SIEMENS

Data sheet

3RT1066-6AP36



power contactor, AC-3e/AC-3 300 A, 160 kW / 400 V, AC (50-60 Hz) / DC Uc: 220-240 V 3-pole, auxiliary contacts 2 NO + 2 NC drive: conventional main circuit: busbar control and auxiliary circuit: screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
General technical data	
size of contactor	S10
product extension	
 function module for communication 	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	66 W
 at AC in hot operating state per pole 	22 W
 without load current share typical 	7.4 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	1 000 V
 of auxiliary circuit with degree of pollution 3 rated value 	500 V
surge voltage resistance	
 of main circuit rated value 	8 kV
 of auxiliary circuit rated value 	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
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
shock resistance 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 (operating cycles)	
 of contactor typical 	10 000 000
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Blei - 7439-92-1
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
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30	95 %

mum	
ircuit	
per of poles for main current circuit 3	
per of NO contacts for main contacts 3	
ating voltage	
at AC-3 rated value maximum 1 00	
at AC-3e rated value maximum 1 00	JU V
ational current	
at AC-1 at 400 V at ambient temperature 40 °C rated 330 .	A
at AC-1	
— up to 690 V at ambient temperature 40 °C rated 330 value	
up to 690 V at ambient temperature 60 °C rated 300 . value	A
up to 1000 V at ambient temperature 40 °C rated value 150	A
— up to 1000 V at ambient temperature 60 °C rated value 150	A
at AC-3	
- at 400 V rated value 300	A
- at 500 V rated value 300	A
- at 690 V rated value 280	A
- at 1000 V rated value 95 A	A
at AC-3e	
- at 400 V rated value 300	A
- at 500 V rated value 300	A
- at 690 V rated value 280	A
— at 1000 V rated value 95 A	Ą
at AC-4 at 400 V rated value 280	A
at AC-5a up to 690 V rated value 290	A
at AC-5b up to 400 V rated value 249	A
at AC-6a	
— up to 230 V for current peak value n=20 rated value 292.	A
— up to 400 V for current peak value n=20 rated value 292.	
— up to 500 V for current peak value n=20 rated value 292.	
— up to 690 V for current peak value n=20 rated value 280.	
- up to 1000 V for current peak value n=20 rated 95 A	
value	
at AC-6a	
— up to 230 V for current peak value n=30 rated value 195.	A
— up to 400 V for current peak value n=30 rated value 195.	A
— up to 500 V for current peak value n=30 rated value 195	
— up to 690 V for current peak value n=30 rated value 195	
— up to 1000 V for current peak value n=30 rated 95 A	
value	, mm²
ational current for approx. 200000 operating cycles at	
anonal current for approx. 200000 operating cycles at	
at 400 V rated value 125	A
at 690 V rated value 115	A
ational current	
at 1 current path at DC-1	
- at 24 V rated value 300	A
- at 60 V rated value 300	A
- at 110 V rated value 33 A	4
- at 220 V rated value 3.8 A	A
- at 440 V rated value 0.9 A	
- at 600 V rated value 0.6 A	
	A
at 1 current path at DC-1300 at 24 V rated value300 at 60 V rated value300 at 110 V rated value33 A at 220 V rated value3.8 A at 440 V rated value0.9 A	A A A A A

— at 110 V rated value	300 A
— at 220 V rated value	300 A
— at 440 V rated value	4 A
— at 600 V rated value	2 A
 with 3 current paths in series at DC-1 	
— at 24 V rated value	300 A
— at 60 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	300 A
— at 440 V rated value	11 A
— at 600 V rated value	5.2 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	300 A
— at 60 V rated value	11 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.18 A
— at 600 V rated value	0.125 A
• with 2 current paths in series at DC-3 at DC-5	
- at 24 V rated value	300 A
— at 60 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	2.5 A
— at 440 V rated value	0.65 A
— at 600 V rated value	0.37 A
with 3 current paths in series at DC-3 at DC-5	0.57 A
— at 24 V rated value	300 A
— at 60 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	300 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
operating power	0.13 A
• at AC-3	
— at 230 V rated value	90 kW
— at 400 V rated value	160 kW
— at 500 V rated value	200 kW
— at 690 V rated value	250 kW
— at 1000 V rated value	132 kW
• at AC-3e	102 (\\
- at 230 V rated value	90 kW
— at 400 V rated value	160 kW
— at 500 V rated value	200 kW
— at 690 V rated value	250 kW
— at 1000 V rated value	132 kW
operating power for approx. 200000 operating cycles at AC-	152 KW
4	
• at 400 V rated value	71 kW
• at 690 V rated value	112 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	110 000 kVA
• up to 400 V for current peak value n=20 rated value	200 000 VA
 up to 500 V for current peak value n=20 rated value 	250 000 VA
• up to 690 V for current peak value n=20 rated value	330 000 VA
 up to 1000 V for current peak value n=20 rated value 	160 000 VA
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	70 000 VA
• up to 400 V for current peak value n=30 rated value	130 000 VA
• up to 500 V for current peak value n=30 rated value	160 000 VA
 up to 690 V for current peak value n=30 rated value 	230 000 VA
 up to 1000 V for current peak value n=30 rated value 	160 000 VA
short-time withstand current in cold operating state up to	

short-time withstand current in cold operating state up to

40 °C				
 limited to 1 s switching at zero current maximum 	5 524 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 5 s switching at zero current maximum 	4 579 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 10 s switching at zero current maximum 	3 153 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 30 s switching at zero current maximum 	1 883 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 60 s switching at zero current maximum 	1 445 A; Use minimum cross-section acc. to AC-1 rated value			
no-load switching frequency				
• at AC	2 000 1/h			
• at DC	2 000 1/h			
operating frequency	2 000 1/11			
• at AC-1 maximum	750 1/h			
• at AC-2 maximum	250 1/h			
• at AC-2 maximum	500 1/h			
• at AC-3e maximum	500 1/h			
• at AC-3e maximum	130 1/h			
	130 1/11			
Control circuit/ Control	10/00			
type of voltage of the control supply voltage	AC/DC			
control supply voltage at AC	000 04014			
• 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			
operating range factor control supply voltage rated value of magnet coil at DC				
initial value	0.8			
full-scale value	1.1			
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			
design of the surge suppressor	with varistor			
apparent pick-up power				
 at minimum rated control supply voltage at AC 				
— at 50 Hz	490 VA			
— at 60 Hz	490 VA			
 at maximum rated control supply voltage at AC 				
— at 60 Hz	590 VA			
— at 50 Hz	590 VA			
apparent pick-up power of magnet coil at AC				
● at 50 Hz	590 VA			
• at 60 Hz	590 VA			
inductive power factor with closing power of the coil				
• at 50 Hz	0.9			
• at 60 Hz	0.9			
apparent holding power				
 at minimum rated control supply voltage at DC 	6.1 VA			
 at maximum rated control supply voltage at DC 	7.4 VA			
apparent holding power				
 at minimum rated control supply voltage at AC 				
— at 50 Hz	5.6 VA			
— at 60 Hz	5.6 VA			
 at maximum rated control supply voltage at AC 				
— at 50 Hz	6.7 VA			
— at 60 Hz	6.7 VA			
apparent holding power of magnet coil at AC				
• at 50 Hz	6.7 VA			
• at 60 Hz	6.7 VA			
inductive power factor with the holding power of the coil				
• at 50 Hz	0.9			
• at 60 Hz	0.9			
closing power of magnet coil at DC	650 W			

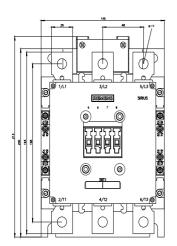
holding power of magnet coil at DC	7.4 W
closing delay	
• at AC	30 95 ms
• at DC	30 95 ms
opening delay	
• at AC	40 80 ms
• at DC	40 80 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous	2
contact	2
number of NO contacts for auxiliary contacts instantaneous contact	2
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	6 A
 at 400 V rated value 	3 A
at 500 V rated value	2 A
at 690 V rated value	1A
operational current at DC-12	
at 24 V rated value	10 A
	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
• at 600 V rated value	0.15 A
operational current at DC-13	
at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
at 220 V rated value	0.3 A
at 600 V rated value	0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	302 A
at 600 V rated value	289 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
— at 200/208 V rated value	100 hp
— at 220/230 V rated value	125 hp
— at 460/480 V rated value	250 hp
— at 575/600 V rated value	300 hp
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 	gG: 500 A (690 V, 100 kA)
- with type of assignment 2 required	gG: 400 A (690 V, 100 kA), aM: 315 A (690 V, 50 kA), BS88: 400 A (415 V, 50
for short-circuit protection of the auxiliary switch required	kA) gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
fastening method	screw fixing
side-by-side mounting	Yes
	100
	210 mm
height width	210 mm 145 mm

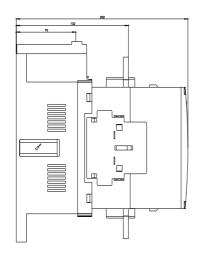
depth		202 mm		
required spacing		202 11111		
with side-by-side mounting				
— forwards		20 mm		
— upwards		10 mm		
— downwards		10 mm		
— at the side		0 mm		
		0 mm		
for grounded parts		00 man		
— forwards		20 mm		
— upwards		10 mm		
— at the side		10 mm		
— downwards		10 mm		
for live parts		00		
— forwards		20 mm		
— upwards		10 mm		
— downwards		10 mm		
— at the side		10 mm		
Connections/ Terminals				_
type of electrical connection				
 for main current circuit 		Connection bar		
 for auxiliary and control circuit 		screw-type terminals		
 at contactor for auxiliary contacts 		Screw-type terminals		
 of magnet coil 		Screw-type terminals		
width of connection bar		25 mm		
thickness of connection bar		6 mm		
diameter of holes		11 mm		
number of holes		1		
connectable conductor cross-section for main co	ontacts			
stranded		70 240 mm²		
connectable conductor cross-section for auxiliar	y contacts			
 solid or stranded 		0.5 4 mm²		
 finely stranded with core end processing 		0.5 2.5 mm ²		
type of connectable conductor cross-sections				
 for auxiliary contacts 				
— solid		2x (0.5 1.5 mm²), 2x (0.75	2.5 mm²), max. 2x (0.75	. 4 mm²)
— solid or stranded		2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²)		. 4 mm²)
 finely stranded with core end processing 	l .	2x (0.5 1.5 mm²), 2x (0.75	2.5 mm²)	
 for AWG cables for auxiliary contacts 		2x (20 16), 2x (18 14), 12	x 12	
AWG number as coded connectable conductor c	ross			
section		10 14		
for auxiliary contacts		18 14		
Safety related data				_
product function				
mirror contact according to IEC 60947-4-1		Yes		
positively driven operation according to IEC 6	0947-5-1	No		
suitability for use safety-related switching OFF		Yes		
B10 value with high demand rate according to SN 31		1 000 000		
T1 value for proof test interval or service life accordin 61508	ng to IEC	20 a		
protection class IP on the front according to IEC	60529	IP00; IP20 with box terminal/o	cover	
touch protection on the front according to IEC 60		finger-safe, for vertical contact		ninal/cover
Certificates/ approvals				
General Product Approval				
contrait rouger Approval				
	<u>Confirmation</u>	• (b)	<u>KC</u>	EHC
EMC Functional Safety/Safety of Ma-	Declaration of	Conformity	Test Certificates	

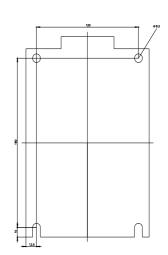
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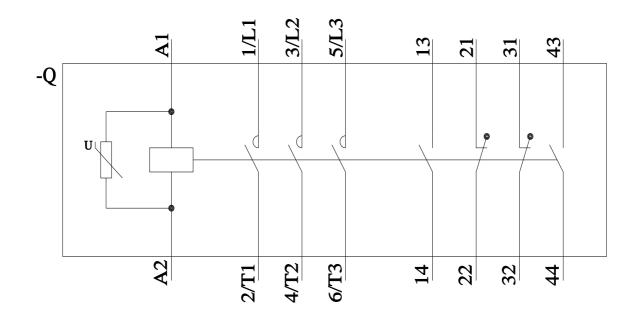
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	chinery				
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Test Certificates	Marine / Shipping				
<u>Miscellaneous</u>	ABS	Llovd's Register uts	PRS	RMRS	DNV-GL DNV-GL
other				Railway	
Confirmation	<u>Miscellaneous</u>	<u>Miscellaneous</u>	<u>Confirmation</u>	Vibration and Shock	Special Test Certific- ate
Environmental Con- firmations					
urther information Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus). Information on the packaging https://support.industry.siemens.com/cs/ww/en/view/109813875 Information- and Downloadcenter (Catalogs, Brochures,) https://www.siemens.com/ic10 Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1066-6AP36 Cax online generator					
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