



CONTACTOR, AC-3, 5.5KW/400V,  
2NO+2NC AC110V 50HZ/120V 60HZ 3-POLE,  
SZ S0 SCREW TERMINAL PERMANENT AUX. SWITCH  
FOR SUVA APPLICATIONS

General technical data:		
product brand name		SIRIUS
Size of the contactor		S0
Product extension / auxiliary switch		No
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
• during operating	°C	-25 ... +60
Shock resistance		
• at rectangular impulse		
• at AC		7,5g / 5 ms, 4,7g / 10 ms
• at sine pulse		
• at AC		11,8g / 5 ms, 7,4g / 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
- of the contactor with added electronics-compatible auxiliary switch block / typical

10,000,000

5,000,000

**Main circuit:****Number of NC contacts / for main contacts**

0

**Number of NO contacts / for main contacts**

3

**Operating current**

- at AC-1 / at 400 V

- at 40 °C ambient temperature / rated value

A 40

- at 60 °C ambient temperature / rated value

A 35

- at AC-2 / at 400 V / rated value

A 12

- at AC-3 / at 400 V / rated value

A 12

- at AC-4 / at 400 V / rated value

A 12.5

**Operating current**

- 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

**Service power**

- at AC-2 / at 400 V / rated value

kW 5.5

- at AC-3 / at 400 V / rated value

kW 5.5

- at AC-4 / at 400 V / rated value

kW 5.5

**Active power loss / per conductor / typical**

W 0.5

**Off-load operating frequency**

- at AC

1/h 5,000

• at DC	1/h	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	1,000
Frequency of operation / at AC-3 / according to IEC 60947-6-2	1/h	1,000
Frequency of operation / at AC-4 / according to IEC 60947-6-2	1/h	300

Control circuit:		
Type of voltage / of the controlled supply voltage		AC
Control supply voltage / 1		
• at 50 Hz / for AC / rated value	V	110
• at 60 Hz / for AC / rated value	V	120
Operating range factor control supply voltage rated value / of the magnet coil		
• at 50 Hz / for AC		0.8 ... 1.1
• at 60 Hz / for AC		0.85 ... 1.1
Apparent pull-in power / of the solenoid / for AC	V·A	68
Apparent holding power / of the solenoid / for AC	V·A	7.9
Inductive power factor		
• with the pull-in power of the coil		0.82
• with the pull-in power of the coil		0.25
Closing delay		
• at AC	ms	9 ... 38
Opening delay		
• at AC	ms	4 ... 16
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		2
Number of NO contacts / for auxiliary contacts / instantaneous switching		2
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
- at DC-13
  - at 24 V
  - at 48 V
  - at 60 V
  - at 110 V
  - at 220 V

A	1
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
  - with type of assignment 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:

#### mounting position

+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface

#### 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 141

#### 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
- for auxiliary and control current circuit

screw-type terminals

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

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>)

- with conductor end processing
- for AWG conductors / for auxiliary contacts

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



#### Declaration of Conformity

#### Shipping Approval



#### Shipping Approval

#### other



### 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	1
hp	2
hp	3
hp	3
hp	7.5
hp	10

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

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

A	11
A	11

#### Contact rating designation / for auxiliary contacts / according to UL

A600 / Q600

### Sicherheitsrelevante Kenngrößen:

#### 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
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#### 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
	Yes
	No

**Product function**

- mirror contact to IEC 60947-4-1
- positively driven operation to IEC 60947-5-1

**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:**

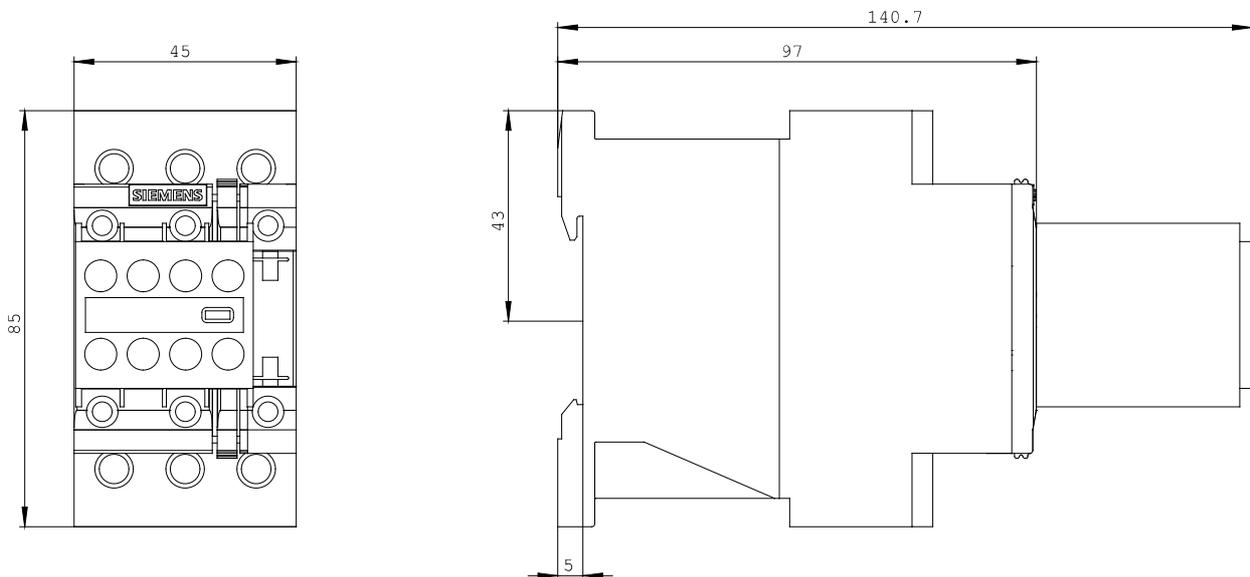
<http://www.siemens.com/cax>

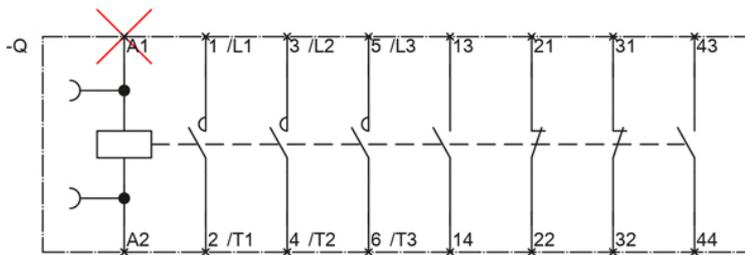
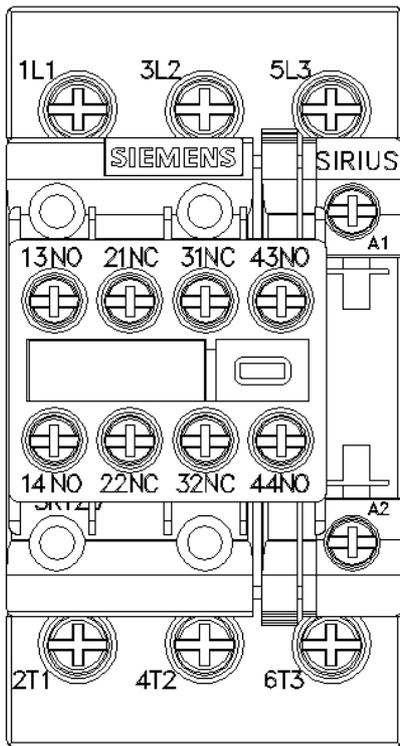
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<http://support.automation.siemens.com/WW/view/en/3RT2024-1AK64-3MA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RT2024-1AK64-3MA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2024-1AK64-3MA0)





last change:

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