SIEMENS

Data sheet

3RT2027-2BB40



CONTACTOR, AC-3, 15KW/400V, 1NO+1NC, DC 24V, 3-POLE, SZ S0 SPRING-LOADED TERMINAL

product brand name		SIRIUS	
Product designation		3RT2 contactor	
General technical data:			
Insulation voltage			
Rated value	V	690	
Degree of pollution		3	
Surge voltage resistance Rated value	kV	6	
Mechanical service life (switching cycles)			
 of the contactor typical 		10 000 000	
 of the contactor with added electronics- compatible auxiliary switch block typical 		5 000 000	
 of the contactor with added auxiliary switch block typical 		10 000 000	
Thermal short-time current restricted to 10 s	А	260	
Protection class IP			
• on the front		IP20	
• of the terminal		IP20	
Equipment marking	_		
• acc. to DIN EN 61346-2		Q	
• acc. to DIN EN 81346-2		Q	
Main circuit:			
Number of poles for main current circuit		3	
Number of NC contacts for main contacts		0	
Number of NO contacts for main contacts		3	
Operating voltage			

 at AC-3 Rated value maximum 	V	690
Operating current		
• at AC-1		
— at 400 V at ambient temperature 40 °C	А	50
Rated value		
— up to 690 V at ambient temperature 40 $^\circ C$	А	50
Rated value		
— up to 690 V at ambient temperature 60 °C Rated value	A	42
• at AC-2 at 400 V Rated value	А	32
● at AC-3		
— at 400 V Rated value	А	32
— at 500 V Rated value	А	32
— at 690 V Rated value	А	21
• at AC-4 at 400 V Rated value	А	22
Operating current with 1 current path		
● at DC-1		
— at 24 V Rated value	А	35
— at 110 V Rated value	А	4.5
— at 220 V Rated value	А	1
— at 440 V Rated value	А	0.4
— at 600 V Rated value	А	0.25
• at DC-3 at DC-5		
— at 24 V Rated value	А	20
— at 110 V Rated value	А	2.5
— at 220 V Rated value	А	1
— at 440 V Rated value	А	0.09
— at 600 V Rated value	А	0.06
Operating current with 2 current paths in series		
● at DC-1		
— at 24 V Rated value	А	35
— at 110 V Rated value	А	35
— at 220 V Rated value	А	5
— at 440 V Rated value	А	1
— at 600 V Rated value	А	0.8
• at DC-3 at DC-5		
— at 110 V Rated value	А	15
— at 220 V Rated value	А	3
— at 24 V Rated value	А	35
— at 440 V Rated value	А	0.27
— at 600 V Rated value	А	0.16
Operating current with 3 current paths in series		

● at DC-1		
— at 24 V Rated value	А	35
— at 110 V Rated value	А	35
— at 220 V Rated value	А	35
— at 440 V Rated value	А	2.9
— at 600 V Rated value	А	1.4
• at DC-3 at DC-5		
— at 110 V Rated value	А	35
— at 220 V Rated value	А	10
— at 24 V Rated value	А	35
— at 440 V Rated value	А	0.6
— at 600 V Rated value	А	0.6
Operating power	-	
• at AC-1 at 400 V Rated value	kW	28
• at AC-2 at 400 V Rated value	kW	15
• at AC-4 at 400 V Rated value	kW	11
Operating power	-	
● at AC-1		
— at 230 V at 60 °C Rated value	kW	15.5
— at 230 V Rated value	kW	16
— at 400 V at 60 °C Rated value	kW	27.5
— at 690 V at 60 °C Rated value	kW	47.5
— at 690 V Rated value	kW	48
● at AC-3		
— at 230 V Rated value	kW	7.5
— at 400 V Rated value	kW	15
— at 690 V Rated value	kW	18.5
Operating power for \geq 200000 operating cycles at		
AC-4		_
• at 400 V Rated value	kW	6
at 690 V Rated value	kW	10.3
Operating frequency	4.0	750
• at AC-3 maximum	1/h	750
Control circuit/ Control:		
Type of voltage of the control supply voltage		DC
Control supply voltage for DC		
Rated value	V	24
Operating range factor control supply voltage rated		0.8 1.1
value of the magnet coil for DC Closing power of the magnet coil for DC	W	5.9
Holding power of the magnet coil for DC	W	5.9
	VV	5.5

Auxiliary circuit:		
Number of NC contacts		
 for auxiliary contacts 		
— instantaneous contact		1
Number of NO contacts	_	
 for auxiliary contacts 		
— instantaneous contact		1
Product expansion Auxiliary switch		Yes
Operating current at AC-15		
• at 230 V Rated value	А	10
• at 400 V Rated value	А	3
• at 690 V Rated value	А	1
Operating current		
• at DC-12 at 125 V Rated value	А	2
• at DC-12 at 220 V Rated value	А	1
• at DC-12 at 600 V Rated value	А	0.15
• at DC-13 at 125 V Rated value	А	0.9
• at DC-13 at 220 V Rated value	А	0.3
• at DC-13 at 600 V Rated value	А	0.1
Operating current		
• at DC-12		
— at 60 V Rated value	А	6
— at 110 V Rated value	А	3
• at DC-13		
— at 24 V Rated value	А	10
— at 60 V Rated value	А	2
— at 110 V Rated value	А	1
Contact reliability of the auxiliary contacts	_	1 faulty switching per 100 million (17 V, 1 mA)
JL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	А	27
• at 600 V Rated value	А	27
yielded mechanical performance [hp]		
 for single-phase AC motor at 110/120 V Rated value 	metric hp	2
 for single-phase AC motor at 230 V Rated value 	metric hp	5
 for three-phase AC motor at 200/208 V Rated value 	metric hp	10
• for three-phase AC motor at 220/230 V Rated	metric	10

• for three-phase AC motor at 220/230 V Rated value

hp

 for three-phase AC motor at 460/480 V Rated value 	metric hp	20
• for three-phase AC motor at 575/600 V Rated	metric	25
	hp	A 222 / O 222
Contact rating of the auxiliary contacts acc. to UL		A600 / Q600
Short-circuit:	-	
Design of the fuse link		
 for short-circuit protection of the main circuit 		
 — with type of assignment 1 required 		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 100 A
— with type of assignment 2 required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A
 for short-circuit protection of the auxiliary switch 		fuse gL/gG: 10 A
required		
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
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
 Side-by-side mounting 		Yes
Height	mm	102
Width	mm	45
Depth	mm	107
Required spacing	-	
 with side-by-side mounting 		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	0
— downwards	mm	0
— at the side	mm	0
 for grounded parts 		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	0
— at the side	mm	6
— downwards	mm	0
for live parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	0
— downwards	mm	0
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— at the side	mm	6
Connections/ Terminals:		
Type of electrical connection		
• for main current circuit		spring-loaded terminals
 for auxiliary and control current circuit 		spring-loaded terminals
Type of connectable conductor cross-section		
• for main contacts		
— single or multi-stranded		2x (1 10 mm²)
— finely stranded with core end processing		2x (1 6 mm²)
 finely stranded without core end processing 		2x (1 6 mm²)
 for AWG conductors for main contacts 		2x (18 8)
 for auxiliary contacts 		
— single or multi-stranded		2x (0,5 2,5 mm²)
— finely stranded with core end processing		2x (0.5 1.5 mm²)
 finely stranded without core end processing 		2x (0.5 2.5 mm²)
 for AWG conductors for auxiliary contacts 		2x (20 14)
Safety related data:		
B10 value with high demand rate acc. to SN 31920		1 000 000
Proportion of dangerous failures		
 with low demand rate acc. to SN 31920 	%	40
 with high demand rate acc. to SN 31920 	%	73
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	100
Product function Mirror contact acc. to IEC 60947-4-1		Yes
T1 value for proof test interval or service life acc. to IEC 61508	У	20
Protection against electrical shock		finger-safe
Mechanical data:		
Size of contactor		S0
Ambient conditions:		
Installation altitude at height above sea level	m	2 000
maximum		
Ambient temperature		
 during operation 	°C	-25 +60
 during storage 	°C	-55 +80
Certificates/ approvals:		

General Product	Approval			EMC	Functional Safety/Safety of Machinery
	CSA		EHC	С-тіск	Type Examination
Declaration of Conformity	Test Certificate	S		Shipping App	proval
CE EG-Konf.	Special Test Certificate	<u>Type Test</u> Certificates/Test <u>Report</u>	other	ABS	B U R E A U VERITAS
Shipping Approv	al				
ĴÅ DNV DNV	GL	Lloyd's Register LRS	PRS	RINA	RMRS
other					
Environmental Confirmations	<u>Confirmation</u>	UDE VDE			
ther information formation- and Dov	vnloadcenter (Catal	ogs, Brochures,)			
dustry Mall (Online	n/industrial-controls/ca ordering system)	atalogs			
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Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT20272BB40&lang=en





