SIEMENS

Data sheet

3RT2027-1AG20



CONTACTOR, AC-3, 15KW/400V, 1NO+1NC, AC 110V 50/60HZ, 3-POLE, SZ S0 SCREW 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	
Aain 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	4.11	750
• at AC-3 maximum	1/h	750
Control circuit/ Control:		
Type of voltage of the control supply voltage		AC
Control supply voltage with AC		
• at 50 Hz Rated value	V	110
• at 60 Hz Rated value	V	110
Operating range factor control supply voltage rated value of the magnet coil with AC		
• at 50 Hz		0.8 1.1

• at 60 Hz		0.85 1.1
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)
UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
 at 480 V Rated value 	А	27

• 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 value 	metric hp	10

Note Number of three-phase AC motor at 575/600 V Rated Method 25 Context rating of the auxiliary contacts acc. to UL A800 / 0600 A800 / 0600 Short-circuit Design of the fuse link. Image: Contact acc. Image: Contact acc. - with type of assignment 1 required	 for three-phase AC motor at 460/480 V Rated value 	metric hp	20	
value hp Contact rating of the auxiliary contacts acc. to UL A600 / C600 Short-circuit Event of a short-circuit protection of the main circuit gLigG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 100 A - with type of assignment 2 required gLigG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A tor short-circuit protection of the auxiliary switch required gLigG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A • for short-circuit protection of the auxiliary switch required fuse gL/gG: 10 A thus gL/gG: 10 A Installator/ mounting / dimensions: #/180° rotation possible on vertical mounting surface: can be tilted forward and backward by +/-22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 • Side-by-side mounting mm 45 Optifit mm 45 Pepth mm 97 Required spacing mm 0 • with side-by-side mounting mm 0 - at the side mm 0 - gackwards mm 0 - at the side mm 0 - forwards mm 0 - forwards mm 0 <t< td=""><td></td><td></td><td colspan="2">25</td></t<>			25	
Short-circuit: Design of the fuse link - with type of assignment 1 required - with type of assignment 2 required - with type of assignment 2 required - for short-circuit protection of the auxiliary switch required for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: mounting position Vistallation mounting Mounting type • Side-by-side mounting + fully the distribution of the auxiliary switch required Nother type • Side-by-side mounting +/-180* rotation possible on vertical mounting surface: can be titled forward and backward by +/- 22.5* on vertical mounting surface • Side-by-side mounting • for wards mm Peipth mm • onwards mm - downwards mm - forwards mm - forwards mm - forwards mm - downwards mm - forwards <td< td=""><td>-</td><td></td><td>20</td></td<>	-		20	
Design of the fuse link for short-circuit protection of the main circuit with type of assignment 1 required with type of assignment 2 required for short-circuit protection of the auxiliary switch required gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 100 A • for short-circuit protection of the auxiliary switch 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: fuse gL/gG: 10 A guirace; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting surface; can be titled forward and backward by +/-22.5° on vertical mounting sur	Contact rating of the auxiliary contacts acc. to UL	-	A600 / Q600	
• for short-circuit protection of the main circuit JL/G LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 100 A • with type of assignment 2 required JL/G LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A • for short-circuit protection of the auxiliary switch required fuse gL/gG: 10 A Installator/ mounting/ dimensions: */180" rotation possible on vertical mounting surface; can be tilted forward and backward by +/-22.5" on vertical mounting surface; can be tilted forward and backward by +/-22.5" on vertical mounting stratedee Mounting type */180" rotation possible on vertical mounting surface; can be tilted forward and backward by +/-22.5" on vertical mounting stratedee Mounting type screw and snap-on mounting onto 35 mm standard mounting ratia according to DIN EN 50022 • Side-by-side mounting Yes Height mm 85 Width mm 97 Required spacing mm 0 • with side-by-side mounting mm 0 - forwards mm 0 - gravinds graving mm 0 - forwards mm 0 - downwards mm 0 - downwards mm 0 - forwards mm 0	Short-circuit:			
- with type of assignment 1 requiredgL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 100 A- with type of assignment 2 requiredgL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 3S A• for short-circuit protection of the auxiliary switch requiredfuse gL/gG: 10 AInstallation/ mounting/ dimensions:+/-180° rotation possible on vertical mounting 	Design of the fuse link			
Amount of the sector of the auxiliary switch required100 A gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A• for short-circuit protection of the auxiliary switch requiredfuse gL/gG: 10 AInstallation/ mounting/ dimensions:100 k gurface; can be titted forward and backward by +/- 22.5° on vertical mounting surfaceMounting typescrew and snap-on mounting outfaceMounting typescrew and snap-on mounting out as 5 mm standard mounting rail according to DIN EN 50022• Side-by-side mountingmm85Widthmm45Depthmm97Required spacingImage: Standard mounting surface• with side-by-side mountingmm0- forwardsmm0- at the sidemm0- at the sidemm0- forwardsmm0- at the sidemm0- forwardsmm0- at the sidemm0- at the sidemm <th< td=""><td> for short-circuit protection of the main circuit </td><td></td><td></td></th<>	 for short-circuit protection of the main circuit 			
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required Image: constraint of the state	— with type of assignment 2 required			
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Required spacingImage: Second sec	Width	mm	45	
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• for grounded partsmm0- forwardsmm0- Backwardsmm0- upwardsmm0- at the sidemm6- downwardsmm0- for live partsmm0- forwardsmm0- forwardsmm0- hackwardsmm0- forwardsmm0- hackwardsmm0- hackwardsmm0- upwardsmm0- upwardsmm0	— downwards	mm	0	
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at the sidemm6 downwardsmm0• for live parts forwardsmm0 Backwardsmm0 upwardsmm0	— Backwards	mm	0	
- downwardsmm0• for live partsmm0- forwardsmm0- Backwardsmm0- upwardsmm0	— upwards	mm	0	
 for live parts forwards mm Backwards mm mm 0 mm 0 	— at the side	mm	6	
- forwardsmm0- Backwardsmm0- upwardsmm0	— downwards	mm	0	
— Backwards mm 0 — upwards mm 0	• for live parts			
— upwards mm 0	— forwards	mm	0	
	— Backwards	mm	0	
	— upwards	mm	0	
		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)
Apparent pick-up power of the magnet coil with AC		
• at 50 Hz	V·A	81
● at 60 Hz	V·A	79
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 maximum	m	2 000
Ambient temperature		
 during operation 	°C	-25 +60
 during storage 	°C	-55 +80
Certificates/ approvals:		

General Product	Approval			EMC	Functional Safety/Safety of Machinery
	(SA) CSA	EHC		С-тіск	Type Examinatio
Declaration of Conformity	Test Certificate	95	Shipping App	proval	
EG-Konf.	Special Test Certificate	<u>Type Test</u> Certificates/Test <u>Report</u>	ABS	BUREAU VERITAS	DNV DNV
Shipping Approv	al				other
G L 🛞	Lloyd's Register LRS	PRS	RINA	RMRS	Environmental Confirmations
other					
Confirmation					
ther information					

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