

CONTACTOR, AC-3, 18.5KW/400V, 1NO+1NC,  
DC 24V, 3-POLE,  
SZ S0 SPRING-LOADED TERMINAL

### General technical data:

<b>Product brand name</b>		SIRIUS
<b>Product designation</b>		3RT2 contactor
<b>Size of the contactor</b>		S0
<b>Protection class IP / frontal/front side</b>		IP20
<b>Degree of pollution</b>		3
<b>Altitude of installation site / at a height over sea level / maximum</b>	m	2,000
<b>Ambient temperature</b>		
• during storage	°C	-55 ... 80
• during the operating phase	°C	-25 ... 60
• during transport	°C	-55 ... 80
<b>Resistance against shock</b>		12.5g / 5 ms and 7.8g / 10 ms
<b>Impulse voltage resistance / rated value</b>	kV	6
<b>Insulation voltage / rated value</b>	V	690
<b>Resistive loss</b>		
• per conductor / typical	W	3.8
• of the magnet coil / at DC / typical	W	5.9
<b>Item designation</b>		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		K
• according to DIN EN 61346-2		Q
<b>Mechanical operating cycles as operating time</b>		
• 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		10,000,000

### Main circuit:

<b>Number of poles / for main current circuit</b>		3
<b>Number of NC contacts / for main contacts</b>		0
<b>Number of NO contacts / for main contacts</b>		3
<b>Operating voltage / at 3 AC / rated value</b>		

• maximum	V	690
<b>Operating current / at AC-1 / at 400 V</b>		
• at 40 °C ambient temperature / rated value	A	50
• at 60 °C ambient temperature / rated value	A	45
<b>Operating current</b>		
• 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	20
• 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 500 V / rated value	kW	15
• at 690 V / rated value	kW	15
• at AC-4 / at 400 V / rated value	kW	18.5
<b>Operating reactive power / at AC-6b</b>		
• at 230 V / rated value	var	0
• at 400 V / rated value	var	0
• at 690 V / rated value	var	0
<b>Off-load operating frequency</b>	1/h	1,500
<b>Switching frequency</b>		
• at AC-1 / according to IEC 60947-6-2 / maximum	1/h	1,000

- at AC-2 / according to IEC 60947-6-2 / maximum
- at AC-3 / according to IEC 60947-6-2 / maximum
- at AC-4 / according to IEC 60947-6-2 / maximum

1/h	750
1/h	750
1/h	250

### Control circuit:

Design of activation of the operating mechanism		conventional
Type of voltage / of the controlled supply voltage		DC
Control supply voltage / 1  • for DC  • rated value	V	24
Operating range factor control supply voltage rated value / of solenoid  • for DC		0.8 ... 1.1
Pull-in power / of the solenoid / with DC	W	5.9
Holding power / of solenoid / with DC	W	5.9

### Auxiliary circuit:

Product extension / auxiliary switch		Yes
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
• lagging switching		0
Number of NO contacts / for auxiliary contacts		
• instantaneous switching		1
• leading switching		0
Operating current / of the auxiliary contacts		
• at AC-12 / maximum	A	10
• at AC-15		
• at 230 V	A	10
• 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
- for short-circuit protection of the main circuit
  - at type of coordination 1 / required
  - at type of coordination 2 / required

fuse gL/gG: 10 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:  
100 AgL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:  
35A**Installation/mounting/dimensions:****built in orientation**

vertical

**Type of fixing/fixation**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

102

**Depth**

mm

102

**distance, to be maintained, to the ranks assembly**

- forwards
- backwards
- upwards
- downwards
- sideways

mm

0

mm

0

mm

6

mm

6

mm

0

**distance, to be maintained, to earthed part**

- forwards
- backwards
- upwards
- downwards
- sideways

mm

6

mm

0

mm

6

mm

6

mm

6

**distance, to be maintained, conductive elements**

- forwards
- backwards
- upwards
- downwards
- sideways

mm

6

mm

6

mm

6

mm

10

mm

6

**Connections:****design of the electrical connection**

- for main current circuit
- for auxiliary and control current circuit

spring-loaded terminals

spring-loaded terminals

**Type of the connectable conductor cross-section**

- for main contacts
  - unifilar
  - stranded wire
  - stranded wire
    - with conductor end processing
    - without conductor final cutting
- at AWG-conductors / for main contacts
- for auxiliary contact
  - solid
  - stranded wire
    - with wire end processing
    - without conductor final cutting
- for AWG conductors / for auxiliary contacts

2x (1 ... 10 mm <sup>2</sup> )
2x (1 ... 10 mm <sup>2</sup> )
2x (1 ... 6 mm <sup>2</sup> )
2x (1 ... 6 mm <sup>2</sup> )
1x (18 ... 8)
2x (0.5 ... 2.5 mm <sup>2</sup> )
2x (0.5 ... 1.5 mm <sup>2</sup> )
2 x (0.5 ... 1.5 mm <sup>2</sup> )
2x (20 ... 14)

#### Certificates/approvals:

verification of suitability

CE / UL / CSA / CCC

#### Safety:

##### 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

%

75

%

75

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

- according to SN 31920

FIT

50

##### Protection against electrical shock

finger-safe

#### Further information:

##### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

##### Global Industry Mall (Online ordering system)

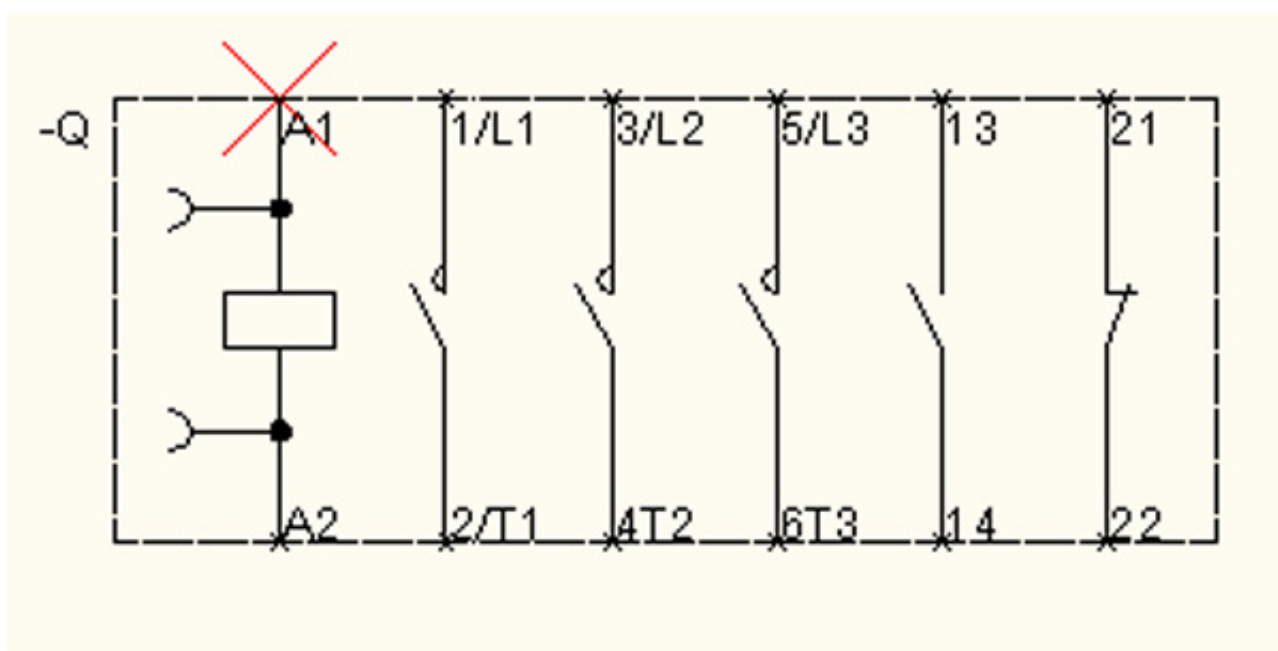
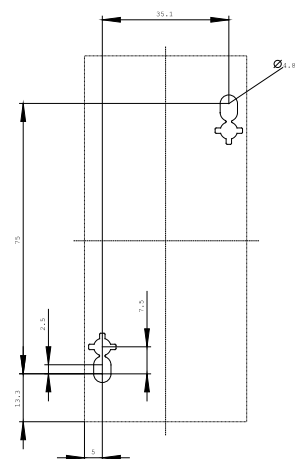
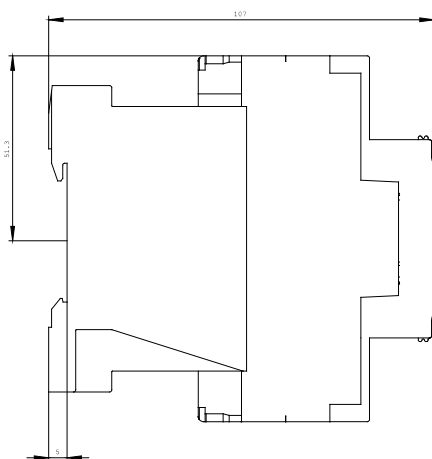
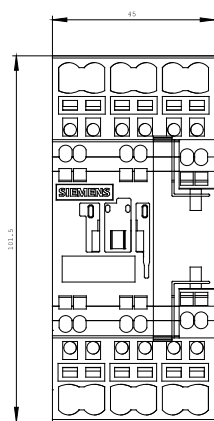
<http://www.siemens.com/industrial-controls/mall>

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

<http://support.automation.siemens.com/WW/view/en/3RT2028-2BB40/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RT2028-2BB40](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2028-2BB40)



last change:

May 8, 2010