

CONTACTOR, 90KW/400V/AC-3, AC(40...60HZ)/DC OPERATION
UC 220...240V W/O AUXILIARY CONTACTS 3-POLE, SIZE S6 BAR
CONNECTIONS CONVENT. OPERATING MECHANISM

product brand name	SIRIUS
Product designation	power contactor

General technical data:

Size of contactor	S6
Insulation voltage • rated value	1 000 V
Degree of pollution	3
Surge voltage resistance rated value	8 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 — at DC • with sine pulse — at AC — at DC	8,5g / 5 ms, 4,2g / 10 ms 8,5g / 5 ms, 4,2g / 10 ms 13,4g / 5 ms, 6,5g / 10 ms 13,4g / 5 ms, 6,5g / 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 NO contacts for main contacts	3
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Number of NC contacts for main contacts	0
Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 up to 690 V — at ambient temperature 40 °C rated value — at ambient temperature 60 °C rated value • at AC-3 — at 400 V rated value — at 690 V rated value	215 A 215 A 185 A 185 A 170 A
Connectable conductor cross-section in main circuit at AC-1 • at 60 °C minimum permissible • at 40 °C minimum permissible	95 mm ² 95 mm ²
Operating current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value	81 A 65 A
Operating current • at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value	160 A 18 A 160 A 160 A 160 A 160 A
Operating current • at 1 current path at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-3 at DC-5 — at 110 V rated value — at 24 V rated value • with 3 current paths in series at DC-3 at DC-5 — at 110 V rated value — at 24 V rated value	160 A 2.5 A 160 A 160 A 160 A 160 A
Operating power • at AC-1 — at 230 V at 60 °C rated value — at 400 V rated value	70 kW 121 kW

— at 690 V rated value	210 kW
— at 690 V at 60 °C rated value	210 kW
• at AC-2 at 400 V rated value	104 kW
• at AC-3	
— at 230 V rated value	61 kW
— at 400 V rated value	104 kW
— at 500 V rated value	132 kW
— at 690 V rated value	167 kW
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	45 kW
• at 690 V rated value	65 kW
Thermal short-time current limited to 10 s	1 480 A
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	13 W
No-load switching frequency	
• at AC	2 000 1/h
• at DC	2 000 1/h
Operating frequency	
• at AC-1 maximum	800 1/h
• at AC-2 maximum	300 1/h
• at AC-3 maximum	750 1/h
• at AC-4 maximum	130 1/h
Control circuit/ Control:	
Type of voltage of the control supply voltage	AC/DC
Control supply voltage at AC	
• at 50 Hz rated value	220 ... 240 V
• at 60 Hz rated value	220 ... 240 V
Control supply voltage at DC	
• rated value	220 ... 240 V
• 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	0.8 ... 1.1
Operating range factor control supply voltage rated value of magnet coil at DC	0.8 ... 1.1
Design of the surge suppressor	with varistor
Apparent pick-up power of magnet coil at AC	300 V·A
Inductive power factor with closing power of the coil	0.9
Apparent holding power of magnet coil at AC	5.8 V·A

Inductive power factor with the holding power of the coil	0.8
Closing power of magnet coil at DC	360 W
Holding power of magnet coil at DC	5.2 W
Closing delay	
• at AC	20 ... 95 ms
• at DC	20 ... 95 ms
Opening delay	
• at AC	40 ... 60 ms
• at DC	40 ... 60 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

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: 355 A
— with type of assignment 2 required	fuse gL/gG: 315 A
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A

Installation/ mounting/ dimensions:

Mounting type	screw fixing
• Side-by-side mounting	Yes
Height	172 mm
Width	140 mm
Depth	170 mm
Required spacing	
• for grounded parts	
— at the side	10 mm

Connections/ Terminals:

Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• at AWG conductors for main contacts	4 ... 250 kcmil
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), max. 2x (0.75 ... 4 mm ²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 1x 12

Certificates/approvals

General Product Approval				Declaration of Conformity	Test Certificates
					spezielle Prüfbescheinigunge n
CCC	CSA		UL	EG-Konf.	

Test Certificates	Shipping Approval				other
Typprüfbescheinigung/Werkszeugnis					sonstig
	ABS	DNV	GL	RMRS	

other
Umweltbestätigung Bestätigungen

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=3RT10566AP30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT10566AP30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT10566AP30>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT10566AP30&lang=en

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