

3RT2027-1AL20 CONTACTOR,AC3:15KW 1NO+1NC 230V 50/60HZ

Technical / CAx data

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CONTACTOR, AC-3, 15KW/400V, 1NO+1NC, AC 230V 50/60HZ, 3-POLE, SZ S0 SCREW TERMINAL

General technical data:	
product brand name	SIRIUS
Size of the contactor	S0
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	°C -55...+80
Ambient temperature / during operating	°C -25...+60
Shock resistance	
• at rectangular impulse	
• at AC	8,3g / 5 ms, 5,3g / 10 ms
• at sine pulse	
• at AC	13,5g / 5 ms, 8,3g / 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	10,000,000
• 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		
<ul style="list-style-type: none"> at AC-1 / at 400 V at 40 °C ambient temperature / rated value at 60 °C ambient temperature / rated value at AC-2 / at 400 V / rated value at AC-3 / at 400 V / rated value at AC-4 / at 400 V / rated value 	A	50
	A	42
	A	32
	A	32
	A	22
Operating current		
<ul style="list-style-type: none"> with 1 current path / at DC-1 at 24 V / rated value at 110 V / rated value with 2 current paths in series / at DC-1 at 24 V / rated value at 110 V / rated value with 3 current paths in series / at DC-1 at 24 V / rated value at 110 V / rated value 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 	A	35
	A	4.5
	A	35
	A	35
	A	35
	A	35
	A	20
	A	2.5
	A	35
	A	15
	A	35
	A	35
Service power		
<ul style="list-style-type: none"> at AC-2 / at 400 V / rated value at AC-3 / at 400 V / rated value at AC-4 / at 400 V / rated value 	kW	15
	kW	15
	kW	11
Active power loss / per conductor / typical		
	W	2.7
Off-load operating frequency		
<ul style="list-style-type: none"> at AC at DC 	1/h	5,000
	1/h	1,500
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		AC
Control supply voltage / 1		
<ul style="list-style-type: none"> at 50 Hz / for AC / rated value at 60 Hz / for AC / rated value 	V	230
	V	230
operating range factor control supply voltage rated value / of the magnet coil		
<ul style="list-style-type: none"> at 50 Hz / for AC at 60 Hz / for AC 		0.8...1.1
		0.85...1.1

Apparent pull-in power / of the solenoid / for AC	V·A	81
Apparent holding power / of the solenoid / for AC	V·A	10.5
Inductive power factor		
• with the pull-in power of the coil		0.82
• with the pull-in power of the coil		0.25
Closing delay		
• at AC	ms	8...40
Opening delay		
• at AC	ms	4...16
Arcing time	ms	10...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		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: 100 A
• at type of coordination 2 / required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35A

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	85
Depth	mm	97
Distance, to be maintained, to the ranks assembly / sideways	mm	0
Distance, to be maintained, to earthed part / sideways	mm	6

Connections:

Design of the electrical connection		
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<ul style="list-style-type: none"> for main current circuit for auxiliary and control current circuit 	<p>screw-type terminals</p> <p>screw-type terminals</p>
Type of the connectable conductor cross-section <ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> solid finely stranded <ul style="list-style-type: none"> with conductor end processing for AWG conductors / for main contacts for auxiliary contacts <ul style="list-style-type: none"> solid finely stranded <ul style="list-style-type: none"> with conductor end processing for AWG conductors / for auxiliary contacts 	<p>2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)</p> <p>2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²</p> <p>2x (16 ... 12), 2x (14 ... 8)</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14)</p>

Certificates/approvals:	
General Product Approval	Declaration of Conformity
<input checked="" type="checkbox"/> CCC <input checked="" type="checkbox"/> CSA <input checked="" type="checkbox"/> GOST <input checked="" type="checkbox"/> UL	<input checked="" type="checkbox"/> EC-Declarator
Test Certificates	
Special Test Certificate	Type Test Certificates/Test Report
Shipping Approval	
<input checked="" type="checkbox"/> ABS (Americas) <input checked="" type="checkbox"/> DNV / Det Norske Veritas <input checked="" type="checkbox"/> GL / Germanischer Lloyd <input checked="" type="checkbox"/> LRS / Lloyds Register <input checked="" type="checkbox"/> PRS / Polski Register <input checked="" type="checkbox"/> RINA / Registro Italiano Navale	
Shipping Approval	other
<input checked="" type="checkbox"/> RMRS / Russian Maritime Register of Shipping Confirmation <input checked="" type="checkbox"/> Household appliances	

UL/CSA ratings:	
yielded mechanical performance (hp) <ul style="list-style-type: none"> for single-phase squirrel cage motors <ul style="list-style-type: none"> at 110/120 V / rated value at 230 V / rated value for three-phase squirrel cage motors <ul style="list-style-type: none"> at 200/208 V / rated value at 220/230 V / rated value at 460/480 V / rated value at 575/600 V / rated value 	<p>hp 2</p> <p>hp 5</p> <p>hp 10</p> <p>hp 10</p> <p>hp 20</p> <p>hp 25</p>
Operating current (FLA) / for three-phase squirrel cage motors <ul style="list-style-type: none"> at 480 V / rated value at 600 V / rated value 	<p>A 27</p> <p>A 27</p>
Contact rating designation / for auxiliary contacts / according to UL	<p>A600 / Q600</p>

Safety-related Parameter:	
B10 value / with high demand rate <ul style="list-style-type: none"> according to SN 31920 	<p>1,000,000</p>
T1 value / for proof test interval or service life <ul style="list-style-type: none"> according to IEC 61508 	<p>a 20</p>
Proportion of dangerous failures <ul style="list-style-type: none"> with low demand rate / according to SN 31920 with high demand rate / according to SN 31920 	<p>% 40</p> <p>% 73</p>

31920	
Failure rate (FIT value) / with low demand rate <ul style="list-style-type: none">according to SN 31920	FIT 100
Product function <ul style="list-style-type: none">mirror contact to IEC 60947-4-1positively driven operation to IEC 60947-5-1	Yes 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:

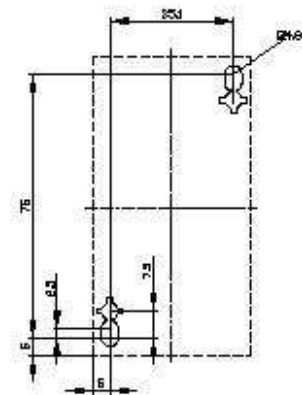
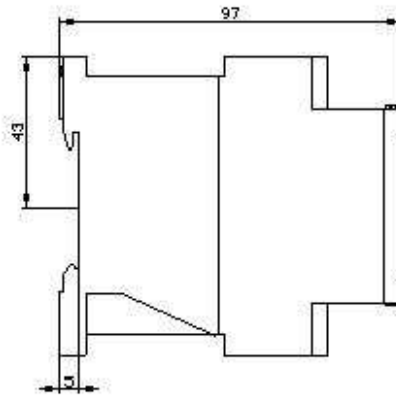
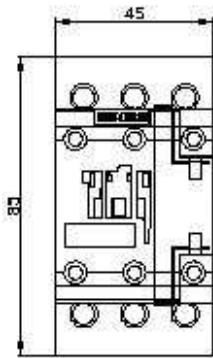
<http://www.siemens.com/cax>

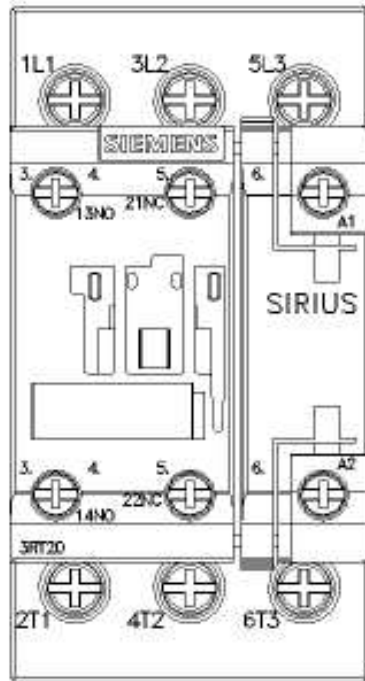
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RT2027-1AL20/all>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2027-1AL20





last change:

Mar 27, 2012