SIEMENS

Data sheet

3RT2027-1BB40-1AA0



CONTACTOR, AC-3, 15KW/400V, 1NO+1NC, DC 24V, 3-POLE, SZ S0 SCREW TERMINAL UPRIGHT MOUNTING POSITION

Figure similar

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

• at DC-1		
— at 24 V Rated value	Α	35
— at 110 V Rated value	Α	35
— at 220 V Rated value	Α	35
— at 440 V Rated value	Α	2.9
— at 600 V Rated value	Α	1.4
• at DC-3 at DC-5		
— at 110 V Rated value	Α	35
— at 220 V Rated value	Α	10
— at 24 V Rated value	Α	35
— at 440 V Rated value	Α	0.6
— at 600 V Rated value	Α	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 ≥ 200000 operating cycles at AC-4		
• at 400 V Rated value	kW	6
• at 690 V Rated value	kW	10.3
Operating frequency		
• at AC-3 maximum	1/h	750
Control circuit/ Control:		DO.
Type of voltage of the control supply voltage		DC
Control supply voltage for DC		

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

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	Α	10
• at 400 V Rated value	Α	3
• at 690 V Rated value	Α	1
Operating current		
• at DC-12 at 125 V Rated value	Α	2
• at DC-12 at 220 V Rated value	Α	1
• at DC-12 at 600 V Rated value	Α	0.15
• at DC-13 at 125 V Rated value	Α	0.9
• at DC-13 at 220 V Rated value	Α	0.3
• at DC-13 at 600 V Rated value	Α	0.1
Operating current		
• at DC-12		
— at 60 V Rated value	Α	6
— at 110 V Rated value	Α	3
• at DC-13		
— at 24 V Rated value	Α	10
— at 60 V Rated value	Α	2
— at 110 V Rated value	Α	1
Contact reliability of the auxiliary contacts	_	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	Α	27
• at 600 V Rated value	Α	27
yielded mechanical performance [hp]		
• for single-phase AC motor at 110/120 V Rated	metric	2
value	hp	
• for single-phase AC motor at 230 V Rated	metric	5
value	hp	
• for three-phase AC motor at 200/208 V Rated	metric	10
value	hp	
• for three-phase AC motor at 220/230 V Rated	metric	10
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 value	metric hp	25
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 required 	fuse gL/gG: 10 A

Installation/ mounting/ dimensions:			
mounting position		standing, on horizontal 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	85	
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	
— at the side	mm	6	

Connections/ Terminals:

Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-section	
• for main contacts	
 single or multi-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
• for AWG conductors for main contacts	2x (16 12), 2x (14 8)
• for auxiliary contacts	
 — single or multi-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 conductors for auxiliary contacts	2x (20 16), 2x (18 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

°C

Certificates/ approvals:

• during storage

-55 ... +80

General Product Approval

Declaration of Conformity

Test Certificates











other

other

Environmental Confirmations

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

http://www.siemens.com/industrymall

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT20271BB401AA0

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