



CONTACTOR,AC3:37KW/400V, 1NO+1NC,  
110V AC 50HZ, 3-POLE, SIZE S2,  
SCREW TERMINAL

General technical data:		
product brand name		SIRIUS
Size of contactor		S2
Product expansion		
• Auxiliary switch		Yes
• function module for communication		No
Protection class IP / on the front		IP20
Degree of pollution		3
Installation altitude / at height above sea level / maximum	m	2,000
Ambient temperature		
• during storage	°C	-55 ... +80
• during operation	°C	-25 ... +60
Surge voltage resistance / Rated value	kV	6
Insulation voltage / Rated value	V	690
maximum permissible voltage for safe isolation / between coil and main contacts / acc. to EN 60947-1	V	400
Mechanical service life (switching cycles)		
• 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
Connectable conductor cross-section / in main circuit		
• at AC-1		
• at 40 °C / minimum permissible	mm <sup>2</sup>	35
• at 60 °C / minimum permissible	mm <sup>2</sup>	35
Operating current		
• at AC-1 / up to 690 V		
• at ambient temperature 40 °C / Rated value	A	90
• at ambient temperature 60 °C / Rated value	A	80
• at AC-2 / at 400 V / Rated value	A	80
• at AC-3		
• at 400 V / Rated value	A	80
• at 500 V / Rated value	A	80
• at 690 V / Rated value	A	58
• at AC-4 / at 400 V / Rated value	A	55
Operating current / for $\geq 200000$ operating cycles / at AC-4		
• at 400 V / Rated value	A	30
• at 690 V / Rated value	A	24
Operating current		
• with 1 current path / at DC-1		
• at 24 V / Rated value	A	75
• at 110 V / Rated value	A	4.5
• at 220 V / Rated value	A	2
• at 440 V / Rated value	A	0.4
• at 600 V / Rated value	A	0.25
• with 2 current paths in series / at DC-1		
• at 24 V / Rated value	A	75
• at 110 V / Rated value	A	45
• at 220 V / Rated value	A	5
• at 440 V / Rated value	A	1
• at 600 V / Rated value	A	0.8
• with 3 current paths in series / at DC-1		
• at 24 V / Rated value	A	55
• at 110 V / Rated value	A	45
• at 220 V / Rated value	A	45
• at 440 V / Rated value	A	2.9
• at 600 V / Rated value	A	1.4

<b>Operating current</b>		
• with 1 current path / at DC-3 / at DC-5		
• at 24 V / Rated value	A	35
• at 110 V / Rated value	A	2.5
• at 220 V / Rated value	A	2
• at 440 V / Rated value	A	0.1
• at 600 V / Rated value	A	0.06
• with 2 current paths in series / at DC-3 / at DC-5		
• at 24 V / Rated value	A	55
• at 110 V / Rated value	A	25
• at 220 V / Rated value	A	5
• at 440 V / Rated value	A	0.27
• at 600 V / Rated value	A	0.16
• with 3 current paths in series / at DC-3 / at DC-5		
• at 24 V / Rated value	A	55
• at 110 V / Rated value	A	45
• at 220 V / Rated value	A	25
• at 440 V / Rated value	A	0.6
• at 600 V / Rated value	A	0.6
<b>Operating power</b>		
• at AC-1 / at 230 V / Rated value	kW	34
• at AC-1 / at 400 V / Rated value	kW	59
• at AC-1 / at 690 V / Rated value	kW	102
• at AC-2		
• at 400 V / Rated value	kW	37
• at AC-3		
• at 230 V / Rated value	kW	22
• at 400 V / Rated value	kW	37
• at 500 V / Rated value	kW	37
• at 690 V / Rated value	kW	45
• at AC-4		
• at 400 V / Rated value	kW	30
<b>Operating power / for <math>\geq 200000</math> operating cycles / at AC-4</b>		
• at 400 V / Rated value	kW	15.8
• at 690 V / Rated value	kW	21.8
<b>Thermal short-time current / restricted to 10 s</b>		
	A	640
<b>Active power loss / at AC-3 / at 400 V / for rated value of the operating current / per conductor</b>		
	W	5.7
<b>No-load switching frequency</b>		
• with AC	1/h	5,000

<b>Operating frequency</b>		
• at AC-1 / maximum	1/h	700
• at AC-2 / maximum	1/h	350
• at AC-3 / maximum	1/h	500
• at AC-4 / maximum	1/h	150

#### Control circuit/ Control:

<b>Type of voltage / of the control supply voltage</b>		AC
<b>Control supply voltage</b>		
• with AC / at 50 Hz / Rated value	V	110
<b>Operating range factor control supply voltage rated value / of the magnet coil</b>		
• with AC / at 50 Hz		0.8 ... 1.1
<b>Apparent pick-up power / of the magnet coil / with AC</b>		
• at 50 Hz	V·A	190
<b>Apparent holding power / of the magnet coil / with AC</b>		
• at 50 Hz	V·A	16
<b>Closing delay</b>		
• with AC	ms	10 ... 80
<b>Opening delay</b>		
• with AC	ms	10 ... 18
<b>Arcing time</b>	ms	10 ... 20

#### Auxiliary circuit:

<b>Number of NC contacts / for auxiliary contacts / instantaneous contact</b>		1
<b>Number of NO contacts / for auxiliary contacts / instantaneous contact</b>		1
<b>Operating current</b>		
• at AC-12 / maximum	A	10
• at AC-15		
• at 230 V / Rated value	A	10
• at 400 V / Rated value	A	3
• at 500 V / Rated value	A	2
• at 690 V / Rated value	A	1
<b>Operating current / at DC-12</b>		
• at 24 V / Rated value	A	10
• at 48 V / Rated value	A	6
• at 60 V / Rated value	A	6
• at 110 V / Rated value	A	3
• at 125 V / Rated value	A	2

• at 220 V / Rated value	A	1
• at 440 V / Rated value	A	0.3
• at 600 V / Rated value	A	0.15
<b>Operating current / at DC-13</b>		
• at 24 V / Rated value	A	10
• at 48 V / Rated value	A	2
• at 60 V / Rated value	A	2
• at 110 V / Rated value	A	1
• at 125 V / Rated value	A	0.9
• at 220 V / Rated value	A	0.3
• at 440 V / Rated value	A	0.14
• at 600 V / Rated value	A	0.1

#### UL/CSA ratings:

<b>yielded mechanical performance [hp]</b>		
• for single-phase AC motor		
• at 110/120 V / Rated value	hp	5
• at 230 V / Rated value	hp	15
• for three-phase AC motor		
• at 200/208 V / Rated value	hp	20
• at 220/230 V / Rated value	hp	25
• at 460/480 V / Rated value	hp	50
• at 575/600 V / Rated value	hp	60
<b>Full-load current (FLA) / for three-phase AC motor</b>		
• at 480 V / Rated value	A	65
• at 600 V / Rated value	A	62
<b>Contact rating / of the auxiliary contacts / acc. to UL</b>		A600 / P600

#### Short-circuit:

<b>Design of the fuse link</b>		
• for short-circuit protection of the auxiliary switch / required		fuse gL/gG: 10 A

#### Installation/ mounting/ dimensions:

<b>mounting position</b>		+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
<b>Mounting type</b>		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
<b>Width</b>	mm	55
<b>Height</b>	mm	113.4
<b>Depth</b>	mm	130
<b>Spacing required / with side-by-side mounting</b>	mm	0

## Connections/ terminals:

### Design of the electrical connection

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

screw-type terminals

screw-type terminals

### Type of connectable conductor cross-section

- for main contacts
  - single or multi-stranded
  - finely stranded / with core end processing
- for AWG conductors / for main contacts

2x (1 ... 35 mm<sup>2</sup>), 1x (1 ... 50 mm<sup>2</sup>)

2x (1 ... 25 mm<sup>2</sup>), 1x (1 ... 35 mm<sup>2</sup>)

2x (18 ... 2), 1x (18 ... 1)

### Type of connectable conductor cross-section

- for auxiliary contacts
  - single or multi-stranded
  - finely stranded / with core 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 (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)

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

## Safety related data:

### Proportion of dangerous failures

- with low demand rate / acc. to SN 31920
- with high demand rate / acc. to SN 31920

%

40

%

73

### Product function

- Mirror contact acc. to IEC 60947-4-1
- positively driven operation acc. to IEC 60947-5-1

Yes

No

## Certificates/ approvals:

General Product Approval

other



[Confirmation](#)

## Further information:

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

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

### Industry Mall (Online ordering system)

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

### Cax online generator

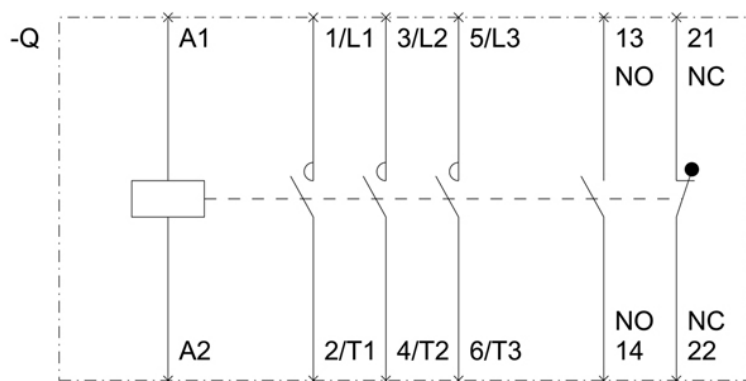
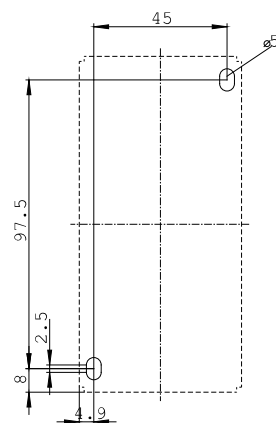
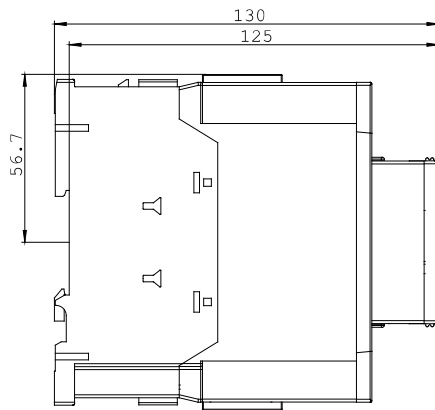
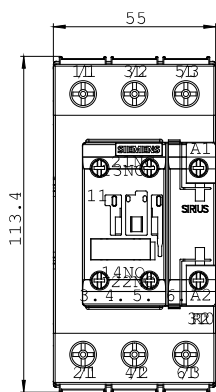
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RT2038-1AF00/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RT2038-1AF00](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2038-1AF00)



last change:

Dec 17, 2014