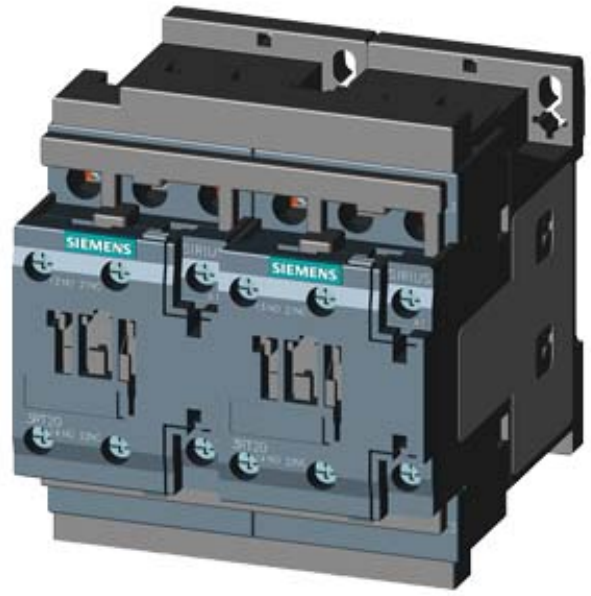
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Product data sheet 3RA2324-8XB30-1AK6



REV. COMB., AC3,
5.5KW/ 400V AC110V 50HZ/120V 60HZ 3-POLE,
SZ S0 SCREW TERMINAL ELECTR. AND MECH.
INTERLOCK 2NO INTEGR.

General technical data:		
product brand name		SIRIUS
product designation		star-delta (wye-delta) contactor assembly 3RA24
Product function		reversing contactor
Size of the contactor		S0
Protection class IP / on the front		IP20
Degree of pollution		3
Insulation voltage / with degree of pollution 3 / rated value	V	690
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature		
• during transport	°C	-55 … +80
• during storage	°C	-55 … +80
• during operating	°C	-25 … +60
Resistance against shock		12.5g / 5 ms and 7.8g / 10 ms
Impulse voltage resistance / rated value	kV	6
Active power loss / per conductor / typical	W	0.5
Item designation		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		K
• according to DIN EN 61346-2		Q

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Manufacturer article number		
• 1 / of the contactor included in the scope of supply		3RT2024-1AK60
• 2 / of the contactor included in the scope of supply		3RT2024-1AK60
• of the RS applied assembly kit		3RA2923-2AA1
Mechanical operating cycles as operating time		
• of the main contacts / typical		10,000,000
• of the auxiliary contacts / typical		10,000,000
• of the contactor / typical		10,000,000
• of the contactor with added auxiliary switch block / typical		10,000,000

Communication:

Product function		
• bus-communication		No
• control circuit interface with IO link		No
Protocol / will be supported / AS interface protocol		No

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		3
Operating voltage / at AC-3 / rated value / maximum	V	690
Operating current		
• at AC-1 / at 400 V		
• at 40 °C ambient temperature / rated value	A	40
• at 60 °C ambient temperature / rated value	A	35
• at AC-2 / at 400 V / rated value	A	12
• at AC-3 / at 400 V / rated value	A	12
• at AC-4 / at 400 V / rated value	A	5.5
• with 1 current path / at DC-1		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	4.5
• with 2 current paths in series / at DC-1		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	35
• with 3 current paths in series / at DC-1		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	35
• with 1 current path / at DC-3 / at DC-5		
• at 24 V / rated value	A	20
• at 110 V / rated value	A	2.5

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• with 2 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	15
• with 3 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	35
Service power		
• at AC-2 / at 400 V / rated value	kW	5.5
• at AC-3		
• at 400 V / rated value	kW	5.5
• at 500 V / rated value	kW	7.5
• at 690 V / rated value	kW	7.5
• at AC-4 / at 400 V / rated value	kW	2.6
Off-load operating frequency	1/h	15
Frequency of operation		
• at AC-1 / according to IEC 60947-6-2 / maximum	1/h	1,000
• at AC-2 / according to IEC 60947-6-2 / maximum	1/h	1,000
• at AC-3 / according to IEC 60947-6-2 / maximum	1/h	1,000
• at AC-4 / according to IEC 60947-6-2 / maximum	1/h	300

Control circuit:

Design of activation		conventional
Type of voltage / of the controlled supply voltage		AC
Control supply voltage frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
Control supply voltage / 1		
• at 50 Hz / for AC / rated value	V	110
• at 60 Hz / for AC / rated value	V	120
Operating range factor control supply voltage rated value / of the magnet coil		
• at 50 Hz / for AC		0.8 … 1.1
• at 60 Hz / for AC		0.8 … 1.1
Apparent pull-in power / of the solenoid / for AC	V·A	65
Apparent holding power / of the solenoid / for AC	V·A	8.5
Inductive power factor		
• with the pull-in power of the coil		0.82
• with the pull-in power of the coil		0.25

Auxiliary circuit:

Product extension / auxiliary switch		Yes

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Contact reliability / of the auxiliary contacts		< 1 error per 100 million operating cycles
Number of NC contacts / for auxiliary contacts		
• per direction of rotation		0
• instantaneous switching		0
• lagging switching		0
Number of NO contacts / for auxiliary contacts		
• per direction of rotation		0
• instantaneous switching		0
• leading switching		0
Operating current / of the auxiliary contacts		
• at AC-12 / maximum	A	10
• at AC-15		
• at 230 V	A	6
• at 400 V	A	3
• at DC-12		
• at 48 V	A	6
• at 60 V	A	6
• at 110 V	A	3
• at 220 V	A	1
• at DC-13		
• at 24 V	A	10
• at 48 V	A	2
• at 60 V	A	2
• at 110 V	A	1
• at 220 V	A	0.3

Short-circuit:

Design of the fuse link		
• for short-circuit protection of the main circuit		
• with type of assignment 1 / required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A
• at type of coordination 2 / required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A
• for short-circuit protection of the auxiliary switch / required		fuse gL/gG: 10 A

Installation/mounting/dimensions:

Built in orientation		any
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail
Width	mm	90
Height	mm	101
Depth	mm	97

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Distance, to be maintained, to the ranks assembly		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6
Distance, to be maintained, to earthed part		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6
Distance, to be maintained, conductive elements		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6

Connections:

Design of the electrical connection		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
Type of the connectable conductor cross-section		
• for main contacts		
• solid		2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)
• stranded		2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)
• finely stranded		
• with conductor end processing		2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²
• for AWG conductors / for main contacts		2x (16 ... 12), 2x (14 ... 8)
• for auxiliary contacts		
• solid		2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
• finely stranded		
• with conductor end processing		2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
• for AWG conductors / for auxiliary contacts		2x (20 ... 16), 2x (18 ... 14)

Certificates/approvals:

Verification of suitability		CE / UL / CSA / CCC

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General Product Approval			Declaration of Conformity	Test Certificates
CSA	GOST	UL	EG-Konf.	Special Test Certificate

Shipping Approval					
ABS	DNV	GL	LRS	PRS	RINA

Shipping Approval	other
RMRS	other

UL/CSA ratings		
yielded mechanical performance (hp)		
• for single-phase squirrel cage motors		
• at 110/120 V / rated value	hp	1
• at 230 V / rated value	hp	2
• for three-phase squirrel cage motors		
• at 220/230 V / rated value	hp	3
• at 460/480 V / rated value	hp	7.5
• at 575/600 V / rated value	hp	10
Operating current (FLA) / for three-phase squirrel cage motors		
• at 480 V / rated value	A	11
• at 600 V / rated value	A	11
Contact rating designation / for auxiliary contacts / according to UL		A600 / Q600

Safety:		
B10 value / with high demand rate		
• according to SN 31920		1,000,000
Failure rate (FIT value) / with low demand rate		
• according to SN 31920	FIT	100
Proportion of dangerous failures		
• with low demand rate / according to SN 31920	%	40
• with high demand rate / according to SN 31920	%	75
T1 value / for proof test interval or service life		
• according to IEC 61508	a	20
Protection against electrical shock		finger-safe

Further information:

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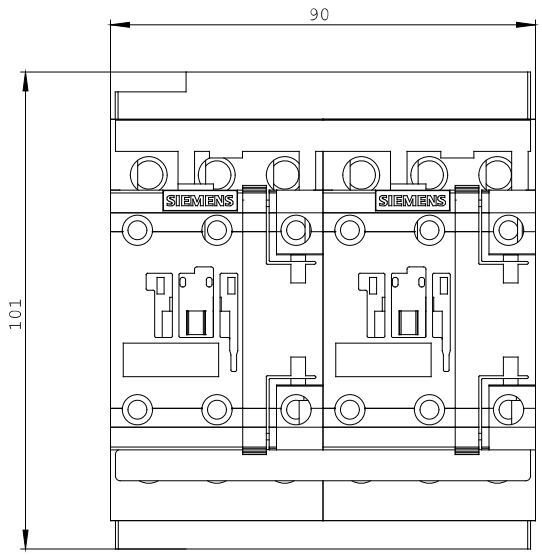
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

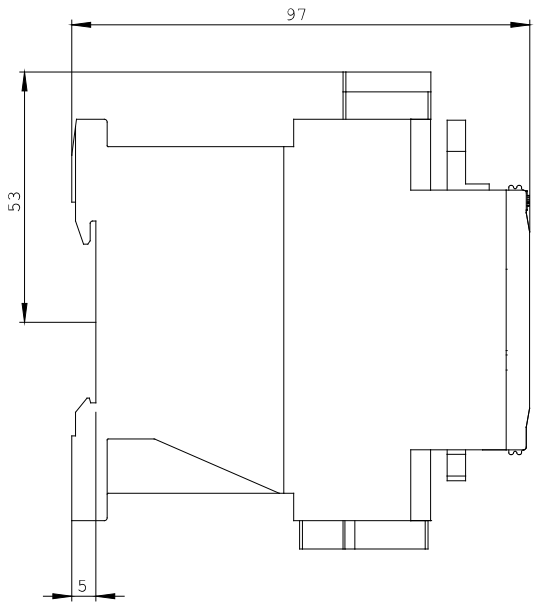
Industry Mall (Online ordering system)
http://www.siemens.com/industrial-controls/mall

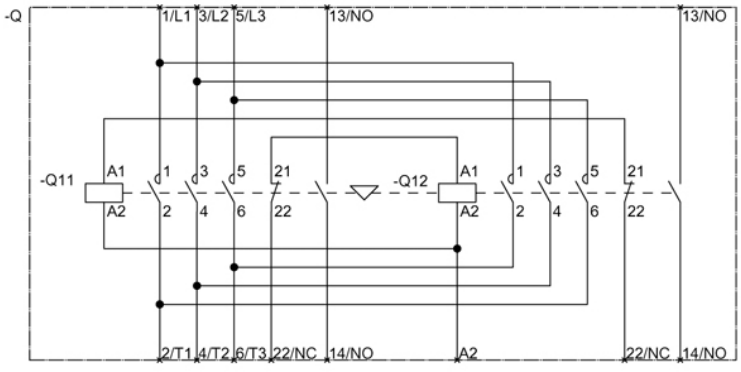
CAx-Online-Generator
http://www.siemens.com/cax

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RA2324-8XB30-1AK6/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RA2324-8XB30-1AK6







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