to be maintained, to the ranks assembly</b>		
• upwards	mm	70
• downwards	mm	50

<b>Connections:</b>		
<b>Design of the electrical connection</b>		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
<b>Design of the thread / of the connection screw</b>		
• for main contacts		M4
• of the auxiliary and control pins		M3
<b>Product function / removable terminal for auxiliary and control circuit</b>		Yes
<b>Type of the connectable conductor cross-section</b>		
• for main contacts		
• solid		2x (0.5 ... 2.5 mm²)
• finely stranded		
• with conductor end processing		2x (0.5 ... 1.5 mm²)
• without conductor final cutting		2x (0.5 ... 2.5 mm²)
• for AWG conductors / for main contacts		2x (18 ... 14)
• for auxiliary and control contacts		
• solid		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
• finely stranded		
• with conductor end processing		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
• without conductor final cutting		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
• for AWG conductors / for auxiliary and control contacts		1x (AWG 20 ... 12)

<b>Tightening torque</b> • for main contacts / with screw-type terminals • for auxiliary and control contacts / with screw-type terminals	N·m	2 ... 2.5
	N·m	0.5 ... 0.6
<b>Tightening torque (lbf·in)</b> • for main contacts / with screw-type terminals • for auxiliary and control contacts / with screw-type terminals	lbf·in	18 ... 22
	lbf·in	7.5 ... 5.3
<b>Skinning length / of the cable</b> • for main contacts • for auxiliary and control contacts	mm	7
	mm	7

#### Certificates/approvals:

##### Verification of suitability

CE / UL / CSA / CCC / C-TICK

##### General Product Approval

##### Test Certificates

##### other

[ROSTEST](#)

[Manufacturer](#)

[Manufacturer](#)

#### UL/CSA ratings

##### yielded mechanical performance (hp) / for three-phase squirrel cage motors

- at 200/208 V / rated value
- at 220/230 V / rated value
- at 460/480 V / rated value

hp 2  
hp 2  
hp 5

##### Operating current (FLA) / for three-phase squirrel cage motors

- at 480 V / rated value

A 7.6

#### Further information:

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

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

##### Industry Mall (Online ordering system)

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

##### CAX-Online-Generator

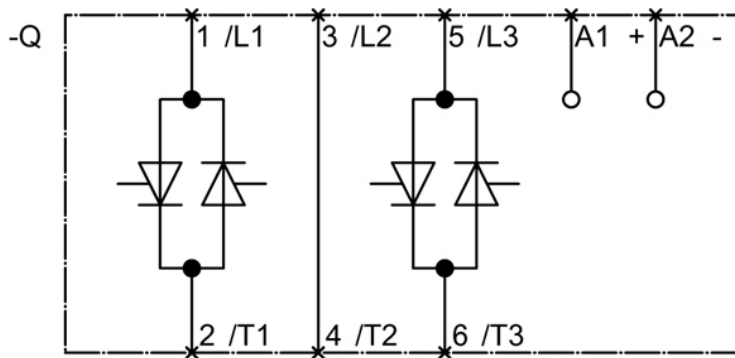
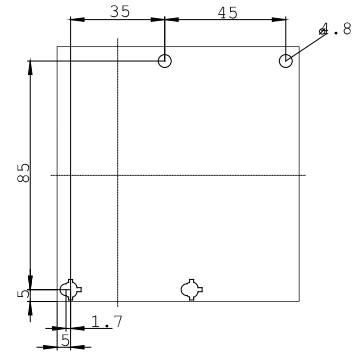
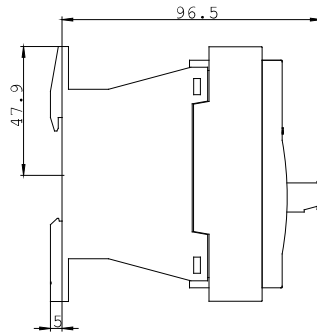
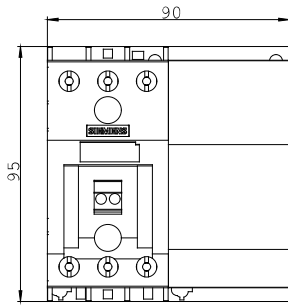
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RF3416-1BB04/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF3416-1BB04](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF3416-1BB04)



last change:

Oct 21, 2011