SIEMENS

Data sheet

3RT1276-6AR36



vacuum contactor, AC-3 500 A, 250 kW / 400 V AC (50-60 Hz) / DC operation 440-480 V AC/DC auxiliary contacts 2 NO + 2 NC 3-pole, frame size S12 busbar connections drive: conventional

product brand name	SIRIUS
product designation	Vacuum contactor
product type designation	3RT12
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 	96 W
 at AC in hot operating state per pole 	32 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 safe isolation 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 (switching 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
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	
Main 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	610 A
 at AC-1 up to 690 V at ambient temperature 40 °C rated value 	610 A
— up to 690 V at ambient temperature 60 °C rated value	550 A
— up to 1000 V at ambient temperature 40 °C rated value	610 A
— up to 1000 V at ambient temperature 60 °C rated value	550 A
• at AC-3	
— at 400 V rated value	500 A
— at 500 V rated value	500 A
— at 690 V rated value	500 A
— at 1000 V rated value	500 A
• at AC-3e	
— at 400 V rated value	500 A
— at 500 V rated value	500 A
— at 690 V rated value	500 A
— at 1000 V rated value	500 A
• at AC-4 at 400 V rated value	430 A
● at AC-6a	
— up to 230 V for current peak value n=20 rated value	439 A
— up to 400 V for current peak value n=20 rated value	439 A 439 A
 — up to 500 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated 	439 A 439 A
- up to 000 V for current peak value n=20 rated - up to 1000 V for current peak value n=20 rated	439 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	293 A
— up to 400 V for current peak value n=30 rated value	293 A
— up to 500 V for current peak value n=30 rated value	293 A
 up to 690 V for current peak value n=30 rated value up to 1000 V for current peak value n=30 rated 	293 A 293 A
— up to 1000 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1	293 A
rated value operational current for approx. 200000 operating	
cycles at AC-4	
• at 400 V rated value	215 A
• at 690 V rated value	215 A
operating power	
• at AC-3	
— at 230 V rated value	160 kW
— at 400 V rated value	250 kW

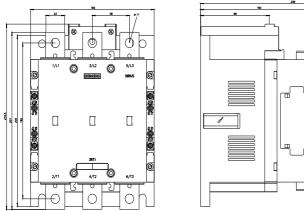
— at 500 V rated value	355 kW
— at 690 V rated value	500 kW
— at 1000 V rated value	710 kW
• at AC-3e	
— at 230 V rated value	160 kW
— at 400 V rated value	250 kW
— at 500 V rated value	355 kW
— at 690 V rated value	500 kW
— at 1000 V rated value	710 kW
operating power for approx. 200000 operating cycles at AC-4	
 at 400 V rated value 	122 kW
at 690 V rated value	212 kW
operating apparent power at AC-6a	
 up to 230 V for current peak value n=20 rated value 	170 000 kVA
 up to 400 V for current peak value n=20 rated value 	300 000 VA
 up to 500 V for current peak value n=20 rated value 	380 000 VA
 up to 690 V for current peak value n=20 rated value 	520 000 VA
 up to 1000 V for current peak value n=20 rated value 	760 000 VA
operating apparent power at AC-6a	
• 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	200 000 VA
• up to 500 V for current peak value n=30 rated value	250 000 VA
• up to 690 V for current peak value n=30 rated value	350 000 VA
 up to 1000 V for current peak value n=30 rated value 	500 000 VA
no-load switching frequency	
• at AC	2 000 1/h
• at DC	2 000 1/h
operating frequency	
 at AC-1 maximum 	700 1/h
 at AC-2 maximum 	250 1/h
• at AC-3 maximum	750 1/h
 at AC-3e maximum 	750 1/h
• at AC-4 maximum	250 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	440 480 V
at 60 Hz rated value	440 480 V
control supply voltage at DC	
• rated value	440 480 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 of magnet coil at AC	
• at 50 Hz	
• at 50 Hz	830 VA
• at 60 Hz	830 VA 830 VA
• at 60 Hz	
• at 60 Hz inductive power factor with closing power of the coil	830 VA
 at 60 Hz inductive power factor with closing power of the coil at 50 Hz at 60 Hz 	830 VA 0.9
• at 60 Hz inductive power factor with closing power of the coil • at 50 Hz	830 VA 0.9
at 60 Hz inductive power factor with closing power of the coil at 50 Hz at 60 Hz apparent holding power of magnet coil at AC	830 VA 0.9 0.9

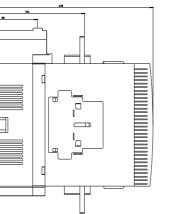
inductive power factor with the holding power of the	-			
coil				
• at 50 Hz	0.9			
• at 60 Hz	0.9			
closing power of magnet coil at DC	920 W			
holding power of magnet coil at DC	10 W			
closing delay				
• at AC	45 100 ms			
• at DC	45 100 ms			
opening delay				
• at AC	60 100 ms			
• at DC	60 100 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	2			
instantaneous contact	-			
number of NO contacts for auxiliary contacts	2			
instantaneous contact				
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				
 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	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: 800 A (690 V, 100 kA)			
— with type of assignment 2 required	gG: 800 A (690 V, 50 kA), aM: 630 A (690 V, 50 kA), BS88: 800 A (415 V, 50 kA)			
 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 V, 1 kA)			

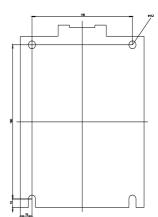
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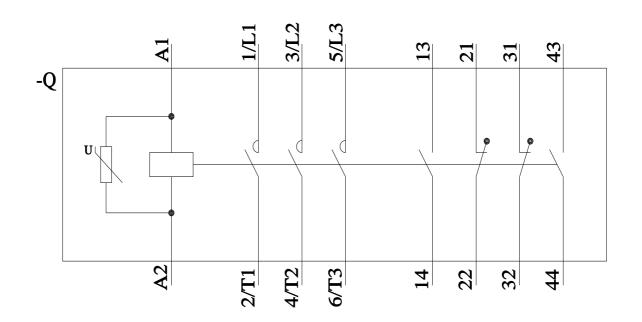
suitability for use • safety-related s Certificates/ approval	-	Yes					
General Product Ap	oproval				EMC		
		<u>Confirmation</u>		EAC	RCM		
Functional Safety/Safety of Machinery	Declaration of Con	formity	Test Certificates		Marine / Shipping		
<u>Type Examination</u> <u>Certificate</u>	UK CA	CE EG-Konf.	<u>Type Test Certific-</u> ates/Test Report	<u>Special Test Certific-</u> <u>ate</u>	ABS		
Marine / Shipping			other				
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Special Test Certific- ate							
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Industry Mall (Online ordering system)							
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1276-6AR36 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1276-6AR36 Service&Support (Manuals, Certificates, Characteristics, FAQs,) https://support.industry.siemens.com/cs/ww/en/ps/3RT1276-6AR36 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,)							
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1276-6AR36⟨=en Characteristic: Tripping characteristics, I ² t, Let-through current							

Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT1276-6AR36/char Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1276-6AR36&objecttype=14&gridview=view1









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