

3RT2016-1AP01 CONTACTOR,AC3:4KW 1NO AC230V 50/60HZ

Technical / CAx data

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CONTACTOR, AC-3, 4KW/400V, 1NO, AC 230V, 50/60 HZ,
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	°C	-55...+80
Ambient temperature / during operating	°C	-25...+60
Shock resistance		
• at rectangular impulse		
• at AC		6,7g / 5 ms, 4,2g / 10 ms
• at sine pulse		
• at AC		10,5g / 5 ms, 6,6g / 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		
<ul style="list-style-type: none"> at AC-1 / at 400 V 	A	22
<ul style="list-style-type: none"> at 40 °C ambient temperature / rated value 	A	20
<ul style="list-style-type: none"> at 60 °C ambient temperature / rated value 	A	9
<ul style="list-style-type: none"> at AC-2 / at 400 V / rated value 	A	9
<ul style="list-style-type: none"> at AC-3 / at 400 V / rated value 	A	8.5
<ul style="list-style-type: none"> at AC-4 / at 400 V / rated value 		
Operating current		
<ul style="list-style-type: none"> with 1 current path / at DC-1 		
<ul style="list-style-type: none"> at 24 V / rated value 	A	20
<ul style="list-style-type: none"> at 110 V / rated value 	A	2.1
<ul style="list-style-type: none"> with 2 current paths in series / at DC-1 		
<ul style="list-style-type: none"> at 24 V / rated value 	A	20
<ul style="list-style-type: none"> at 110 V / rated value 	A	12
<ul style="list-style-type: none"> with 3 current paths in series / at DC-1 		
<ul style="list-style-type: none"> at 24 V / rated value 	A	20
<ul style="list-style-type: none"> at 110 V / rated value 	A	20
<ul style="list-style-type: none"> with 1 current path / at DC-3 / at DC-5 		
<ul style="list-style-type: none"> at 24 V / rated value 	A	20
<ul style="list-style-type: none"> at 110 V / rated value 	A	0.1
<ul style="list-style-type: none"> with 2 current paths in series / at DC-3 / at DC-5 		
<ul style="list-style-type: none"> at 24 V / rated value 	A	20
<ul style="list-style-type: none"> at 110 V / rated value 	A	0.35
<ul style="list-style-type: none"> with 3 current paths in series / at DC-3 / at DC-5 		
<ul style="list-style-type: none"> at 24 V / rated value 	A	20
<ul style="list-style-type: none"> at 110 V / rated value 	A	20
Service power		
<ul style="list-style-type: none"> at AC-2 / at 400 V / rated value 	kW	4
<ul style="list-style-type: none"> at AC-3 / at 400 V / rated value 	kW	4
<ul style="list-style-type: none"> at AC-4 / at 400 V / rated value 	kW	4
Active power loss / per conductor / typical		
	W	0.7
Off-load operating frequency		
<ul style="list-style-type: none"> at AC 	1/h	10,000
<ul style="list-style-type: none"> 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		
		AC
Control supply voltage / 1		
<ul style="list-style-type: none"> at 50 Hz / for AC / rated value 	V	230
<ul style="list-style-type: none"> at 60 Hz / for AC / rated value 	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 		0.8...1.1
<ul style="list-style-type: none"> at 60 Hz / for AC 		0.85...1.1

Apparent pull-in power / of the solenoid / for AC	V·A	27
Apparent holding power / of the solenoid / for AC	V·A	4.2
Inductive power factor		
• with the pull-in power of the coil		0.8
• with the pull-in power of the coil		0.25
Closing delay		
• at AC	ms	9...35
Opening delay		
• at AC	ms	3.5...14
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 / 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 (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 2x 12</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 2x 12</p>

Certificates/approvals:					
General Product Approval				Declaration of Conformity	Test Certificates
<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-Declaration	Special Test Certificate
Shipping Approval					
<input checked="" type="checkbox"/> ABS (America)	<input checked="" type="checkbox"/> DNV / Det Nor	<input checked="" type="checkbox"/> GL / Germani	<input checked="" type="checkbox"/> LRS / Lloyds R	<input checked="" type="checkbox"/> PRS / Polski R	<input checked="" type="checkbox"/> RINA / Registr
Shipping Approval other					
<input checked="" type="checkbox"/> RMRS / Russ	Confirmation		<input checked="" type="checkbox"/> Household ar		

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 0.33</p> <p>hp 1</p> <p>hp 2</p> <p>hp 3</p> <p>hp 5</p> <p>hp 7.5</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 7.6</p> <p>A 9</p>
Contact rating designation / for auxiliary contacts / according to UL	A600 / Q600

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

- according to SN 31920
- Product function**
- mirror contact to IEC 60947-4-1
 - comment
 - positively driven operation to IEC 60947-5-1

FIT	100
	Yes
	with 3RH29
	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:

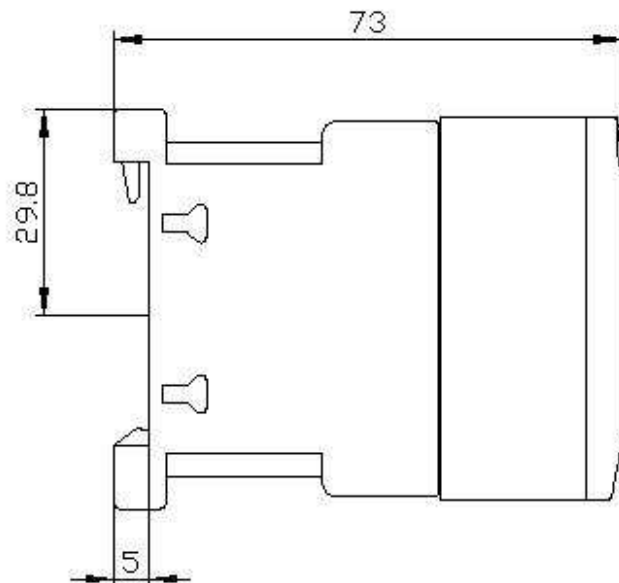
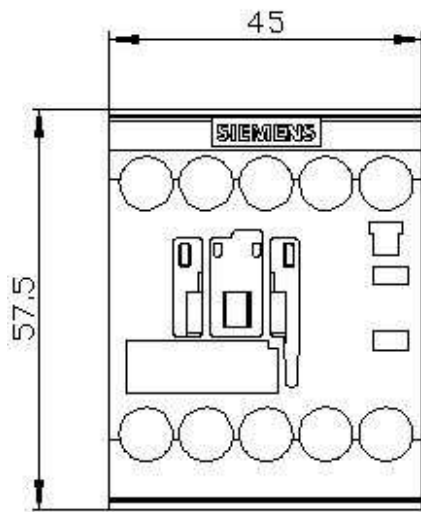
<http://www.siemens.com/cax>

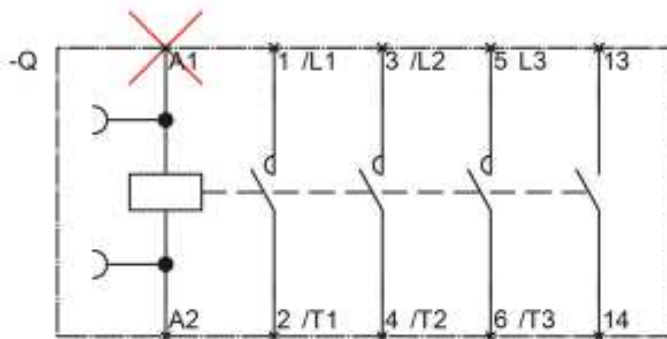
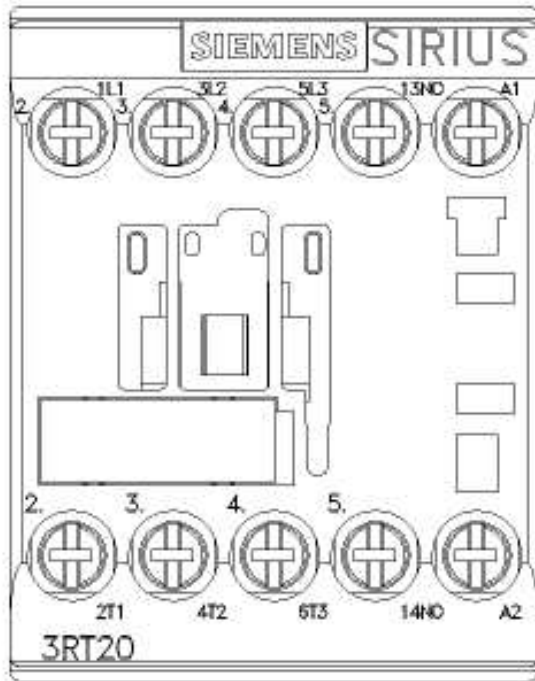
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RT2016-1AP01/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3RT2016-1AP01





last change:

Mar 27, 2012