

CONTACTOR, AC-3, 18.5KW/400V, 2NO+2NC,
DC 24V, 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
Product extension / function module for communication		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 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

Maximum permissible voltage for protective separation / between coil and main contacts / in accordance with EN 60947-1	V	400
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:		
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	50
• at 60 °C ambient temperature / rated value	A	42
Connectable conductor cross-section / in main circuit		
• at AC-1		
• at 40 °C / minimum permissible	m ²	10
• at 60 °C / minimum permissible	m ²	10
Operational current		
• at AC-2 / at 400 V / rated value	A	38
• at AC-3		
• at 400 V / rated value	A	38
• at 500 V / rated value	A	32
• at 690 V / rated value	A	21
• at AC-4 / at 400 V / rated value	A	22
Operational current		
• with 1 current path / at DC-1		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	4.5
• at 220 V / rated value	A	1
• 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	35
• at 110 V / rated value	A	35
• 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	35
• at 110 V / rated value	A	35

• at 220 V / rated value	A	35
• at 440 V / rated value	A	2.9
• at 600 V / rated value	A	1.4
Operational current		
• 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
• at 220 V / rated value	A	1
• at 440 V / rated value	A	0.09
• 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	35
• at 110 V / rated value	A	15
• at 220 V / rated value	A	3
• 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	35
• at 110 V / rated value	A	35
• at 220 V / rated value	A	10
• at 440 V / rated value	A	0.6
• at 600 V / rated value	A	0.6
Service power		
• at AC-1		
• at 230 V / rated value	kW	16
• at 400 V / rated value	kW	28
• at 500 V / rated value	kW	35
• at 690 V / rated value	kW	48
• at AC-2 / at 400 V / rated value	kW	18.5
• at AC-3		
• at 230 V / rated value	kW	11
• at 400 V / rated value	kW	18.5
• at 690 V / rated value	kW	18.5
• at AC-4 / at 400 V / rated value	kW	11
Active power loss / at AC-3 / at 400 V / with rated operational current value / per conductor	W	3.8
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
- at AC-2 / according to IEC 60947-6-2
- at AC-3 / according to IEC 60947-6-2
- at AC-4 / according to IEC 60947-6-2

1/h	1,000
1/h	750
1/h	750
1/h	250

Control circuit:

Type of voltage / of the controlled supply voltage		DC
Control supply voltage		
• for DC / rated value	V	24
operating range factor control supply voltage rated value / of the magnet coil		
• for DC		0.8 ... 1.1
Pull-in power / of the solenoid / for DC	W	5.9
Holding power / of the solenoid / for DC	W	5.9
Closing delay		
• at DC	ms	50 ... 170
Opening delay		
• at DC	ms	15 ... 17.5
Arcing time	ms	10 ... 10
Residual current / of electronics / for control with signal <0>		
• at 230 V / with AC / maximum permissible	mA	7
• at 24 V / with DC / maximum permissible	mA	16

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		
• [nicht versorgt: PMD_ABP551_001_000]		
•	A	2
• at 690 V	A	1

UL/CSA ratings:

yielded mechanical performance (hp)		
• for single-phase squirrel cage motors		
• at 110/120 V / rated value	hp	3
• at 230 V / rated value	hp	5
• for three-phase squirrel cage motors		
• at 200/208 V / rated value	hp	10
• at 220/230 V / rated value	hp	10

<ul style="list-style-type: none"> • at 460/480 V / rated value • at 575/600 V / rated value 	hp	25
	hp	25
Operating current (FLA) / for three-phase squirrel cage motors		
<ul style="list-style-type: none"> • 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

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:
100 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:
35A

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	151
Distance, to be maintained, to the ranks assembly / sideways	mm	0

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
 - with conductor end processing

2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)

2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²

2x (16 ... 12), 2x (14 ... 8)

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

• for AWG conductors / for auxiliary contacts

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

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

Proportion of dangerous failures

• with low demand rate / according to SN 31920

%

40

• with high demand rate / according to SN 31920

%

73

Failure rate (FIT value) / with low demand rate

• according to SN 31920

FIT

100

Product function

• mirror contact to IEC 60947-4-1

• comment

Yes

with 3RH29

• positively driven operation to IEC 60947-5-1

No

Certificates/approvals:

General Product Approval

EMC

Functional Safety / Safety of Machinery



[Type Examination](#)

Declaration of Conformity



EG-Konf.

Shipping Approval



ABS



BUREAU
VERITAS



DNV



GL



LRS



PRS

Shipping Approval

other



RINA



RMRS

[Confirmation](#)



VDE

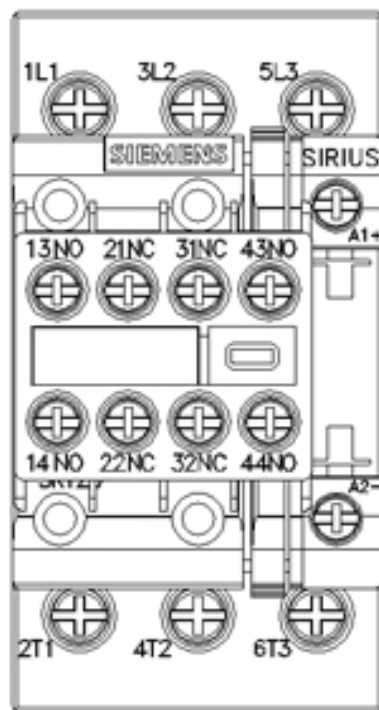
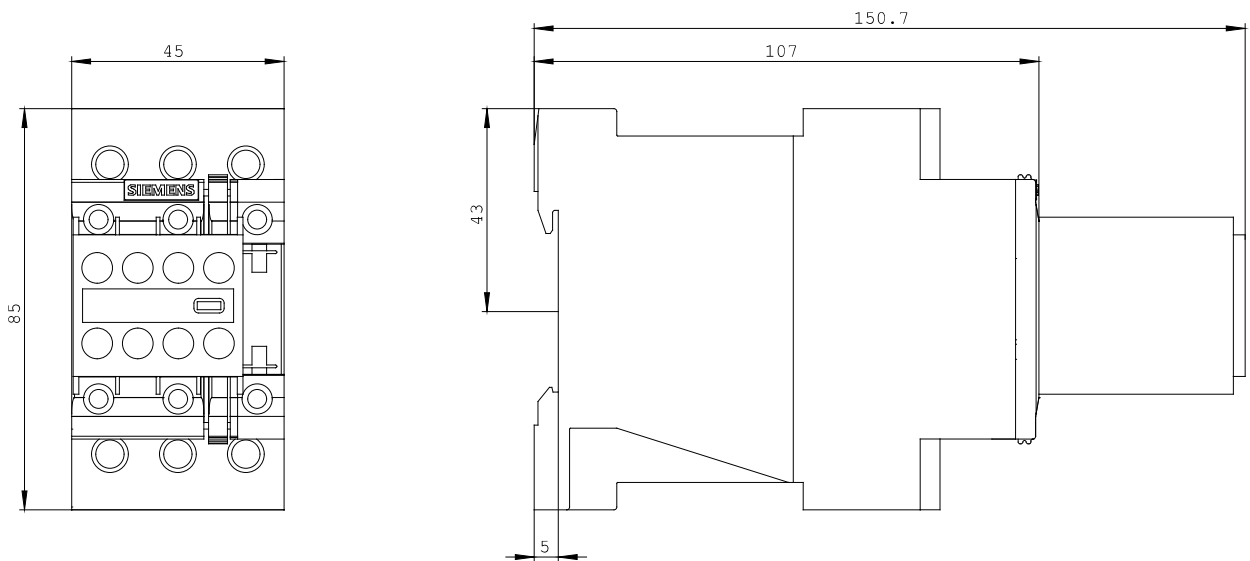
Further information:

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

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

Industry Mall (Online ordering system)

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



last change:

Feb 15, 2013