

3RT2028-1BB40 CONTACTOR,AC3:18,5KW 1NO+1NC DC24V

Technical / CAx data

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As of 2012-03-24



CONTACTOR, AC-3, 18.5KW/400V, 1NO+1NC, DC 24V, 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 DC		10g / 5 ms, 7,5g / 10 ms
• at sine pulse		
• at DC		15g / 5 ms, 10g / 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 <ul style="list-style-type: none"> • 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 42 38 38 22
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 • at 110 V / rated value • with 2 current paths in series / at DC-1 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value • with 3 current paths in series / at DC-1 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value • with 1 current path / at DC-3 / at DC-5 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value • with 2 current paths in series / at DC-3 / at DC-5 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value • with 3 current paths in series / at DC-3 / at DC-5 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value 	A	35 4.5 35 35 35 35 20 2.5 35 15 35 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	18.5 18.5 11
Active power loss / per conductor / typical		W 3.8
Off-load operating frequency		
<ul style="list-style-type: none"> • at AC • at DC 	1/h	5,000 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		DC
Control supply voltage / 1		
<ul style="list-style-type: none"> • for DC / rated value 	V	24
operating range factor control supply voltage rated value / of the magnet coil		
<ul style="list-style-type: none"> • for DC 		0.8...1.1
Pull-in power / of the solenoid / for DC		W 5.9

Holding power / of the solenoid / for DC	W	5.9
Closing delay		
• at DC	ms	50...170
Opening delay		
• at DC	ms	15...17.5
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	107
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		
• 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
 - finely stranded
 - with conductor end processing
- for AWG conductors / for main contacts
- for auxiliary contacts
 - solid
 - finely stranded
 - with conductor end processing
- for AWG conductors / for auxiliary contacts

2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)

2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²
2x (16 ... 12), 2x (14 ... 8)

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

2x (20 ... 16), 2x (18 ... 14)

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 3
 - at 230 V / rated value hp 5
- for three-phase squirrel cage motors
 - at 200/208 V / rated value hp 10
 - at 220/230 V / rated value hp 10
 - at 460/480 V / rated value hp 25
 - at 575/600 V / rated value hp 25

Operating current (FLA) / for three-phase squirrel cage motors

- at 480 V / rated value A 34
- at 600 V / rated value A 27

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
- 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:

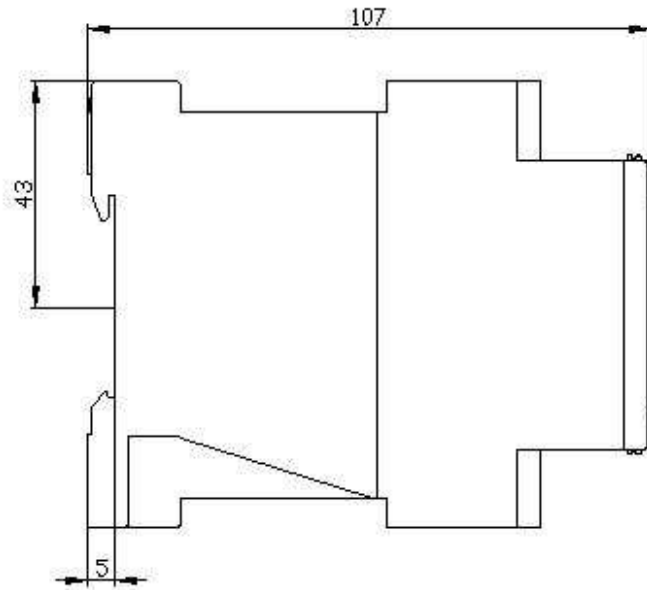
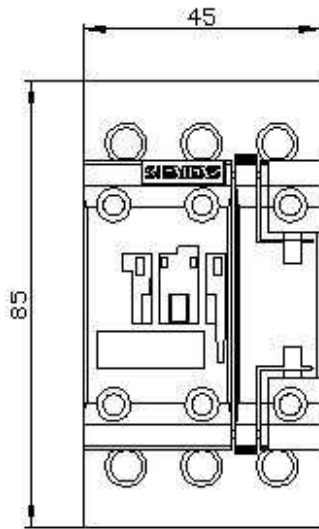
<http://www.siemens.com/cax>

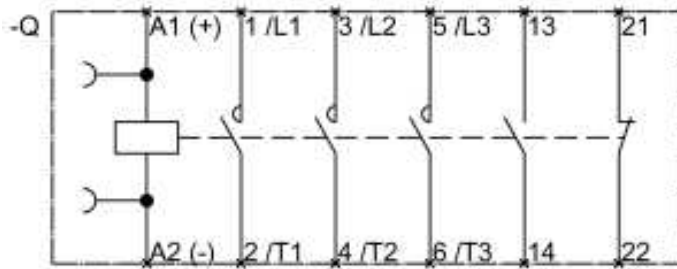
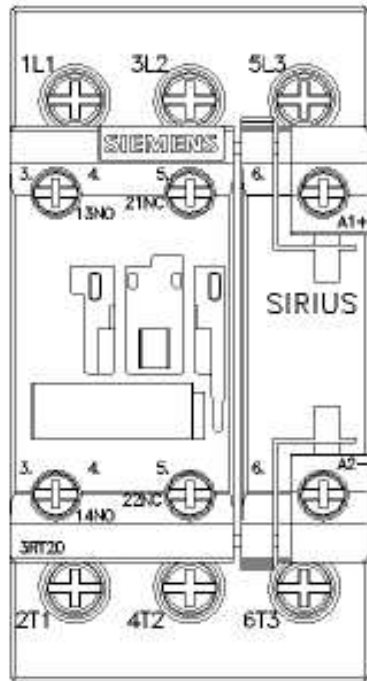
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RT2028-1BB40/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2028-1BB40





last change:

Mar 15, 2012