



SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 12.5A 40 DEGREES C 48-480V / 24V DC 2-PH. CONTROLLED INSTANTANEOUS SCREW TERMINALS

General technical data:

product brand name		SIRIUS
product designation		solid-state motor contactor
<ul style="list-style-type: none"> • _1 / of the accessories that can be ordered • _2 / of the accessories that can be ordered 		Link module Connection adapter
Manufacturer article number		
<ul style="list-style-type: none"> • _1 / of the accessories that can be ordered • _2 / of the accessories that can be ordered 		3RA2921-1BA00 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		
<ul style="list-style-type: none"> • during storage • during operating 	°C	-55 ... +80
	°C	-25 ... +60
Resistance against shock		
<ul style="list-style-type: none"> • according to IEC 60068-2-27 		15g / 11 ms
Resistance against vibration		
<ul style="list-style-type: none"> • 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		
<ul style="list-style-type: none"> • 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		
<ul style="list-style-type: none"> • rated value 	Hz	60 ... 50
Operating voltage		
<ul style="list-style-type: none"> • at 60 Hz / at AC / rated value • at 50 Hz / at AC / rated value 	V V	48 ... 480 48 ... 480
Operating current		
<ul style="list-style-type: none"> • minimum • at AC-3 / at 400 V / rated value 	mA A	500 12.5
Working area related to the operating voltage		
<ul style="list-style-type: none"> • at 50 Hz / for AC • at 60 Hz / for AC 	V V	40 ... 506 40 ... 506
Service power / at AC-3 / at 400 V		
<ul style="list-style-type: none"> • 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		
<ul style="list-style-type: none"> • maximum permissible 	V/μs	1,000
Block voltage / at the thyristor / for main contacts		
<ul style="list-style-type: none"> • 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		
<ul style="list-style-type: none"> • 1 <ul style="list-style-type: none"> • for DC <ul style="list-style-type: none"> • initial rated value • final rated value • for DC / final value for signal<0>-recognition 	V V V	15 30 5

Control current • for DC / rated value • at minimum control supply voltage / for DC	mA	15
	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 • downwards	mm mm	70 50

Connections:

Design of the electrical connection • for main current circuit • for auxiliary and control current circuit		screw-type terminals screw-type terminals
Design of the thread / of the connection screw • for main contacts • of the auxiliary and control pins		M4 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		2x (1.5 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (14 ... 10) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)

<ul style="list-style-type: none"> finely stranded with conductor end processing without conductor final cutting for AWG conductors / for auxiliary and control contacts 		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 <ul style="list-style-type: none"> 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) <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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

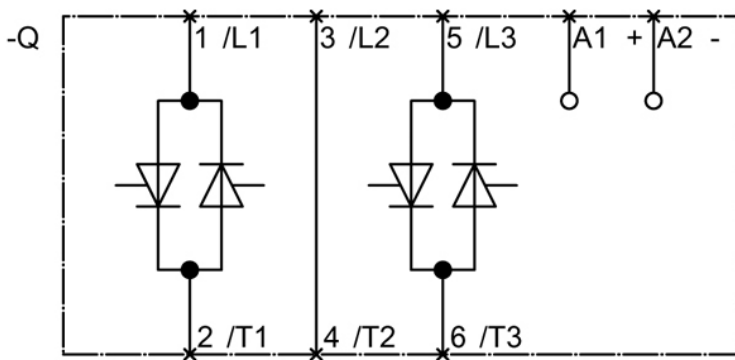
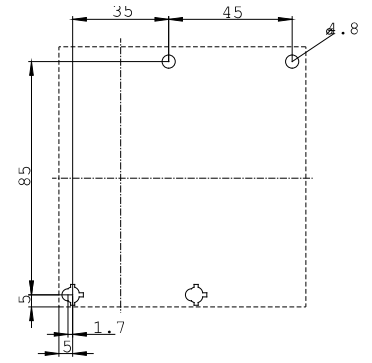
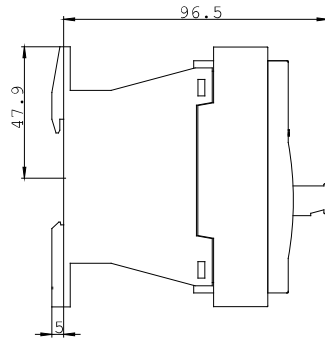
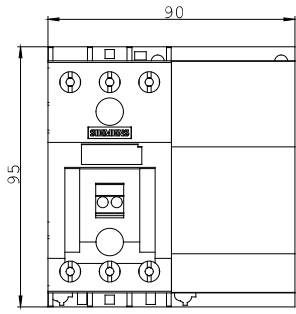
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RF3412-1BB04/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF3412-1BB04



last change:

May 14, 2012