SIEMENS

Data sheet

3RT2028-1AR60



power contactor, AC-3e/AC-3, 38 A, 18.5 kW / 400 V, 3-pole, 400 V AC, 50 Hz / 400-440 V, 60 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0

product brand name SIRUS product designation Power contactor product type designation 3RT2 Central technical data S0 product extension No • auxiliary switch Yes opwer loss [W] for rated value of the current 9.6 W • at AC in hot operating state 9.6 W • at AC in hot operating state per pole 3.2 W • without load current share typical 10.5 W insulation voltage 690 V • of main circult with degree of pollution 3 rated value 690 V • of auxiliary circuit value 6 kV • of auxiliary circuit rated value 6 kV • of auxiliary switch bick typical 10 00 V • of auxiliary switch bick typical 10 000 000 • of contactor typical 10 000 000 • of contactor with added electr		
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Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature -25 +60 °C • 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 maximum 95 % Main circuit	reference code according to IEC 81346-2	Q
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• 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 maximum 95 % Main circuit -25 +80 °C	installation altitude at height above sea level maximum	2 000 m
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relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum 95 % Main circuit 4000000000000000000000000000000000000	during operation	-25 +60 °C
relative humidity at 55 °C according to IEC 60068-2-30 95 % Main circuit 95 %	during storage	-55 +80 °C
Main circuit	relative humidity minimum	10 %
		95 %
	Main circuit	
number of poles for main current circuit 3	number of poles for main current circuit	3

number of NO contacts for main contacts	3
operating voltage	
at AC-3 rated value maximum	690 V
 at AC-3e rated value maximum 	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated	50 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	50 A
— up to 690 V at ambient temperature 60 °C rated	42 A
value	
• at AC-3	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
at AC-4 at 400 V rated value	22 A
at AC-5a up to 690 V rated value	44 A
• at AC-5b up to 400 V rated value	31.5 A
• at AC-6a	30.8 A
— up to 230 V for current peak value n=20 rated value	
— up to 400 V for current peak value n=20 rated value	30.8 A 30.8 A
 up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value 	21 A
• at AC-6a	21A
 up to 230 V for current peak value n=30 rated value 	20.5 A
— up to 200 V for current peak value n=30 rated value	20.5 A
— up to 500 V for current peak value n=30 rated value	21.4 A
— up to 690 V for current peak value n=30 rated value	21 A
minimum cross-section in main circuit at maximum AC-1 rated	10 mm ²
value	
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	12 A
at 690 V rated value	12 A
operational current	
 at 1 current path at DC-1 	
— at 24 V rated value	35 A
— at 60 V rated value	20 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
 with 3 current paths in series at DC-1 	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
 at 1 current path at DC-3 at DC-5 	

— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
• at AC-3	
- at 230 V rated value	11 kW
— at 200 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
• at AC-3e	10.5 KW
- at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
operating power for approx. 200000 operating cycles at AC- 4	
4	
 at 400 V rated value 	6 kW
	6 kW 10.3 kW
• at 400 V rated value	
at 400 V rated valueat 690 V rated value	
at 400 V rated value at 690 V rated value operating apparent power at AC-6a	10.3 kW
 at 400 V rated value at 690 V rated value operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value 	10.3 kW 12.2 kVA
 at 400 V rated value at 690 V rated value operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value 	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA
 at 400 V rated value at 690 V rated value operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value 	10.3 kW 12.2 kVA 21.3 kVA
 at 400 V rated value at 690 V rated value operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value operating apparent power at AC-6a 	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA
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 at 400 V rated value at 690 V rated value operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 230 V for current peak value n=30 rated value up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value 	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA
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• a id 0 Hz70 Vainductor power factor with closing power of he coil072• a coil 0 Hz072• a coil 0 Hz074• a coil 0 Hz074• a coil 0 Hz054• a coil 0 Hz054• a coil 0 Hz024• a coil 0 Hz	apparent pick-up power of magnet coil at AC	
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full-load current (FLA) for 3-phase AC motor • at 480 V rated value 34 A • at 600 V rated value 27 A yielded mechanical performance [hp] • for single-phase AC motor - at 110/120 V rated value 3 hp		1 faulty switching per 100 million (17 V, 1 mA)
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• at 600 V rated value 27 A yielded mechanical performance [hp] - at 110/120 V rated value • for single-phase AC motor 3 hp		
yielded mechanical performance [hp] • • for single-phase AC motor - — at 110/120 V rated value 3 hp		
for single-phase AC motor at 110/120 V rated value 3 hp		27 A
- at 110/120 V rated value 3 hp		
	 for single-phase AC motor 	
— at 230 V rated value 5 hp	— at 110/120 V rated value	3 hp
	— at 230 V rated value	5 hp

• for 3-phase AC motor			
— at 200/208 V rated value	10 hp		
— at 220/230 V rated value	10 hp		
— at 460/480 V rated value	25 hp		
— at 575/600 V rated value	25 hp		
contact rating of auxiliary contacts according to UL	A600 / P600		
Short-circuit protection			
design of the fuse link			
 for short-circuit protection of the main circuit 			
 — with type of coordination 1 required 	gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)		
 — with type of assignment 2 required 	gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA)		
for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)		
Installation/ mounting/ dimensions			
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface		
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715		
side-by-side mounting	Yes		
height	85 mm		
width	45 mm		
depth	97 mm		
required spacing			
with side-by-side mounting	40		
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	0 mm		
for grounded parts forwards	10 mm		
— forwards	10 mm		
— upwards — at the side	6 mm		
— at the side — downwards	6 mm		
for live parts			
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	6 mm		
Connections/ Terminals			
type of electrical connection			
for main current circuit	screw-type terminals		
 for auxiliary and control circuit 	screw-type terminals		
 at contactor for auxiliary contacts 	Screw-type terminals		
• of magnet coil	Screw-type terminals		
type of connectable conductor cross-sections for main contacts			
• solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)		
solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)		
 finely stranded with core end processing 	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²		
connectable conductor cross-section for main contacts			
• solid	1 10 mm²		
stranded	1 10 mm²		
 finely stranded with core end processing 	1 10 mm²		
connectable conductor cross-section for auxiliary contacts			
 solid or stranded 	0.5 2.5 mm²		
 finely stranded with core end processing 	0.5 2.5 mm²		
type of connectable conductor cross-sections			
 for auxiliary contacts 			
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)		
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)		
 for AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14)		
AWG number as coded connectable conductor cross section			
for main contacts	16 8		
	10 0		

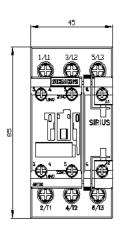
 for auxiliary cor 	ntacts	20) 14			
Safety related data		20				
	mirror contact according to IEC 60947-4-1 Yes					
B10 value with high demand rate according to SN 31920		4	450 000			
proportion of dangerous failures		20 40				
	nd rate according to SN 319) %			
	nd rate according to SN 319		73 %			
	low demand rate according		00 FIT			
61508	T1 value for proof test interval or service life according to IEC 20 a					
	on the front according to I	EC 60529	20			
-	the front according to IEC		nger-safe, for vertical contact	from the front		
suitability for use						
 safety-related s 	witching OFF	Y	es			
Certificates/ approvals	•					
General Product Ap	proval					
(SP) Car	<u>Confirmation</u>			KC	EHC	
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Cor	formity	Test Certificates		
RCM	Type Examination Cer- tificate	CE EG-Konf.	UK CA	Type Test Certific- ates/Test Report	Special Test Certific- ate	
Marine / Shipping						
ABS			Lloyd's Register Lits	RINA	EXAMPLE	
other Railway Environment						
Confirmation Confirmation Vibration and Shock Environmental Con- firmations						
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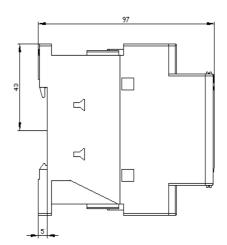
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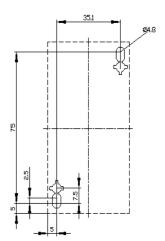
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Characteristic: Tripping characteristics, I²t, Let-through current

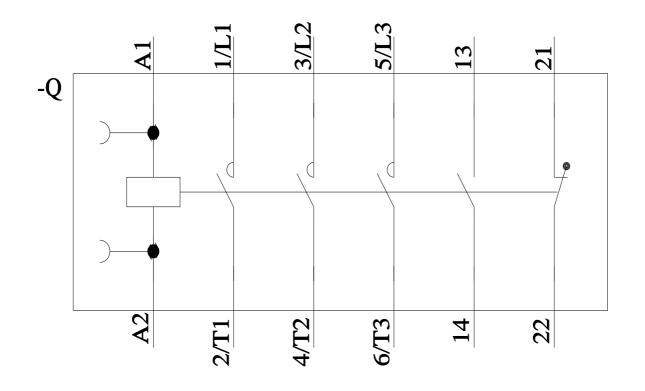
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