SIEMENS

Data sheet 3RT1066-6AB36



power contactor, AC-3e/AC-3 300 A, 160 kW / 400 V, AC (50-60 Hz) / DC Uc: 23-26 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 %

maximum	
ain circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
at AC-3 rated value maximum	1 000 V
at AC-3e rated value maximum	1 000 V
operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	330 A
• at AC-1	
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	330 A
— up to 690 V at ambient temperature 60 °C rated value	300 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	200 A
— 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
• 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
 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 A
 up to 500 V for current peak value n=20 rated value 	292 A
 up to 690 V for current peak value n=20 rated value 	280 A
— 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 A
— up to 690 V for current peak value n=30 rated value	195 A
— up to 1000 V for current peak value n=30 rated value	95 A
ninimum cross-section in main circuit at maximum AC-1 rated value	185 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	125 A
at 690 V rated value	115 A
pperational 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
— at 220 V rated value	3.8 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.6 A
with 2 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	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 	
— 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	
• 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	
— 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-	
• 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	

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				
• at AC-1 maximum	750 1/h			
• at AC-2 maximum	250 1/h			
• at AC-3 maximum	500 1/h			
at AC-3e maximum	500 1/h			
• at AC-4 maximum	130 1/h			
Control circuit/ Control	130 1/11			
	AC/DC			
type of voltage of the control supply voltage	AC/DC			
control supply voltage at AC	00 00 1/			
at 50 Hz rated value	23 26 V			
at 60 Hz rated value	23 26 V			
control supply voltage at DC				
rated value	23 26 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	0.0 1/1			
— at 50 Hz	6.7 VA			
— at 60 Hz	6.7 VA			
apparent holding power of magnet coil at AC	0.7.1/4			
• 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			

halding a constant of the cons	7.4W		
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 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	1 A		
operational current at DC-12			
• at 24 V rated value	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	0.1071		
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	1A		
at 175 V rated value 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 kA)		
• for short-circuit protection of the auxiliary switch required	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		
height	210 mm		
width	145 mm		

depth	202 mm			
required spacing				
with side-by-side mounting				
— forwards	20 mm			
— upwards	10 mm			
— downwards	10 mm			
— at the side	0 mm			
for grounded parts	O IIIII			
— forwards	20 mm			
— upwards	10 mm			
— at the side	10 mm			
— downwards	10 mm			
• for live parts				
— 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				
at contactor for auxiliary contacts	screw-type terminals Screw-type terminals			
of magnet coil	Screw-type terminals 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 contacts	1			
stranded	70 240 mm²			
connectable conductor cross-section for auxiliary contacts	70 240 Hilli			
solid or stranded	0.5 4 mm²			
finely stranded with core end processing	0.5 2.5 mm²			
type of connectable conductor cross-sections	0.5 2.5 11111			
• 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— finely stranded with core end processing	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)			
for AWG cables for auxiliary contacts	2x (0.5 1.5 minr), 2x (0.75 2.5 minr) 2x (20 16), 2x (18 14), 1x 12			
Nor AWG cables for auxiliary contacts AWG number as coded connectable conductor cross	2A (20 10), 2A (10 17), 1X 12			
section				
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 60947-5-1 	No			
suitability for use safety-related switching OFF	Yes			
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	20 a			
protection class IP on the front according to IEC 60529	IP00; IP20 with box terminal/cover			
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover			
Certificates/ approvals				
General Product Approval				

General Product Approval





Confirmation



<u>KC</u>





Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certific-<u>ate</u>

Test Certificates

Marine / Shipping

Miscellaneous











other				Railway	
Confirmation	<u>Miscellaneous</u>	Miscellaneous	Confirmation	Special Test Certific- ate	Vibration and Shock

Environment

Environmental Confirmations

Further 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=3RT1066-6AB36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1066-6AB36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1066-6AB36

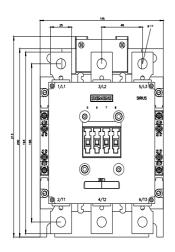
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

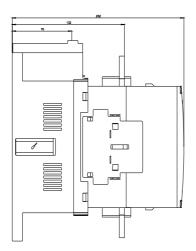
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1066-6AB36&lang=en

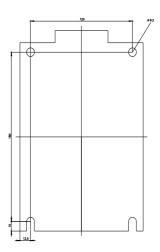
Characteristic: Tripping characteristics, I²t, Let-through current

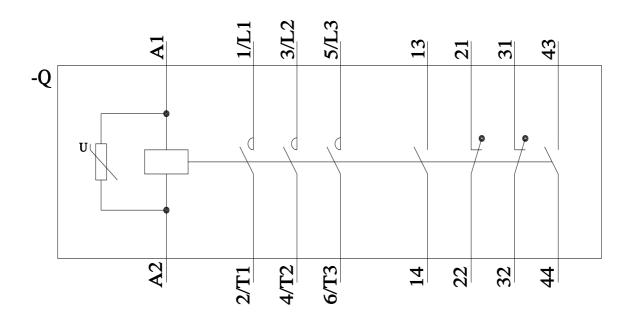
https://support.industry.siemens.com/cs/ww/en/ps/3RT1066

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1066-6AB36&objecttype=14&gridview=view1



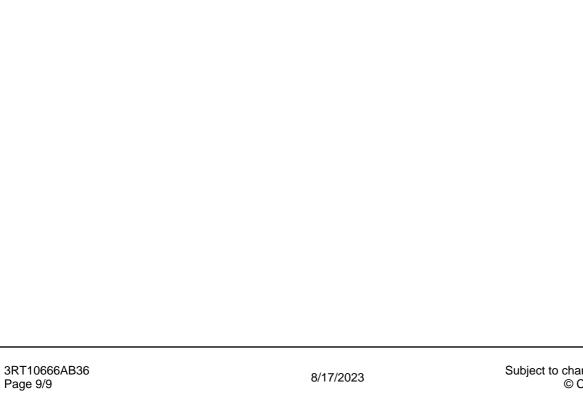






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