



CONTACTOR, AC-3, 3KW/400V, 1NC, DC 12V,
3-POLE, SZ S00 SCREW TERMINAL

General technical data:

product brand name		SIRIUS
Size of the contactor		S00
Product extension		
• auxiliary switch		Yes
• function module for communication		No
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	°C	-55 ... +80
• during operating	°C	-25 ... +60
Shock resistance		
• at rectangular impulse		
• at DC		6,7g / 5 ms, 4,2g / 10 ms
• at sine pulse		
• at DC		10,5g / 5 ms, 6,6g / 10 ms
Impulse voltage resistance / rated value	kV	6
Insulation voltage / rated value	V	690

Maximum permissible voltage for protective separation / between coil and main contacts / in accordance with EN 60947-1	V	400
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
Connectable conductor cross-section / in main circuit		
• at AC-1		
• at 40 °C / minimum permissible	mm ²	2.5
• at 60 °C / minimum permissible	mm ²	2.5
Operating current		
• at AC-1 / up to 690 V		
• at 40 °C ambient temperature / rated value	A	18
• at 60 °C ambient temperature / rated value	A	16
• at AC-2 / at 400 V / rated value	A	7
• at AC-3		
• at 400 V / rated value	A	7
• at 500 V / rated value	A	6
• at 690 V / rated value	A	4.9
• at AC-4 / at 400 V / rated value	A	6.5
Operational current / for ≥ 200000 operating cycles / at AC-4		
• at 400 V / rated value	A	2.6
• at 690 V / rated value	A	1.8
Operating current		
• with 1 current path / at DC-1		
• at 24 V / rated value	A	15
• at 110 V / rated value	A	1.5
• at 220 V / rated value	A	0.6
• at 440 V / rated value	A	0.42
• at 600 V / rated value	A	0.42
• with 2 current paths in series / at DC-1		
• at 24 V / rated value	A	15
• at 110 V / rated value	A	8.4
• at 220 V / rated value	A	1.2
• at 440 V / rated value	A	0.6
• at 600 V / rated value	A	0.5

• with 3 current paths in series / at DC-1 • at 24 V / rated value • at 110 V / rated value • at 220 V / rated value • at 440 V / rated value • at 600 V / rated value	A	15
	A	15
	A	15
	A	0.9
	A	0.7
Operating current		
• with 1 current path / at DC-3 / at DC-5 • at 24 V / rated value • at 110 V / rated value • with 2 current paths in series / at DC-3 / at DC-5 • at 24 V / rated value • at 110 V / rated value • with 3 current paths in series / at DC-3 / at DC-5 • at 24 V / rated value • at 110 V / rated value • at 220 V / rated value • at 440 V / rated value • at 600 V / rated value	A	15
	A	0.1
	A	15
	A	0.25
	A	15
	A	15
	A	1.2
	A	0.14
	A	0.14
Operating performance		
• at AC-1 / at 230 V / rated value	kW	6.3
• at AC-1 / at 400 V / rated value	kW	11
• at AC-1 / at 690 V / rated value	kW	19
• at AC-2 • at 400 V / rated value	kW	3
• at AC-3 • at 230 V / rated value • at 400 V / rated value • at 690 V / rated value	kW	1.5
	kW	3
	kW	4
• at AC-4 • at 400 V / rated value	kW	3
Operating performance / for ≥ 200000 operating cycles / at AC-4		
• at 400 V / rated value	kW	1.15
• at 690 V / rated value	kW	1.15
Thermal short-time current / restricted to 10 s		
	A	56
Active power loss / at AC-3 / at 400 V / with rated Operating current value / per conductor		
	W	0.4
Off-load operating frequency		
• at DC	1/h	10,000
Frequency of operation		

- with AC-1 / maximum
- with AC-2 / maximum
- with AC-3 / maximum
- with AC-4 / maximum

1/h	1,000
1/h	750
1/h	750
1/h	250

Control circuit/ Control:

Voltage type / of control feed voltage		DC
Control supply voltage		
• for DC / rated value	V	12
Operating range factor control 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
Residual current / of electronics / for control with signal <0>		
• at 230 V / with AC / maximum permissible	mA	3
• at 24 V / with DC / maximum permissible	mA	10

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		1
Number of NO contacts / for auxiliary contacts / instantaneous switching		0
Operating current		
• at AC-12 / maximum	A	10
• at AC-15		
• at 230 V / rated value	A	10
• at 400 V / rated value	A	3
• at 500 V / rated value	A	2
• at 690 V / rated value	A	1
Operating current / at DC-12		
• at 24 V / rated value	A	10
• at 48 V / rated value	A	6
• at 60 V / rated value	A	6
• at 110 V / rated value	A	3

• at 125 V / rated value	A	2
• at 220 V / rated value	A	1
• at 440 V / rated value	A	0.3
• at 600 V / rated value	A	0.15
Operating current / at DC-13		
• at 24 V / rated value	A	10
• at 48 V / rated value	A	2
• at 60 V / rated value	A	2
• at 110 V / rated value	A	1
• at 125 V / rated value	A	0.9
• at 220 V / rated value	A	0.3
• at 440 V / rated value	A	0.14
• at 600 V / rated value	A	0.1

UL/CSA ratings:

yielded mechanical performance [hp]		
• for single-phase squirrel cage motors		
• at 110/120 V / rated value	hp	0.25
• at 230 V / rated value	hp	0.75
• for three-phase squirrel cage motors		
• 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
• at 575/600 V / rated value	hp	5
Full-load current (FLA) / for 3-phase motor		
• at 480 V / rated value	A	4.8
• at 600 V / rated value	A	6.1
Contact rating designation / for auxiliary contacts / according to UL		A600 / Q600

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:

mounting position		+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
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Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
Mounting type / series installation		Yes
Width	mm	45
Height	mm	57.5
Depth	mm	73
Distance, to be maintained, to the ranks assembly / sideways	mm	0

Connections/ terminals:

Design of the electrical connection

• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
• for main contacts / 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 / 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

Safety related data:

B10 value / with high demand rate

• according to SN 31920		1,000,000
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T1 value / for proof test interval or service life

• according to IEC 61508	a	20
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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] / with low demand rate

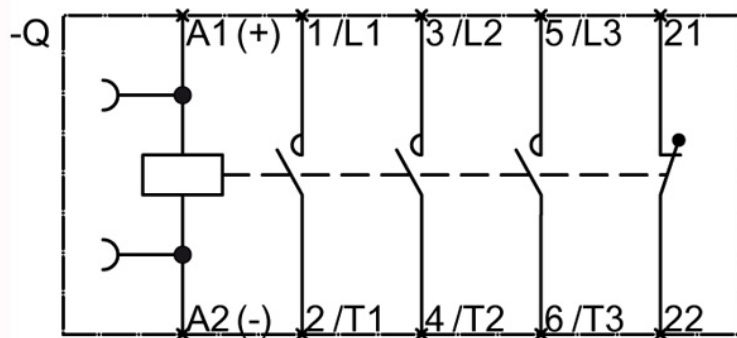
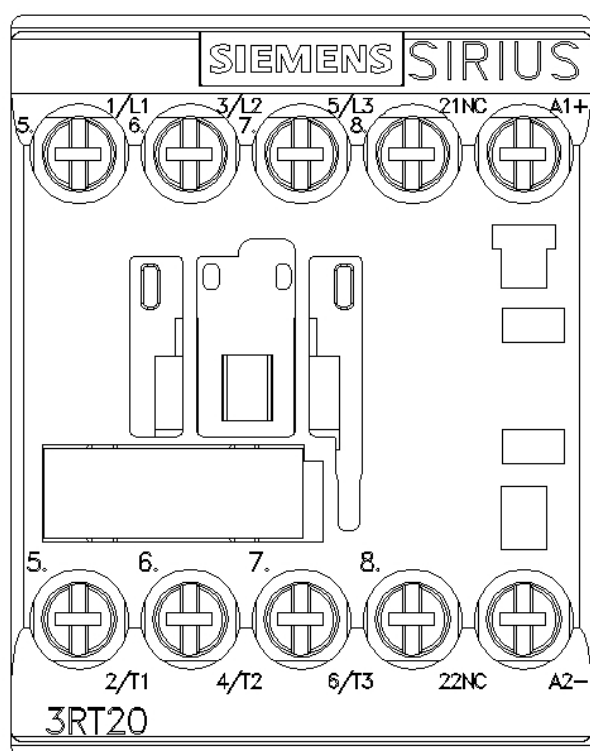
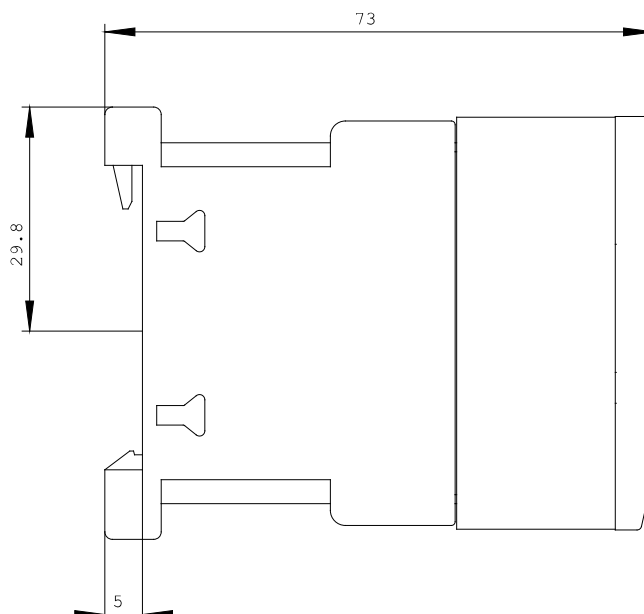
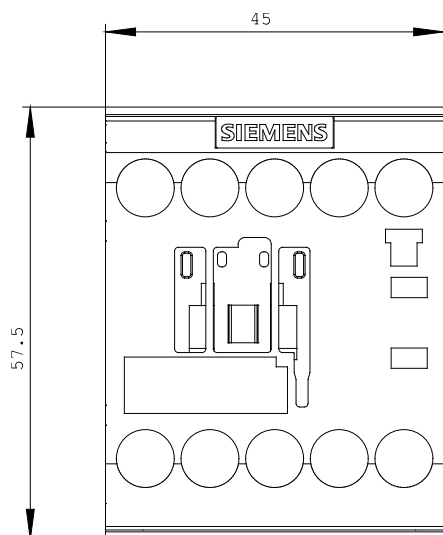
• according to SN 31920	FIT	100
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Product function

• mirror contact to IEC 60947-4-1	Yes
• positively driven operation to IEC 60947-5-1	No

Certificates/ approvals:

General Product Approval				Functional Safety / Safety of Machinery	Declaration of Conformity
 CCC	 CSA		 UL	Type Examination	 EG-Konf.
Test Certificates					
Special Test Certificate		Type Test Certificates/Test Report			
Shipping Approval					
 ABS	 BUREAU VERITAS	 DNV	 GL	 LRS	 PRS
Shipping Approval		other			
 RINA	 RMRS	Confirmation		 VDE	Environmental Confirmations
Further information:					
Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/industrial-controls/catalogs					
Industry Mall (Online ordering system) http://mall.industry.siemens.com/					
Cax online generator http://www.siemens.com/cax					
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RT2015-1BA42/all					
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2015-1BA42					



last change:

Aug 4, 2014