



SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 12.5A 40 DEGREES C 48-480V / 110-230V AC 2-PH. CONTROLLED INSTANTANEOUS SCREW TERMINALS

General technical data:

product brand name		SIRIUS
product designation		solid-state motor contactor
• _1 / of the accessories that can be ordered		Link module
• _2 / of the accessories that can be ordered		Connection adapter
Manufacturer article number		
• _1 / of the accessories that can be ordered		3RA2921-1BA00
• _2 / of the accessories that can be ordered		3RF3900-0QA88
Protection class IP		IP20
Insulation voltage / rated value	V	600
Installation altitude / at a height over sea level / maximum	m	1,000
Ambient temperature		
• during storage	°C	-55 ... +80
• during operating	°C	-25 ... +60
Resistance against shock		
• according to IEC 60068-2-27		15g / 11 ms
Resistance against vibration		
• according to IEC 60068-2-6		2g
Resistance against the impulse current / rated value	A	1,200
Active power loss / total / typical	W	22

Item designation • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 • according to DIN EN 61346-2		K
		Q
Product function		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 • at 50 Hz / at AC / rated value	V	48 ... 480
	V	48 ... 480
Operating current • minimum • at AC-3 / at 400 V / rated value	mA	500
	A	12.5
Working area related to the operating voltage • at 50 Hz / for AC • at 60 Hz / for AC	V	40 ... 506
	V	40 ... 506
Service power / at AC-3 / at 400 V • rated value	kW	5.5
Derating temperature	°C	40
Tolerance of the line frequency	Hz	5
Relative symmetrical tolerance / of the operation frequency	%	10
I²t-level / maximum	A ² ·s	7,200
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		AC
Control supply voltage frequency • 1 / rated value • 2 / rated value	Hz	50
	Hz	60
Relative symmetrical tolerance • of the control supply voltage frequency • of the supply voltage frequency	%	10
	%	10

Control supply voltage		
• 1		
• at 50 Hz / for AC		
• initial rated value	V	90
• final rated value	V	253
• at 60 Hz / for AC		
• initial rated value	V	90
• final rated value	V	253
• at 50 Hz / for AC / final value for signal<0>-recognition	V	40
• at 60 Hz / for AC / final value for signal<0>-recognition	V	40
Control current		
• for AC / rated value	mA	15
• at minimum control supply voltage / for AC	mA	2
Auxiliary circuit:		
Number of NC contacts / for auxiliary contacts		0
Number of NO contacts / for auxiliary contacts		0
Number of change-over switches / for auxiliary contacts		0
Installation/mounting/dimensions:		
Built in orientation		vertical
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail
Type of fixing/fixation / series installation		Yes
Tightening torque / of the screw for fastening of the operating resource	N·m	1.5
Design of the thread / of the screw for fastening of the operating resource		M4
Width	mm	90
Height	mm	95
Depth	mm	100.8
Distance, to be maintained, to the ranks assembly		
• upwards	mm	70
• downwards	mm	50
Connections:		
Design of the electrical connection		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
Design of the thread / of the connection screw		
• for main contacts		M4
• of the auxiliary and control pins		M3

Product function / removable terminal for auxiliary and control circuit		Yes
Type of the connectable conductor cross-section - for main contacts - solid - finely stranded - with conductor end processing - for AWG conductors / for main contacts - for auxiliary and control contacts - solid - finely stranded - with conductor end processing - without conductor final cutting - for AWG conductors / for auxiliary and control contacts		2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²) 2x (18 ... 14) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (AWG 20 ... 12)
Tightening torque - for main contacts / with screw-type terminals - for auxiliary and control contacts / with screw-type terminals	N·m N·m	2 ... 2.5 0.5 ... 0.6
Tightening torque (lbf·in) - for main contacts / with screw-type terminals - for auxiliary and control contacts / with screw-type terminals	lbf·in lbf·in	18 ... 22 7.5 ... 5.3
Skinning length / of the cable - for main contacts - for auxiliary and control contacts	mm mm	7 7

Certificates/approvals:

Verification of suitability

CE / UL / CSA / CCC / C-TICK

General Product Approval

Test Certificates

other



[Type Test Certificates/Test Report](#)

[Declaration of Conformity](#)

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

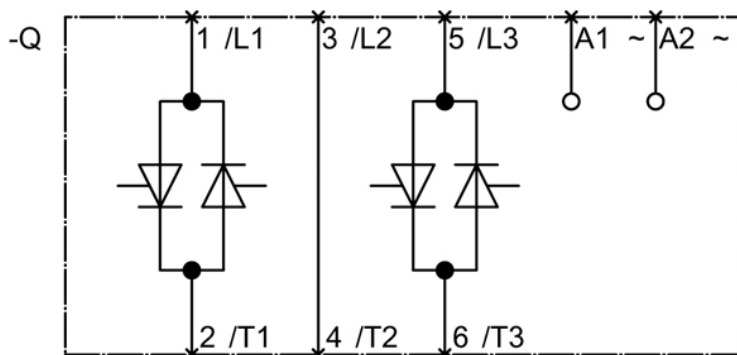
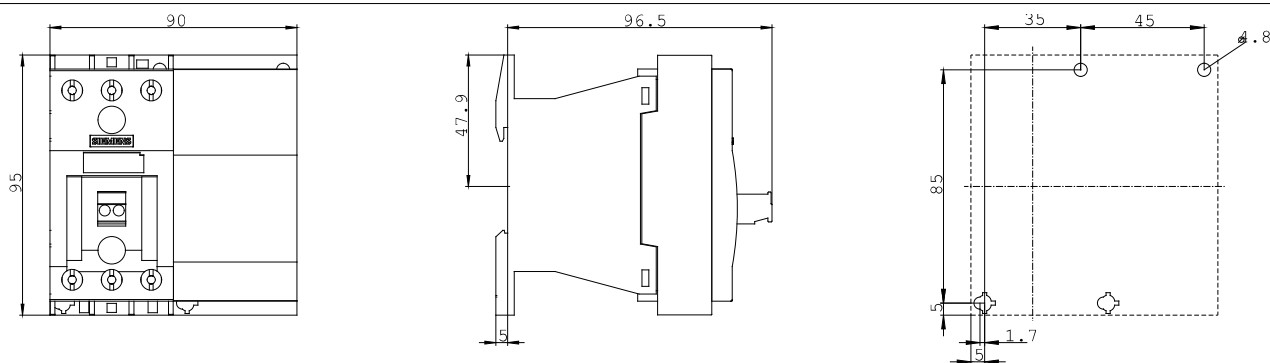
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RF3412-1BB24/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF3412-1BB24



last change:

May 14, 2012