SIEMENS

Industry Automation and Drive Technologies Service & Support

3RT2018-1BB41 CONTACTOR,AC3:7,5KW 1NO DC24V

Technical / CAx data

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As of 2012-02-09

CONTACTOR, AC-3, 7.5KW/400V, 1NO, DC 24V, 3-POLE, SZ S00 SCREW TERMINAL .

General technical data:		
product brand name		SIRIUS
Size of the contactor		S00
Product extension / auxiliary switch		Yes
Protection class IP / on the front		IP20
Protection against electrical shock		finger-safe
Degree of pollution		3
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature / during storage	℃	-55…+80
Ambient temperature / during operating	℃	-25…+60
Shock resistance		
• at rectangular impulse		
• at DC		7.3g / 5 ms, 4.7g / 10 ms
• at sine pulse		
• at DC		11,4g / 5 ms, 7,3g / 10 ms
Impulse voltage resistance / rated value	kV	6
Insulation voltage / rated value	V	690
Mechanical operating cycles as operating time		
• of the contactor / typical		30,000,000
• of the contactor with added auxiliary switch block / typical		10,000,000
• of the contactor with added electronics-compatible auxiliary switch block / typical		5,000,000

Main circuit:		

Number of NC contacts / for main contacts		0
Number of NO contacts / for main contacts		3
Operating current		
• at AC-1 / at 400 V		
• at 40 °C ambient temperature / rated value	A	22
• at 60 °C ambient temperature / rated value	A	20
• at AC-2 / at 400 V / rated value	A	16
• at AC-3 / at 400 V / rated value	A	16
• at AC-4 / at 400 V / rated value	A	11.5
Operating current		
• with 1 current path / at DC-1		
• at 24 V / rated value	A	20
• at 110 V / rated value	A	2.1
• with 2 current paths in series / at DC-1		
• at 24 V / rated value	A	20
• at 110 V / rated value	A	12
• with 3 current paths in series / at DC-1		
• at 24 V / rated value	A	20
• at 110 V / rated value	A	20
• with 1 current path / at DC-3 / at DC-5		
• at 24 V / rated value	A	20
• at 110 V / rated value	A	0.1
• with 2 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	A	20
• at 110 V / rated value	A	0.35
• with 3 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	A	20
• at 110 V / rated value	A	20
Service power		
• at AC-2 / at 400 V / rated value	kW	7.5
• at AC-3 / at 400 V / rated value	kW	7.5
• at AC-4 / at 400 V / rated value	kW	5.5
Active power loss / per conductor / typical	W	2.2
Off-load operating frequency		
• at AC	1/h	10,000
• at DC	1/h	10,000
Frequency of operation / at AC-1 / according to IEC 60947-6-2	1/h	1,000
Frequency of operation / at AC-2 / according to IEC 60947-6-2	1/h	750
Frequency of operation / at AC-3 / according to IEC 60947-6-2	1/h	750
Frequency of operation / at AC-4 / according to IEC 60947-6-2	1/h	250

Control circuit:		
Type of voltage / of the controlled supply voltage		DC
Control supply voltage / 1		
• for DC / rated value	V	24
Working range factor supply voltage rated value / of the magnet coil		
• for DC		0.8…1.1
Pull-in power / of the solenoid / for DC	W	4

Holding power / of the solenoid / for DC	W	4
Closing delay		
• at DC	ms	30…100
Opening delay		
• at DC	ms	7…13
Arcing time	ms	10…15

Auxiliary circuit:		
Contact reliability / of the auxiliary contacts		1 faulty switching per 100 million (17 V, 1 mA)
Number of NC contacts / for auxiliary contacts / instantaneous switching		0
Number of NO contacts / for auxiliary contacts / instantaneous switching		1
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	6
◦ 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 auxiliary switch / required		fuse gL/gG: 10 A
• for short-circuit protection of the main circuit		
◦ with type of assignment 1 / required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A
◦ at type of coordination 2 / required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20A

Installation/mounting/dimensions:		
Built in orientation		vertical
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
Type of fixing/fixation / series installation		Yes
Width	mm	45
Height	mm	57.5
Depth	mm	73
Distance, to be maintained, to the ranks assembly / sidewards	mm	0
Distance, to be maintained, to earthed part / 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 (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
• finely stranded	
• with conductor end processing	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
• for AWG conductors / for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
• for auxiliary contacts	
• solid	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 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), 2x 12

Certificates/approvals:

General Product Approval

☒ CQC	☒ CSA	ROSTEST	☒ UL

Shipping Approval

☒ ABS (American Bureau of Shipping)	☒ DNV (Det Norske Veritas)	☒ GL (Germanischer Lloyd)	☒ LRS

Shipping Approval	**other**	
☒ RMRS (Russian Maritime Register)	Manufacturer	☒ VDE

UL/CSA ratings:

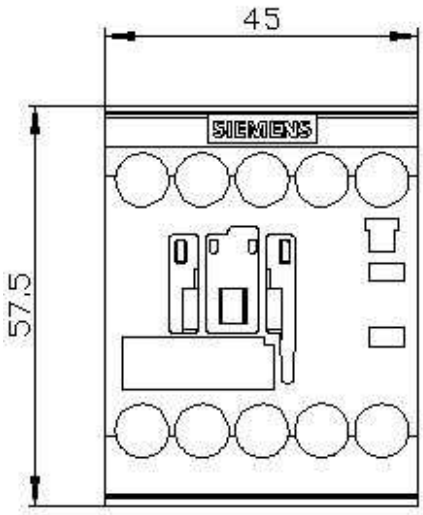
yielded mechanical performance (hp)		
• for single-phase squirrel cage motors		
• at 110/120 V / rated value	hp	1
• at 230 V / rated value	hp	2
• for three-phase squirrel cage motors		
• at 200/208 V / rated value	hp	3
• at 220/230 V / rated value	hp	5
• at 460/480 V / rated value	hp	10
• at 575/600 V / rated value	hp	10
Operating current (FLA) / for three-phase squirrel cage motors		
• at 480 V / rated value	A	14
• at 600 V / rated value	A	11
Contact rating designation / for auxiliary contacts / according to UL		A600 / Q600

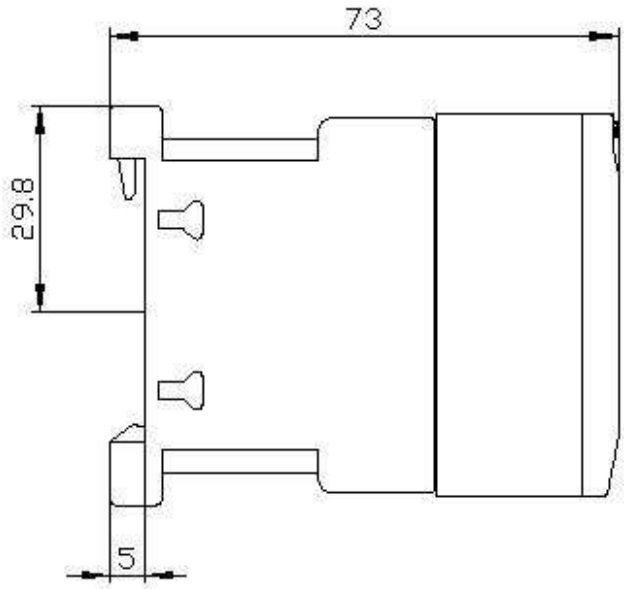
Safety:related Parameter:

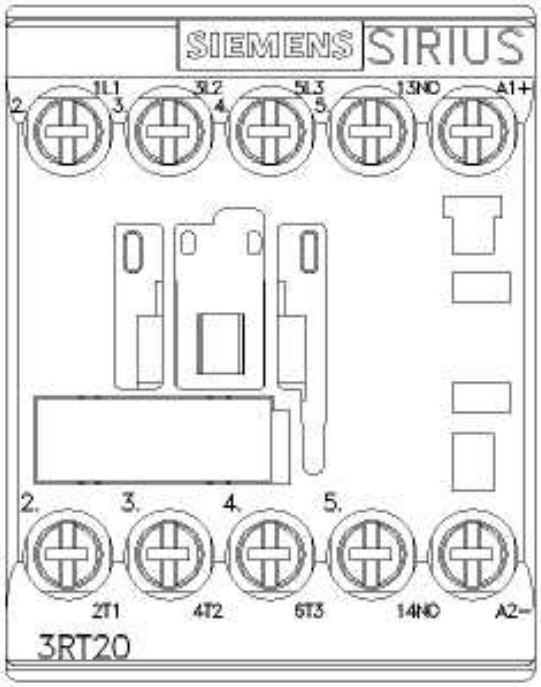
B10 value / with high demand rate		
• according to SN 31920		1,000,000
T1 value / for proof test interval or service life		
• according to IEC 61508	a	20
Proportion of dangerous failures		
• with low demand rate / according to SN 31920	%	40
• with high demand rate / according to SN 31920	%	73
Failure rate (FIT value) / with low demand rate		
• according to SN 31920	FIT	100
Product function		
• mirror contact to IEC 60947-4-1		Yes
• comment		with 3RH29

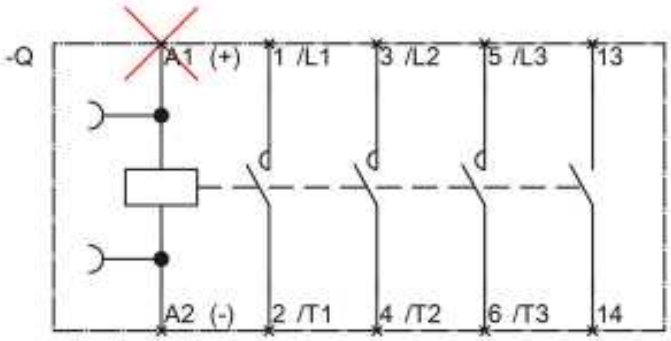
• positively driven operation to IEC 60947-5-1	No

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/3RT2018-1BB41/all
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2018-1BB41









last change: Feb 6, 2012