

CONTACTOR, AC-3 30 KW/400 V, AC 230 V 50/60 HZ, 3-POLE,
SIZE S3, CAGE CLAMP MULTIUNIT PACKING PACKING = 4
ITEMS

product brand name	SIRIUS
Product designation	power contactor

General technical data

Size of contactor	S3
Insulation voltage • rated value	1 000 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation • between coil and main contacts acc. to EN 60947-1	690 V
Protection class IP • on the front • of the terminal	IP00 IP00
Shock resistance • at rectangular impulse — at AC • with sine pulse — at AC	6,8g / 5 ms, 4g / 10 ms 10,6g / 5 ms, 6,2g / 10 ms
Mechanical service life (switching cycles) • of contactor typical • of the contactor with added electronics-compatible auxiliary switch block typical • of the contactor with added auxiliary switch block typical	10 000 000 5 000 000 10 000 000

Ambient conditions

Installation altitude at height above sea level maximum	2 000 m
Ambient temperature • during operation • during storage	-25 ... +60 °C -55 ... +80 °C

Main circuit

Number of poles for main current circuit	3
Number of NO contacts for main contacts	3
Number of NC contacts for main contacts	0

Operating current	
• at AC-1 at 400 V — at ambient temperature 40 °C rated value	100 A
• at AC-1 — up to 690 V at ambient temperature 40 °C rated value	100 A
— up to 690 V at ambient temperature 60 °C rated value	90 A
— up to 1000 V at ambient temperature 40 °C rated value	50 A
— up to 1000 V at ambient temperature 60 °C rated value	40 A
• at AC-3 — at 400 V rated value	65 A
— at 690 V rated value	47 A
— at 1000 V rated value	25 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	35 mm ²
• at 40 °C minimum permissible	35 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	28 A
• at 690 V rated value	20 A
Operating current	
• at 1 current path at DC-1 — at 24 V rated value	90 A
— at 110 V rated value	4.5 A
• with 2 current paths in series at DC-1 — at 24 V rated value	90 A
— at 110 V rated value	90 A
• with 3 current paths in series at DC-1 — at 24 V rated value	90 A
— at 110 V rated value	90 A
Operating current	
• at 1 current path at DC-3 at DC-5 — at 24 V rated value	40 A
— at 110 V rated value	2.5 A
• with 2 current paths in series at DC-3 at DC-5 — at 110 V rated value	90 A
— at 24 V rated value	90 A
• with 3 current paths in series at DC-3 at DC-5	

— at 110 V rated value	90 A
— at 24 V rated value	90 A
Operating power	
• at AC-1	
— at 230 V at 60 °C rated value	34 kW
— at 400 V rated value	59 kW
— at 690 V rated value	102 kW
— at 690 V at 60 °C rated value	102 kW
— at 1000 V at 60 °C rated value	66 W
• at AC-2 at 400 V rated value	30 kW
• at AC-3	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	45 kW
— at 1000 V rated value	30 W
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	15.1 kW
• at 690 V rated value	18.6 kW
Thermal short-time current limited to 10 s	600 A
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	4.6 W
No-load switching frequency	
• at AC	5 000 1/h
Operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	400 1/h
• at AC-3 maximum	1 000 1/h
• at AC-4 maximum	300 1/h
Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	230 V
• at 60 Hz rated value	230 V
Control supply voltage frequency 1 rated value	50 Hz
Control supply voltage frequency 2 rated value	60 Hz
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
Apparent pick-up power of magnet coil at AC	247 V·A

Inductive power factor with closing power of the coil	0.62
Apparent holding power of magnet coil at AC	25 V·A
Inductive power factor with the holding power of the coil	0.27
Closing delay	
• at AC	16 ... 57 ms
Opening delay	
• at AC	10 ... 19 ms
Arcing time	10 ... 15 ms

Auxiliary circuit

Number of NC contacts	
• for auxiliary contacts	
— instantaneous contact	0
Number of NO contacts	
• for auxiliary contacts	
— instantaneous contact	0
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V rated value	6 A
• at 400 V rated value	3 A
Operating current at DC-12	
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 220 V rated value	1 A
Operating current at DC-13	
• at 24 V rated value	10 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 220 V rated value	0.3 A
Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings

Contact rating of auxiliary contacts according to UL	A600 / Q600
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Short-circuit protection

Design of the fuse link	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	fuse gL/gG: 250 A
— with type of assignment 2 required	fuse gL/gG: 125 A
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A

Installation/ mounting/ dimensions

Mounting type	screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail
• Side-by-side mounting	Yes
Height	146 mm
Width	70 mm
Depth	139 mm
Required spacing	
• for grounded parts — at the side	6 mm

Connections/Terminals

Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	spring-loaded terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (2.5 ... 16 mm ²)
— stranded	2x (10 ... 50 mm ²)
— single or multi-stranded	2x (2,5 ... 16 mm ²)
— finely stranded with core end processing	2x (2.5 ... 35 mm ²)
— finely stranded without core end processing	2x (10 ... 35 mm ²)
• at AWG conductors for main contacts	2x (10 ... 1/0)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.25 ... 2.5 mm ²)
— finely stranded with core end processing	2x (0.25 ... 1.5 mm ²)
— finely stranded without core end processing	2x (0.25 ... 2.5 mm ²)
• at AWG conductors for auxiliary contacts	2x (24 ... 14)

Certificates/approvals

General Product Approval			Declaration of Conformity	Test Certificates	Shipping Approval
				spezielle Prüfbescheinigungen n	
CSA	UL		EG-Konf.		ABS

Shipping Approval				other	
				sonstig	Bestätigungen
GL	LRS	RINA	RMRS		

other
Umweltbestätigung

Further information

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1044-3AL20-Z W97>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1044-3AL20-Z W97>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1044-3AL20-Z W97>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1044-3AL20-Z W97&lang=en

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