

Solid-state contactor 3-phase 3RF3 AC 53 / 7.4 A / 40 °C 48-480 V / 24 V DC Reversing circuit Instantaneous switching screw terminal



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's 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 height above sea level maximum	m	1 000
Ambient temperature		
<ul style="list-style-type: none"> during storage during operation 	°C	-55 ... +80 -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	600

Power loss [W] total typical	W	13
Reference identifier acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		K
Reference identifier acc. to DIN EN 61346-2		Q
Product function		reversing switch

Main circuit

Number of poles for main current circuit		3
Number of NO contacts for main contacts		2
Operating frequency rated value	Hz	60 ... 50
Operating voltage at AC		
• at 60 Hz rated value	V	48 ... 480
• at 50 Hz rated value	V	48 ... 480
Operating current		
• minimum	mA	500
• at AC-53a at 400 V at ambient temperature 40 °C rated value	A	7.4
Operating range relative to the operating voltage at AC		
• at 50 Hz	V	40 ... 506
• at 60 Hz	V	40 ... 506
Operating power at AC-3 at 400 V rated value	kW	3
Derating temperature	°C	40
Symmetrical line frequency tolerance	Hz	5
Relative symmetrical tolerance of the operating frequency	%	10
I ² t value maximum	A ² ·s	1 800
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		
• at DC		
— rated value	V	24
Operating range factor control supply voltage rated value		
• at DC		0.63 ... 1.25
Control supply voltage at DC		
• initial value for signal <1> detection	V	15
• Full-scale value for signal <0> recognition	V	5
Control current		

<ul style="list-style-type: none"> • at minimum control supply voltage <ul style="list-style-type: none"> — at DC • at DC rated value 	mA	2
	mA	15
Switchover delay of reversing contactor	ms	60 ... 100
switching times		
<ul style="list-style-type: none"> • ON delay 		5 ms
<ul style="list-style-type: none"> • OFF delay 		5 ms + in addition max. one half-wave

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	113.8
Required spacing with side-by-side mounting		
<ul style="list-style-type: none"> • upwards 	mm	70
<ul style="list-style-type: none"> • downwards 	mm	50

Connections/Terminals		
Type of electrical connection		
<ul style="list-style-type: none"> • for main current circuit 		screw-type terminals
<ul style="list-style-type: none"> • for auxiliary and control current circuit 		screw-type terminals
Design of the thread of the connection screw		
<ul style="list-style-type: none"> • for main contacts 		M4
<ul style="list-style-type: none"> • of the auxiliary and control contacts 		M3
Product function removable terminal for auxiliary and control circuit		Yes
Type of connectable conductor cross-sections		
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — finely stranded 		2x (1.5 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²)
<ul style="list-style-type: none"> — with core end processing 		2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ²
<ul style="list-style-type: none"> • at AWG conductors <ul style="list-style-type: none"> — for main contacts — for auxiliary and control contacts 		2x (14 ... 10)
		1x (AWG 20 ... 12)
<ul style="list-style-type: none"> • for auxiliary and control contacts <ul style="list-style-type: none"> — solid — finely stranded 		1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)

— with core end processing		1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
— without core end processing		1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
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
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	10
• for auxiliary and control contacts	mm	7

UL/CSA ratings

Full-load current (FLA) for three-phase AC motor		
• at 480 V rated value	A	4.8
Yielded mechanical performance [hp] for three-phase AC motor		
• at 200/208 V rated value	hp	1.5
• at 220/230 V rated value	hp	2
• at 460/480 V rated value	hp	3

Certificates/approvals

General Product Approval	EMC	Declaration of Conformity
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Test Certificates	other
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[Type Test Certificates/Test Report](#)

[Confirmation](#)

Further information

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

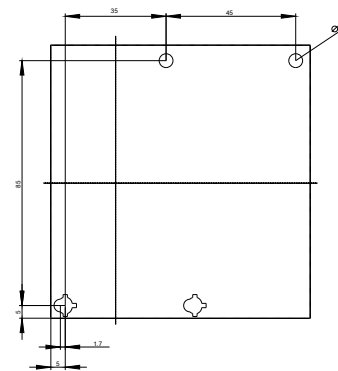
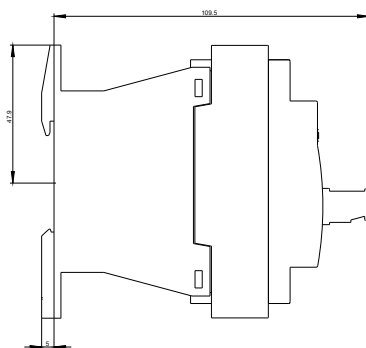
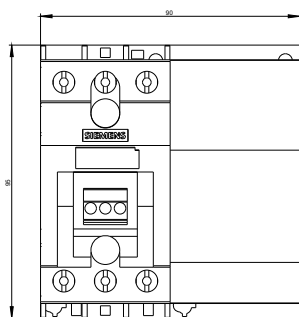
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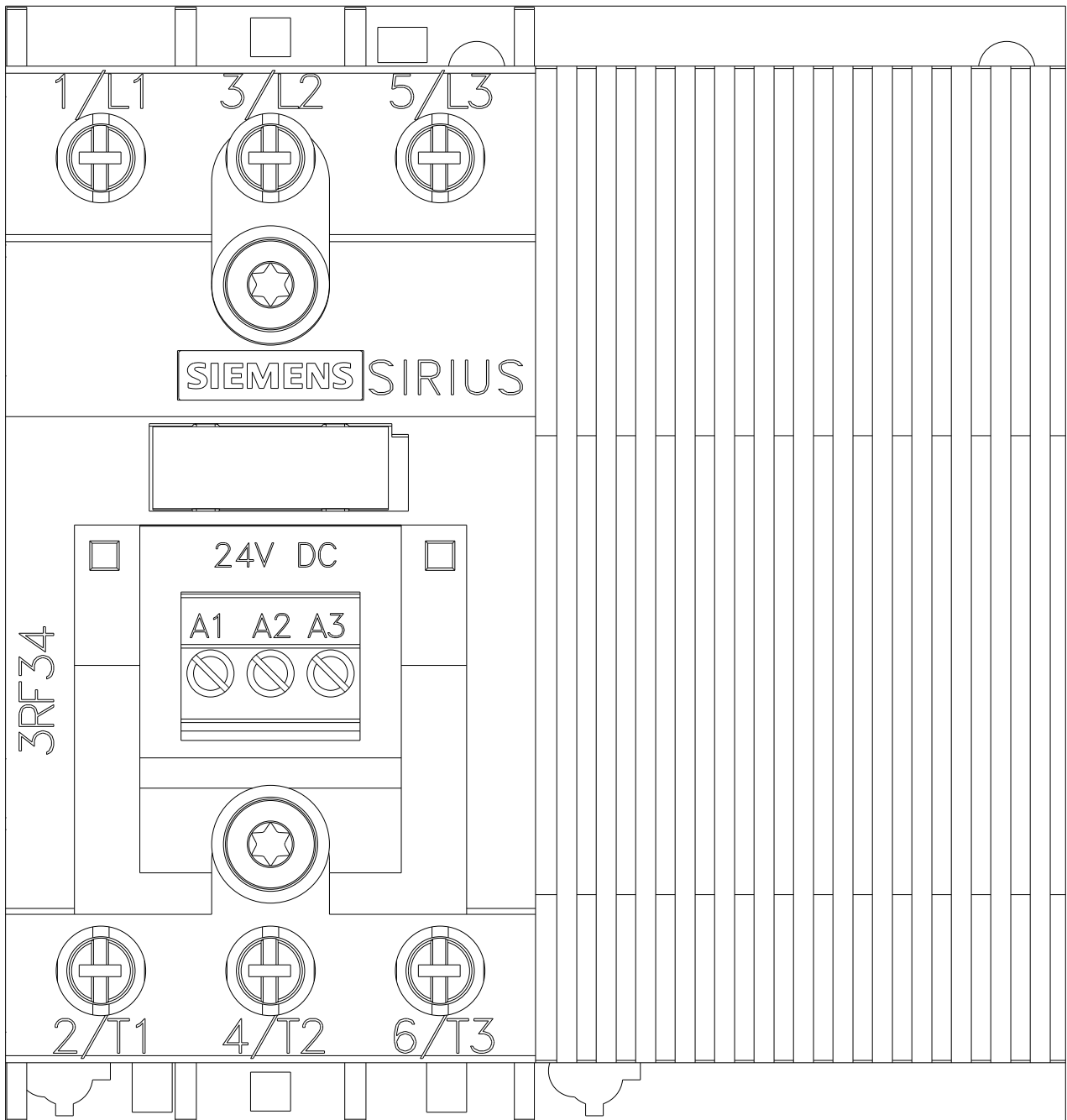
Industry Mall (Online ordering system)

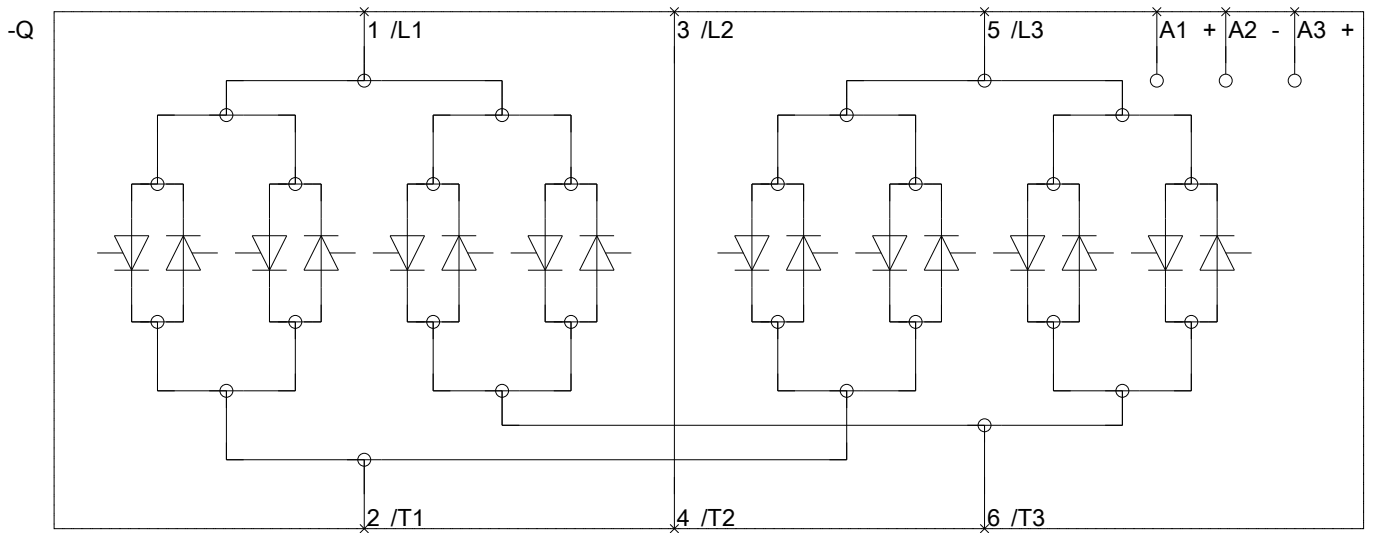
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