

CONTACTOR, AC-3, 4KW/400V, 1NO+1NC,  
AC 230V 50HZ, 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	0.4
<b>Apparent loss power / of the magnet coil / at AC / typical</b>	V·A	8.5
<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	40
• at 60 °C ambient temperature / rated value	A	35
<b>Operating current</b>		
• at AC-2 / at 400 V / rated value	A	9
• at AC-3 / at 400 V / rated value	A	9
• at AC-4 / at 400 V / rated value	A	8.5
• 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	4
• at AC-3		
• at 400 V / rated value	kW	4
• at 500 V / rated value	kW	4.5
• at 690 V / rated value	kW	5.5
• at AC-4 / at 400 V / rated value	kW	4
<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	5,000
<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	1,000
1/h	1,000
1/h	300

#### Control circuit:

<b>Design of activation of the operating mechanism</b>		conventional
<b>Type of voltage / of the controlled supply voltage</b>		AC
<b>control supply voltage frequency</b>		
• 1 / rated value	Hz	50
<b>Control supply voltage / 1</b>		
• at 50 Hz / for AC		
• rated value	V	230
<b>Operating range factor control supply voltage rated value / of solenoid</b>		
• at 50 Hz / for AC		0.8 ... 1.1
<b>Apparent pull-in power / of the solenoid / for AC</b>	V·A	65
<b>Apparent holding power / of the solenoid / for AC</b>	V·A	8.5
<b>Power factor inductive</b>		
• at pull-in power of the coil		0.82
• at holding power of the coil		0.25

#### Auxiliary circuit:

<b>Product extension / auxiliary switch</b>		Yes
<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</b>		
• instantaneous switching		1
• lagging switching		0
<b>Number of NO contacts / for auxiliary contacts</b>		
• instantaneous switching		1
• leading switching		0
<b>Operating current / of the auxiliary contacts</b>		
• 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
- at 48 V
- at 60 V
- at 110 V
- at 220 V

A	6
A	2
A	2
A	1
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: 63 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25A

### Installation/mounting/dimensions:

<b>built in orientation</b>		vertical
<b>Type of fixing/fixation</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	102
<b>Depth</b>	mm	92
<b>distance, to be maintained, to the ranks assembly</b>		
• forwards	mm	0
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sideways	mm	0
<b>distance, to be maintained, to earthed part</b>		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sideways	mm	6
<b>distance, to be maintained, conductive elements</b>		
• forwards	mm	6
• backwards	mm	6
• upwards	mm	6
• downwards	mm	10
• sideways	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,...)

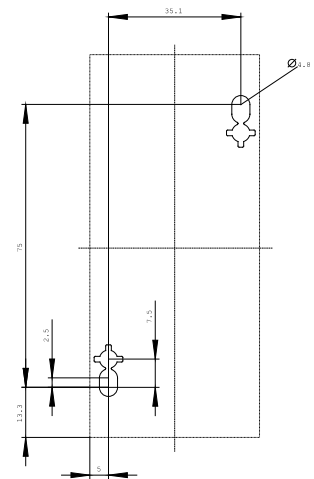
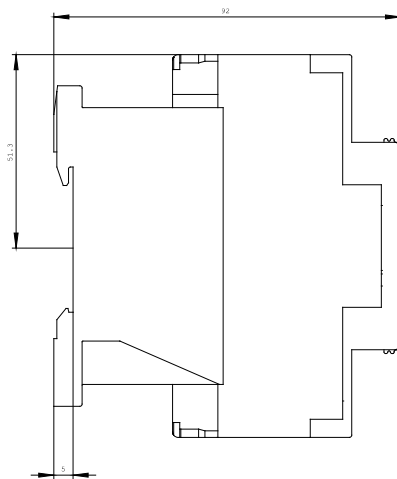
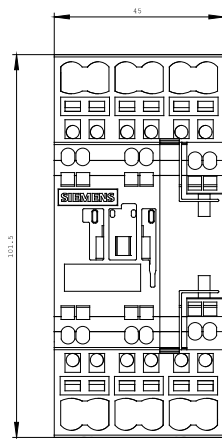
<http://www.siemens.com/industrial-controls/catalogs>

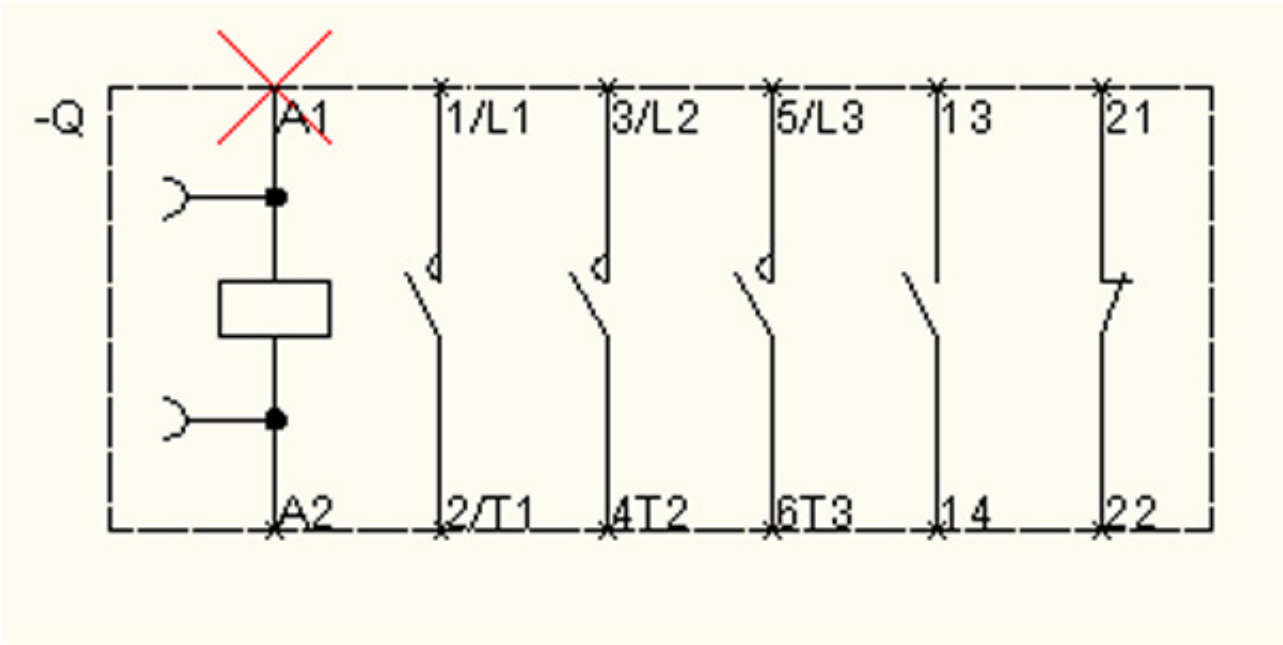
### Global Industry Mall (Online ordering system)

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

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

<http://support.automation.siemens.com/WW/view/en/3RT2023-2AP00/all>





last change:

May 8, 2010