SIEMENS

Data sheet

3RT2037-3XJ40-0LA2



Traction contactor, AC-3 65 A, 30 kW / 400 V 1 NO + 1 NC 72 V DC, 0.7-1.25* Us with varistor 3-pole, size S2 Spring-type terminals

product brand name	SIRIUS
product designation	Contactor
design of the product	With extended operating range
product type designation	3RT2
General technical data	
size of contactor	S2
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 	11.4 W
 at AC in hot operating state per pole 	3.8 W
 without load current share typical 	1 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated value 	690 V
surge voltage resistance	
 of main circuit rated value 	6 kV
 of auxiliary circuit rated value 	6 kV
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	7.7g / 5 ms, 4.5g / 10 ms
shock resistance with sine pulse	
• at DC	12g / 5 ms, 7g / 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)	10/01/2014
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-40 +70 °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 	690 V
 at AC-3e rated value maximum 	690 V
operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	80 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	80 A
 up to 690 V at ambient temperature 60 °C rated value 	70 A
 at AC-2 at 400 V rated value 	65 A
• at AC-3	
— at 400 V rated value	65 A
— at 500 V rated value	65 A
— at 690 V rated value	47 A
• at AC-3e	
— at 400 V rated value	65 A
— at 500 V rated value	65 A
— at 690 V rated value	47 A
 at AC-4 at 400 V rated value 	55 A
minimum cross-section in main circuit	
 at maximum AC-1 rated value 	25 mm²
 at maximum Ith rated value 	25 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	28 A
at 690 V rated value	22 A
operating power	
at AC-2 at 400 V rated value	30 kW
• at AC-3	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	37 kW
• at AC-3e	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	37 kW
operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	14.7 kW
• at 690 V rated value	20 kW
short-time withstand current in cold operating state	
up to 40 °C	
Imited to 1 s switching at zero current maximum	1 055 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	730 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	520 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	336 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	272 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at DC	1 500 1/h
operating frequency	
 at AC-2 at AC-3e maximum 	400 1/h
● at AC-4 maximum	200 1/h

Ratings for railway applications	
thermal current (Ith) up to 690 V	
	80 A
• up to 40 °C according to IEC 60077 rated value	60 A
up to 70 °C according to IEC 60077 rated value	
Control circuit/ Control	DC.
type of voltage	
type of voltage of the control supply voltage	DC
control supply voltage at DC	72.1/
rated value operating range factor control supply voltage rated	72 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.7
 full-scale value 	1.25
design of the surge suppressor	with varistor
duration of locked-rotor current	230 ms
closing power of magnet coil at DC	23 W
holding power of magnet coil at DC	1 W
closing delay	
• at DC	35 110 ms
opening delay	
• at DC	30 55 ms
arcing time	10 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
 instantaneous contact 	1
number of NO contacts for auxiliary contacts	1
instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	10 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	40.4
• 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 2 A
at 125 V rated value	2 A 1 A
 at 220 V rated value at 600 V rated value 	1 A 0.15 A
• at 600 v rated value operational current at DC-13	0.10 A
• at 24 V rated value	10 A
at 24 V rated value at 48 V rated value	2 A
at 60 V rated value	2 A 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
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	65 A
at 600 V rated value	52 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	5 hp
— at 230 V rated value	10 hp
• for 3-phase AC motor	
— at 200/208 V rated value	20 hp

		001		
	— at 220/230 V rated value	20 hp		
contact rating of auxiliary contacts according to UL A800 / P800 Stort-circuit protection No design of the field link In stort circuit protection of the main circuit - with type of accordination 1 required G: 250 A (600 V, 100 kA), akt: 160 A (600 V, 100 kA), BS88: 200 A (615 V, 80 kA) - with type of assignment 2 required G: 125A (600 V, 100 kA), akt: 160 A (600 V, 100 kA), BS88: 100 A (160 VA), 100 kA), BS88: 100 A (161 VA), 100 kA), 100 kA, 100 kA, 100 kA, 100 kA, 1				
Short-circuit protection No graduet function short circuit protection No design of the fuse link (or short-circuit protection of the main circuit				
product function short circuit protection No design of the fuse in or short-circuit protection of the main circuit - with type of assignment 2 required GC 250 A (690 V, 100 kA), aki: 150 A (690 V, 100 kA), BS88: 200 A (415 V, 20 kA) - with type of assignment 2 required GC 125A (690 V, 100 kA), aki: 53A (690 V, 100 kA), BS88: 100A (415 V, 20 kA) • for short circuit protection of the auxiliary switch required GC 125A (690 V, 100 kA), aki: 53A (690 V, 100 kA), BS88: 100A (415 V, 20 kA) • for short circuit protection of the auxiliary switch required space Hold Manual A (100 KA), aki: 53A (690 V, 100 kA), BS88: 100A (415 V, 20 kA) • for short circuit protection of the auxiliary switch required spacing Hold Manual (100 KA), aki: 53A (690 V, 100 kA), BS88: 100A (415 V, 20 kA) • for space mounting possible on vertical mounting surface; can be tilted fastening method For an ad snap-on mounting on the auxiliary switch secret and snap-on mounting on the auxiliary switch for wards • side by-side mounting H-180° rotation possible on vertical mounting surface; secret and snap-on mounting on the auxiliary switch for grounded parts To mm • of or grounded parts 10 mm Mom • of or grounded parts 10 mm • of or auxiliary and control trouti 6 mm • of rowards 10 mm • of auxiliary and control circuit 5 mm M	contact rating of auxiliary contacts according to UL	A600 / P600		
design of the fuse link of short-circuit protection of the main circuit with type of coordination 1 required (d15 % 20.4 (880 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (880 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (880 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (880 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (880 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (880 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (880 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (890 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (890 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (890 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (890 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (890 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (890 V, 100 kA), aM: 160 A (690 V, 100 kA), BS86; 200 A (d15 % 20.4 (890 V, 100 kA), aM: 160 A (690 V, 100 kA), aM: 160 A (d15 % 20.4 (890 V, 100 kA), aM: 160 A (690 V, 100 kA), aM: 160 A (d15 % 20.4 (890 V, 100 kA), aM: 160 A (690 V, 100 kA), aM: 160 A (d15 % 20.4 (80 V, 100 kA), aM: 160 A (d15 % 20.4 (100 KA), aM: 160 A (690 V, 100 kA), aM: 160 A (d15 % 20.4 (100 KA), aM: 160 A (d16 % 100 KA), aM: 1	Short-circuit protection			
for short-circuit protection of the main circuit —with type of coordination 1 required —with type of assignment 2 required G: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (4157,80 kA) -with type of assignment 2 required G: 10 A (650 V, 100 kA), aM: 63A (690 V, 100 kA), BS88: 100A (4157,80 kA) -with type of assignment 2 required -with side-by-side mounting -forwards -for main current circuit -forwards -for main current circuit -sping-type terminals -forwards -for main current circuit -forwards -for main contacts -with side doed comm -for auxiliary contacts -for auxiliary contacts	product function short circuit protection	No		
- with type of coordination 1 required (15: 250 A (800 V, 100 kA), akt: 160 A (890 V, 100 kA), BSB8: 200 A (15: V, 80 kA) • for short-clicul protection of the auxiliary switch required for short-clicul protection of the auxiliary switch required fastening method • side-by-side mounting • side side-by-side mounting • side-by-side	design of the fuse link			
- with type of assignment 2 required (415 V. 80 ka) 4 - with type of assignment 2 required (G: 1254 (600V, 100A), ab: 63A (600V, 100A), BSB: 100A - for short-circuit protection of the auxiliary switch required (G: 10 A (500 V. 1 KA) meanting position +/-180' rotation possible on vertical mounting surface; can be filted forward and backward by +/-2.25' on vertical mounting surface; aside-by-side mounting fastening method screw and Stap-on mounting on 25 mm standard mounting rail according to DIN EN 60715 eside-by-side mounting Yes height 114 mm width 55 mm depth 130 mm - orwards 10 mm - downwards 10 mm - for auxilary contacts 5pring ty	 for short-circuit protection of the main circuit 			
• for short-circuit protection of the auxiliary switch required (415V.80kA) Installation/ mounting/ dimensions (415V.80kA) mounting position +/-180" rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 2.25" on vertical mounting surface; fastening method scie by-side mounting • side by-side mounting Yes height 114 mm width 65 mm deepth 130 mm - orwards 10 mm - orwards 10 mm - orwards 10 mm - downwards 10 mm - orwards 10 mm - forwards 10 mm - o	— with type of coordination 1 required			
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fastening method screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 height 114 mm width 55 mm depth 130 mm required spacing - • with side-by-side mounting - - forwards 10 mm - downwards 10 mm - forwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 10 mm - forwards 10 mm - downwards 10 mm - forwards 10 mm - downwards	mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface		
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• for auxiliary contacts 20 14				
	 for main contacts 	18 1		
Safety related data	for auxiliary contacts	20 14		
	Safety related data			

product function						
 mirror contact a 	according to IEC 60947	-4-1	Yes			
 positively driver 5-1 	n operation according t	o IEC 60947-	No			
B10 value with high d	emand rate according	to SN 31920	1 000 000			
proportion of dange	rous failures					
 with low deman 	d rate according to SN	31920	40 %			
 with high dema 	nd rate according to SI	N 31920	73 %			
	low demand rate accor		100 FIT			
T1 value for proof tes IEC 61508	t interval or service life	according to	20 y			
protection class IP o 60529	on the front according	to IEC	IP20			
touch protection on	the front according to	o IEC 60529	finger-safe	e, for vertical conta	act from the front	
Communication/ Prot	-		0			
product function bu			No			
Certificates/ approval						
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General Product Ap	proval					
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Characteristic: Tri	pping characteristics, I ² t, Let-through current

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