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Data sheet 3RF3412-1BB04

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 _2 of the accessories that can be ordered		Connection adapter
Product designation _1 of the accessories that can be ordered		Link module
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 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	1 200
Active power loss total typical	W	22
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:

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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 with AC		
• at 60 Hz Rated value	V	48 ... 480
• at 50 Hz Rated value	V	48 ... 480
Operating current		
• minimum	mA	500
• at AC-3 at 400 V Rated value	A	12.5
Operating range relative to the operating voltage with AC		
• at 50 Hz	V	40 ... 506
• at 60 Hz	V	40 ... 506
Operating power at AC-3 at 400 V Rated value	kW	5.5
Derating temperature	°C	40
Symmetrical line frequency tolerance	Hz	5
Relative symmetrical tolerance of the operating frequency	%	10
I2t value maximum	$A^2 \cdot s$	7 200
Rate of voltage rise at the thyristor for main contacts maximum permissible	V/µs	1 000
Blocking voltage at the thyristor for main contacts maximum permissible	V	1 200
Reverse current of the thyristor	mA	10

Control circuit/ Control:		
Type of voltage of the control supply voltage		DC
Control supply voltage 1		
• for DC		
— Initial rated value	V	15
— Final rated value	V	30
Control supply voltage for DC Full-scale value for signal<0> recognition	V	5
Control current		
• at minimum control supply voltage		
— for DC	mA	2
• for DC Rated value	mA	15
switching times		
• ON delay		1 ms
• OFF delay		1 ms + in addition max. one half-wave

Auxiliary circuit:		
Number of NC contacts for auxiliary contacts		0
Number of NO contacts for auxiliary contacts		0

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Number of CO contacts for auxiliary contacts		0

Installation/ mounting/ dimensions:		
mounting position		vertical
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail
Mounting type Side-by-side mounting		Yes
Tightening torque of the screw for securing the equipment	N·m	1.5
Design of the thread of the screw for securing the equipment		M4
Width	mm	90
Height	mm	95
Depth	mm	100.8
Required spacing with side-by-side mounting		
• upwards	mm	70
• downwards	mm	50

Connections/ Terminals:		
Type of 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 contacts		M3
Product function removable terminal for auxiliary and control circuit		Yes
Type of connectable conductor cross-section		
• for main contacts		
— solid		2x (1.5 ... 2.5 mm²), 2x (2.5 ... 6 mm²)
— finely stranded		
— with core end processing		2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²
• for AWG conductors		
— for main contacts		2x (14 ... 10)
— for auxiliary and control contacts		1x (AWG 20 ... 12)
• for auxiliary and control contacts		
— solid		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
— finely stranded		
— with core end processing		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
— without core end processing		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
Tightening torque		
• for main contacts with screw-type terminals	N·m	2 ... 2.5
• for auxiliary and control contacts with screw-type terminals	N·m	0.5 ... 0.6

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Tightening torque [lbf·in]		
• for main contacts with screw-type terminals	lbf·in	18 ... 22
• for auxiliary and control contacts with screw-type terminals	lbf·in	7.5 ... 5.3
Wire stripping length of the cable		
• for main contacts	mm	7
• for auxiliary and control contacts	mm	7

Certificates/ approvals:

Certificate of suitability		CE / UL / CSA / CCC / C-TICK

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

Test Certificates	other
Type Test Certificates/Test Report	Environmental Confirmations

UL/CSA ratings:

yielded mechanical performance [hp] for three-phase AC motor		
• at 200/208 V Rated value	metric hp	2
• at 220/230 V Rated value	metric hp	2
• at 460/480 V Rated value	metric hp	5
Full-load current (FLA) for three-phase AC motor		
• 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/industrymall

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF34121BB04

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RF34121BB04/all

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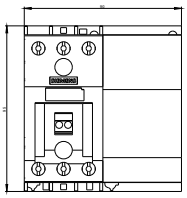
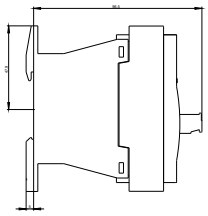
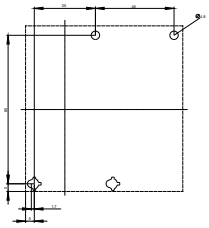
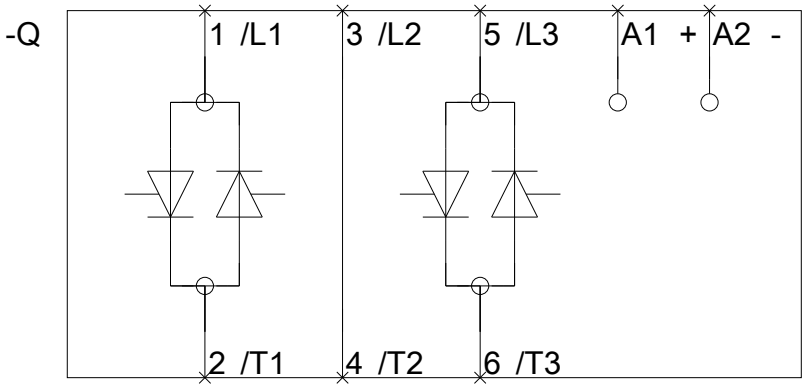
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RF34121BB04&lang=en









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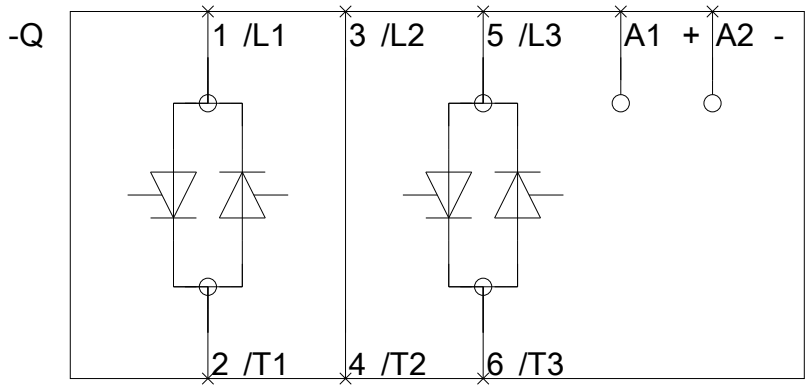

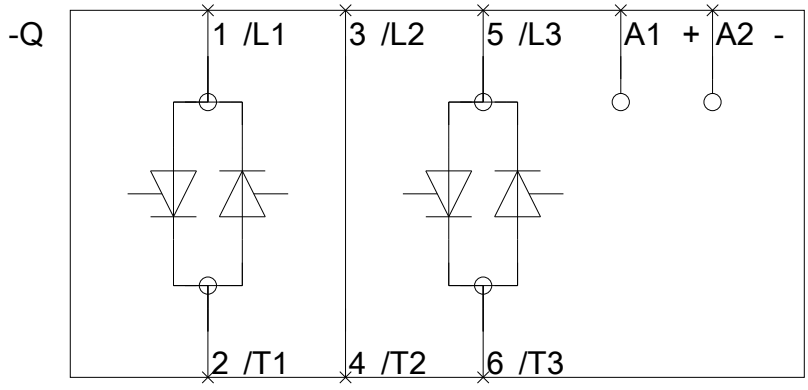

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