SIEMENS

Data sheet

3RT1076-6AP36



power contactor, AC-3e/AC-3 500 A, 250 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	S12
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 	165 W
 at AC in hot operating state per pole 	55 W
 without load current share typical 	10 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	
maximum Iain circuit	
	2
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	4 000 \/
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 	610 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	610 A
value	
— up to 690 V at ambient temperature 60 °C rated	550 A
value — up to 1000 V at ambient temperature 40 °C rated	200 A
value	2007
— up to 1000 V at ambient temperature 60 °C rated	200 A
value	
• at AC-3	
— at 400 V rated value	500 A
— at 500 V rated value	500 A
— at 690 V rated value	450 A
— at 1000 V rated value	180 A
• at AC-3e	
— at 400 V rated value	500 A
— at 500 V rated value	500 A
— at 690 V rated value	450 A
— at 1000 V rated value	180 A
• at AC-4 at 400 V rated value	430 A
 at AC-5a up to 690 V rated value 	536 A
• at AC-5b up to 400 V rated value	415 A
● at AC-6a	
— up to 230 V for current peak value n=20 rated value	414 A
— up to 400 V for current peak value n=20 rated value	414 A
— up to 500 V for current peak value n=20 rated value	414 A
— up to 690 V for current peak value n=20 rated value	414 A
— up to 1000 V for current peak value n=20 rated	180 A
value	
• at AC-6a	
 — up to 230 V for current peak value n=30 rated value 	276 A
— up to 400 V for current peak value n=30 rated value	276 A
— up to 500 V for current peak value n=30 rated value	276 A
— up to 690 V for current peak value n=30 rated value	276 A
— up to 1000 V for current peak value n=30 rated	180 A
value minimum cross-section in main circuit at maximum AC-1 rated	370 mm²
value	
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	175 A
• at 690 V rated value	150 A
operational current	
at 1 current path at DC-1	
— at 24 V rated value	400 A
— at 60 V rated value	330 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	400.4
— at 24 V rated value	400 A
— at 60 V rated value	400 A

— at 110 V rated value	400 A
— at 220 V rated value	400 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	400 A
— at 60 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 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	400 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	400 A
— at 60 V rated value	400 A
— at 110 V rated value	400 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	400 A
— at 60 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 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	160 kW
— at 400 V rated value	250 kW
— at 500 V rated value	315 kW
— at 690 V rated value	400 kW
— at 1000 V rated value	250 kW
• at AC-3e	
— at 230 V rated value	160 kW
— at 400 V rated value	250 kW
— at 500 V rated value	315 kW
— at 690 V rated value	400 kW
— at 1000 V rated value	250 kW
operating power for approx. 200000 operating cycles at AC-	
	00.1144
at 400 V rated value	98 kW
at 690 V rated value	148 kW
operating apparent power at AC-6a	100.000 10/4
up to 230 V for current peak value n=20 rated value	160 000 kVA
up to 400 V for current peak value n=20 rated value	280 000 VA
up to 500 V for current peak value n=20 rated value	350 000 VA
• up to 690 V for current peak value n=20 rated value	490 000 VA
up to 1000 V for current peak value n=20 rated value	310 000 VA
operating apparent power at AC-6a	440.000 \/A
• up to 230 V for current peak value n=30 rated value	110 000 VA
• up to 400 V for current peak value n=30 rated value	190 000 VA
• up to 500 V for current peak value n=30 rated value	230 000 VA
• up to 690 V for current peak value n=30 rated value	330 000 VA
up to 1000 V for current peak value n=30 rated value	310 000 VA
short-time withstand current in cold operating state up to	

40 °C					
 limited to 1 s switching at zero current maximum 	7 484 A; Use minimum cross-section acc. to AC-1 rated value				
 limited to 5 s switching at zero current maximum 	7 484 A; Use minimum cross-section acc. to AC-1 rated value				
 limited to 10 s switching at zero current maximum 	5 978 A; Use minimum cross-section acc. to AC-1 rated value				
 limited to 30 s switching at zero current maximum 	3 765 A; Use minimum cross-section acc. to AC-1 rated value				
 limited to 60 s switching at zero current maximum 	2 887 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	500 1/h				
• at AC-2 maximum	170 1/h				
 at AC-3 maximum 	420 1/h				
• at AC-3e maximum	420 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				
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	700 VA				
— at 60 Hz	700 VA				
at maximum rated control supply voltage at AC					
— at 60 Hz	830 VA				
— at 50 Hz	830 VA				
apparent pick-up power of magnet coil at AC					
• at 50 Hz	830 VA				
• at 60 Hz	830 VA				
inductive power factor with closing power of the coil					
• at 50 Hz	0.9				
• at 60 Hz	0.9				
apparent holding power	0.51/4				
at minimum rated control supply voltage at DC	8.5 VA				
at maximum rated control supply voltage at DC	10 VA				
apparent holding power					
at minimum rated control supply voltage at AC	7 6 \ / A				
— at 50 Hz	7.6 VA				
— at 60 Hz	7.6 VA				
at maximum rated control supply voltage at AC	0.01/4				
- at 50 Hz	9.2 VA				
- at 60 Hz	9.2 VA				
inductive power factor with the holding power of the coil	0.0				
• at 50 Hz	0.9				
• at 60 Hz	0.9				
closing power of magnet coil at DC	920 W				
holding power of magnet coil at DC	10 W				
closing delay	45 100 mg				
• at AC	45 100 ms				

• at DC	45 100 ms				
opening delay					
• at AC	60 100 ms				
• at DC	60 100 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	1A				
• 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	1A				
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	477 A				
at 600 V rated value	472 A				
yielded mechanical performance [hp]					
• for 3-phase AC motor					
— at 200/208 V rated value	150 hp				
— at 220/230 V rated value	200 hp				
— at 460/480 V rated value	400 hp				
— at 575/600 V rated value	500 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: 630 A (690 V, 100 kA)				
— with type of assignment 2 required	gG: 500 A (690 V, 100 kA), aM: 500 A (690 V, 50 kA), BS88: 500 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				
- factorian math1					
fastening method ide hy side recurting	screw fixing				
fastening method side-by-side mounting	Yes				
height	214 mm				
width	160 mm				
depth required spacing	225 mm				

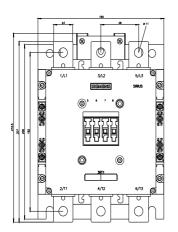
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0 mm²				
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2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), max. 2x (0.75 4 mm²)				
2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²)				
1.5 mm²), 2x (0.75 2.5 mm²)				
2x (20 16), 2x (18 14), 1x 12				
Yes; applies only to contactor operating mechanism				
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20 a				
IP00; IP20 with box terminal/cover				
finger-safe, for vertical contact from the front with box terminal/cover				
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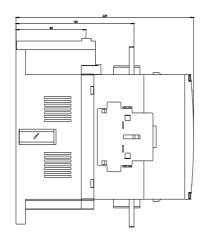
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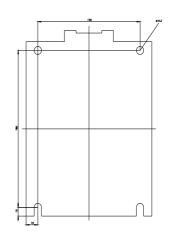
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<u>Miscellaneous</u>	<u>Confirmation</u>	Special Test Certific- ate	EPD Typ II/III (with life cylce assessment)			
Information on the packaging https://support.industry.siemens.com/cs/ww/en/view/109813875 Information- and Downloadcenter (Catalogs, Brochures,) https://www.siemens.com/ic10 Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1076-6AP36 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1076-6AP36 Service&Support (Manuals, Certificates, Characteristics, FAQs,) https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AP36 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1076-6AP36⟨=en						
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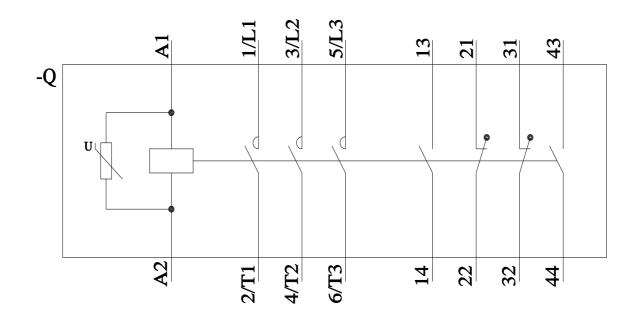
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AP36/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1076-6AP36&objecttype=14&gridview=view1









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