

Reference: 3RT1056-6AP36

CONTACTOR, 90KW/400V/AC-3, AC
(50...60HZ)/DC OPERATION UC
220...240V AUXIL. CONTACTS 2NO+2NC
3-POLE, SIZE S6 BAR CONNECTIONS
CONVENT. OPERATING MECHANISM
SCREW TERMINAL

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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	IP00
of the terminal	IP00
Shock resistance	
at rectangular impulse	
— at AC	8,5g / 5 ms, 4,2g / 10 ms
— at DC	8,5g / 5 ms, 4,2g / 10 ms
with sine pulse	
— at AC	13,4g / 5 ms, 6,5g / 10 ms
— at DC	13,4g / 5 ms, 6,5g / 10 ms
Mechanical service life (switching cycles)	

of contactor typical	10 000 000
of the contactor with atd>	5 000 000
of the contactor with atd>	10 000 000
Ambient conditions:	
Installation altitude at height above sea level maximum	2 000 m
Ambient temperature	
during operation	-25 ... +60 °C
during storage	-55 ... +80 °C
Main circuit:	
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	215 A
at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	215 A
— up to 690 V at ambient temperature 60 °C rated value	185 A
— up to 1000 V at ambient temperature 40 °C rated value	100 A
— up to 1000 V at ambient temperature 60 °C rated value	100 A
at AC-3	
— at 400 V rated value	185 A
— at 690 V rated value	170 A
— at 1000 V rated value	65 A
Connectable conductor cross-section in main circuit at AC-1	
at 60 °C minimum permissible	95 mm ²
at 40 °C minimum permissible	95 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	81 A
at 690 V rated value	65 A
Operating current	
at 1 current path at DC-1	
— at 24 V rated value	160 A
— at 110 V rated value	18 A
with 2 current paths in series at DC-1	
— at 24 V rated value	160 A

— at 110 V rated value	160 A
with 3 current paths in series at DC-1	
— at 24 V rated value	160 A
— at 110 V rated value	160 A
Operating current	
at 1 current path at DC-3 at DC-5	
— at 24 V rated value	160 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	160 A
— at 24 V rated value	160 A
with 3 current paths in series at DC-3 at DC-5	
— at 110 V rated value	160 A
— at 24 V rated value	160 A
Operating power	
at AC-1	
— at 230 V at 60 °C rated value	70 kW
— at 400 V rated value	121 kW
— at 690 V rated value	210 kW
— at 690 V at 60 °C rated value	210 kW
— at 1000 V at 60 °C rated value	165 W
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
— at 1000 V rated value	90 W
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
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	0.8 ... 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	2
Number of NO contacts	
for auxiliary contacts	

— instantaneous contact	2
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
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
Witd>	120 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