

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

Technical / CAx data

☒ Technical Data ☐ CAx data

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:**

<b>Number of NC contacts / for main contacts</b>	0	
<b>Number of NO contacts / for main contacts</b>	3	
<b>Operating current</b>		
• at AC-1 / at 400 V		
• at 40 °C ambient temperature / rated value	A	50
• at 60 °C ambient temperature / rated value	A	42
• at AC-2 / at 400 V / rated value	A	38
• at AC-3 / at 400 V / rated value	A	38
• at AC-4 / at 400 V / rated value	A	22
<b>Operating current</b>		
• with 1 current path / at DC-1		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	4.5
• with 2 current paths in series / at DC-1		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	35
• with 3 current paths in series / at DC-1		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	35
• with 1 current path / at DC-3 / at DC-5		
• at 24 V / rated value	A	20
• at 110 V / rated value	A	2.5
• with 2 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	15
• with 3 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	35
<b>Service power</b>		
• at AC-2 / at 400 V / rated value	kW	18.5
• at AC-3 / at 400 V / rated value	kW	18.5
• at AC-4 / at 400 V / rated value	kW	11
<b>Active power loss / per conductor / typical</b>	W	3.8
<b>Off-load operating frequency</b>		
• at AC	1/h	5,000
• at DC	1/h	1,500
<b>Frequency of operation / at AC-1 / according to IEC 60947-6-2</b>	1/h	1,000
<b>Frequency of operation / at AC-2 / according to IEC 60947-6-2</b>	1/h	750
<b>Frequency of operation / at AC-3 / according to IEC 60947-6-2</b>	1/h	750
<b>Frequency of operation / at AC-4 / according to IEC 60947-6-2</b>	1/h	250
<b>Control circuit:</b>		
<b>Type of voltage / of the controlled supply voltage</b>	DC	
<b>Control supply voltage / 1</b>		
• for DC / rated value	V	24
<b>operating range factor control supply voltage rated value / of the magnet coil</b>		
• for DC	0.8...1.1	
<b>Pull-in power / of the solenoid / for DC</b>	W	5.9

<b>Holding power / of the solenoid / for DC</b>	W	5.9
<b>Closing delay</b>		
• at DC	ms	50...170
<b>Opening delay</b>		
• at DC	ms	15...17.5
<b>Arcing time</b>	ms	10...10

#### Auxiliary circuit:

<b>Contact reliability / of the auxiliary contacts</b>		1 faulty switching per 100 million (17 V, 1 mA)
<b>Number of NC contacts / for auxiliary contacts / instantaneous switching</b>		1
<b>Number of NO contacts / for auxiliary contacts / instantaneous switching</b>		1
<b>Operating current / of the auxiliary contacts</b>		
• 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:

<b>Design of the fuse link</b>		
• 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:

<b>Built in orientation</b>		vertical
<b>Type of mounting</b>		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
<b>Type of fixing/fixation / series installation</b>		Yes
<b>Width</b>	mm	45
<b>Height</b>	mm	85
<b>Depth</b>	mm	107
<b>Distance, to be maintained, to the ranks assembly / sideways</b>	mm	0
<b>Distance, to be maintained, to earthed part / sideways</b>	mm	6

#### Connections:

<b>Design of the electrical connection</b>		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
<b>Type of the connectable conductor cross-section</b>		

- 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 mm<sup>2</sup>), 2x (2.5 ... 10 mm<sup>2</sup>)

2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup>  
2x (16 ... 12), 2x (14 ... 8)

2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)

2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)  
2x (20 ... 16), 2x (18 ... 14)

#### Certificates/approvals:

##### General Product Approval

<input checked="" type="checkbox"/> CQC	<input checked="" type="checkbox"/> CSA	ROSTEST	<input checked="" type="checkbox"/> UL
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##### Shipping Approval

<input checked="" type="checkbox"/> ABS (American Bureau of Shipping)	<input checked="" type="checkbox"/> DNV (Det Norske Veritas)	<input checked="" type="checkbox"/> GL (Germanischer Lloyd)	<input checked="" type="checkbox"/> LRS
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##### Shipping Approval

<input checked="" type="checkbox"/> RMRS (Russian Maritime Register)	other Manufacturer	<input checked="" type="checkbox"/> VDE
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#### UL/CSA ratings:

##### yielded mechanical performance (hp)

- for single-phase squirrel cage motors
  - at 110/120 V / rated value
  - at 230 V / rated value
- for three-phase squirrel cage motors
  - at 200/208 V / rated value
  - at 220/230 V / rated value
  - at 460/480 V / rated value
  - at 575/600 V / rated value

hp 3  
hp 5  
  
hp 10  
hp 10  
hp 25  
hp 25

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

- at 480 V / rated value
- at 600 V / rated value

A 34  
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
- with high demand rate / according to SN 31920

% 40  
% 73

##### Failure rate (FIT value) / with low demand rate

- according to SN 31920

FIT 100

##### Product function

- mirror contact to IEC 60947-4-1
- positively 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:**

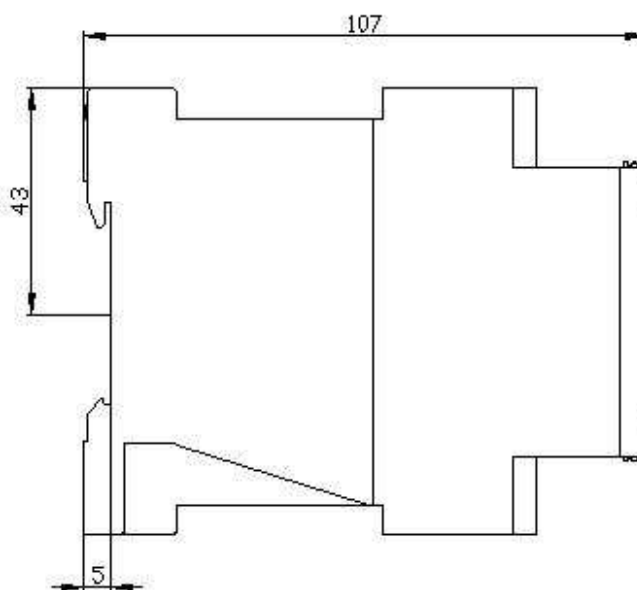
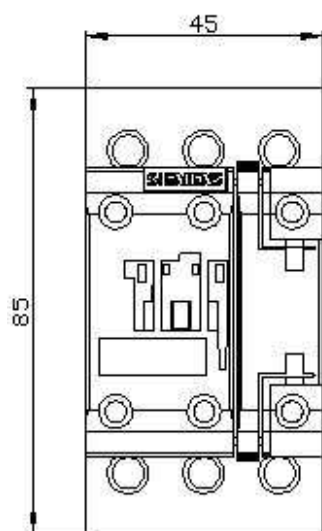
<http://www.siemens.com/cax>

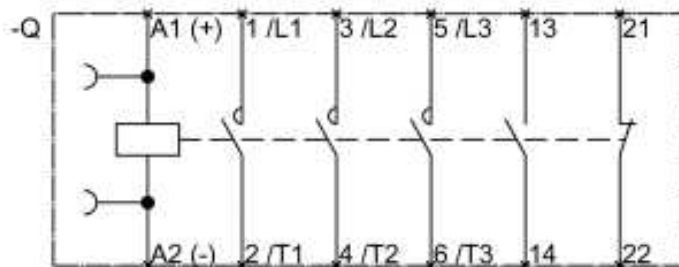
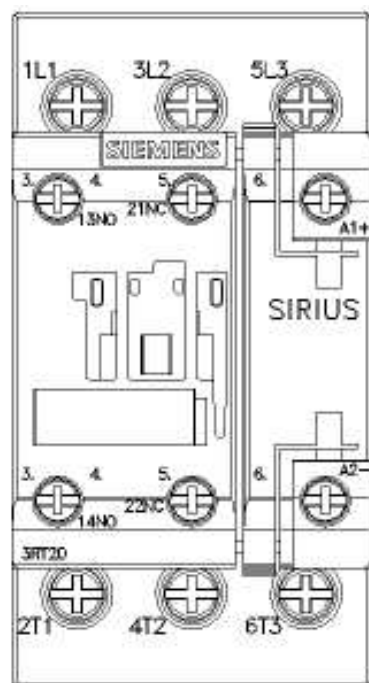
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<http://support.automation.siemens.com/WW/view/en/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](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2028-1BB40)





last change:

Mar 15, 2012