SIEMENS

Data sheet

3RT2025-1AN60



CONTACTOR, AC-3, 7.5KW/400V, 1NO+1NC, AC 200V 50HZ, 200...220V 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- 		5 000 000		
compatible auxiliary switch block typical				
 of the contactor with added auxiliary switch 		10 000 000		
block typical				
Thermal short-time current restricted to 10 s	А	150		
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	40
Rated value		
— up to 690 V at ambient temperature 40 °C	А	40
Rated value		25
— up to 690 V at ambient temperature 60 °C Rated value	A	35
• at AC-2 at 400 V Rated value	А	17
● at AC-3		
— at 400 V Rated value	А	17
— at 500 V Rated value	А	17
— at 690 V Rated value	А	13
 at AC-4 at 400 V Rated value 	А	15.5
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	23
• at AC-2 at 400 V Rated value	kW	7.5
• at AC-4 at 400 V Rated value	kW	7.5
Operating power	-	
● at AC-1		
— at 230 V at 60 °C Rated value	kW	13.3
— at 230 V Rated value	kW	13.3
— at 400 V at 60 °C Rated value	kW	23
— at 690 V at 60 °C Rated value	kW	40
— at 690 V Rated value	kW	40
● at AC-3		
— at 230 V Rated value	kW	4
— at 400 V Rated value	kW	7.5
— at 690 V Rated value	kW	11
Operating power for \geq 200000 operating cycles at		
AC-4		
• at 400 V Rated value	kW	3.5
at 690 V Rated value	kW	6
Operating frequency	4 /h-	4 000
• at AC-3 maximum	1/h	1 000
Control circuit/ Control:	-	
Type of voltage of the control supply voltage		AC
Control supply voltage with AC		200
• at 50 Hz Rated value	V	200
• at 60 Hz Rated value	V	220
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	14

Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	А	14
• at 600 V Rated value	А	17
yielded mechanical performance [hp]		
 for single-phase AC motor at 110/120 V Rated value 	metric hp	1
 for single-phase AC motor at 230 V Rated value 	metric hp	3
 for three-phase AC motor at 200/208 V Rated value 	metric hp	3
 for three-phase AC motor at 220/230 V Rated value 	metric hp	5

valuehp metric hp• or three-phase AC motor at 575/600 V Rated valuehp• Contact rating of the auxiliary contacts acc. to ULA600 / 0600Short-circuitShort-circuit• for short-circuit protection of the main circuit - with type of assignment 1 requiredJL- with type of assignment 2 requiredJL/GG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A• for short-circuit protection of the auxiliary switch requiredVL/GG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A• for short-circuit protection of the auxiliary switch required+/180° rotation possible on vertical mounting surface; can be filted forward and backward by +/- 22 SchInstaliation/ mounting/ dimensions:+/180° rotation possible on vertical mounting surface; can be filted forward and backward by +/- 22 SchNounting typesrew and snap-on mounting onto 35 mm standard mounting rati according to DIN EN 50022 YesHeightmm85Postide-by-side mountingmmI forwardsmm- forwards	 for three-phase AC motor at 460/480 V Rated 	metric	10
value hp Contact rating of the auxiliary contacts acc. to UL A600 / C600 Short-circuit Eveloped of the fuse link. Image: Contact rating of the fuse link. • for short-circuit protection of the main circuit gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A • for short-circuit protection of the auxiliary switch required gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A • for short-circuit protection of the auxiliary switch required suface; can be tilted forward and backward by +/- 22.5" on vertical mounting surface Mounting position surface; can be tilted forward and backward by +/- 22.5" on vertical mounting surface Mounting type screw and snap-orn mounting on 035 mm standard mounting rail according to DIN EN 50022 • Side-by-side mounting mm 45 Popth mm 97 Required spacing mm 0 • with side-by-side mounting mm 0 - at the side mm 0 - forwards mm 0 - at the side mm		hp	
Contact rating of the auxiliary contacts acc. to UL A600 / 0600 Short-circuit Design of the fuse link Image: Contact rating 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: 63 A • for short-circuit protection of the auxiliary switch required at gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A • for short-circuit protection of the auxiliary switch required bt seg L/gG: 10 A Installation/ mounting / dimensions: -/-180° rotation possible on vertical mounting surface; can be titled 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 mm Height mm Width mm Packwards mm - downwards mm - downwards mm - at the side mm - forwards mm - Backwards mm - Backwards mm - forwards mm - forwards mm - forwards mm - at the side mm - fo			15
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: 25 A gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A fuse gL/gG: 10 A Installation/ mounting/ dimensions: fuse gL/gG: 10 A Installation/ mounting / dimensions: fuse gL/gG: 10 A guiface; can be tilted forward and backward by +/-22.5° on vertical mounting surface: on vertical mounting onto 35 mm standard mounting rail according to DIN EN 50022 Yes Mounting type side-by-side mounting for wards mm according to DIN EN 50022 Yes Width mm 45 Depth mm 97 Required spacing with side-by-side mounting for grounded parts at the side mm at the side mm at the side downwards mm at the side <li< td=""><td>Contact rating of the auxiliary contacts acc. to UL</td><td>-</td><td>A600 / Q600</td></li<>	Contact rating of the auxiliary contacts acc. to UL	-	A600 / Q600
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: 25 A gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A fuse gL/gG: 10 A Installation/ mounting/ dimensions: fuse gL/gG: 10 A Installation/ mounting / dimensions: fuse gL/gG: 10 A guiface; can be tilted forward and backward by +/-22.5° on vertical mounting surface: on vertical mounting onto 35 mm standard mounting rail according to DIN EN 50022 Yes Mounting type side-by-side mounting for wards mm according to DIN EN 50022 Yes Width mm 45 Depth mm 97 Required spacing with side-by-side mounting for grounded parts at the side mm at the side mm at the side downwards mm at the side <li< td=""><td>Short-circuit:</td><td></td><td></td></li<>	Short-circuit:		
- with type of assignment 1 requiredgL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A- with type of assignment 2 requiredgL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A• for short-circuit protection of the auxiliary switch requiredfuse gL/gG: 10 AInstallation/ mounting/ dimensions:+/180° rotation possible on vertical mounting str/ace; can be tilted forward and backward by +/- 22.5° on vertical mounting surfaceMounting typescrew and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022• Side-by-side mountingYesHeightmmRequired spacingYes• with side-by-side mountingmm- forwardsmm- onwardsmm- forwardsmm- forwardsmm- forwardsmm- forwardsmm- forwardsmm- onwardsmm- onwardsmm- onwardsmm- forwardsmm- forwardsmm- forwardsmm- forwardsmm- forwardsmm- at the sidemm- forwardsmm- forwardsmm- upwardsmm- at the side </td <td>Design of the fuse link</td> <td></td> <td></td>	Design of the fuse link		
A with type of assignment 2 required63 Å- with type of assignment 2 requiredgL/gG LV HRC 3NA, DIAZED 5SB; 25 Å• for short-circuit protection of the auxiliary switch requiredfuse gL/gG: 10 ÅInstallation/ mounting/ dimensions:surface; can be titled forward and backward by +/- 22.5° on vertical mounting surfaceMounting typescrew and snap-on mounting outfaceMounting typescrew and snap-on mounting outface• Side-by-side mountingYesHeightmmMounting aurfaceYesWidthmmDepthmm• onwardsmm- forwardsmm- upwardsmm- at the sidemm- forwardsmm- forwardsmm- forwardsmm- at the sidemm- forwardsmm- at the sidemm <trr><td< td=""><td> for short-circuit protection of the main circuit </td><td></td><td></td></td<></trr>	 for short-circuit protection of the main circuit 		
* for short-circuit protection of the auxiliary switch required 25 Å * for short-circuit protection of the auxiliary switch required fuse gL/gG: 10 Å Installation/ mounting / dimensions: */-180° rotation possible on vertical mounting surface; and and backward by +/-22.5° on vertical mounting surface Mounting type screw and snap-on mounting onto 35 nm standard mounting rail according to DIN EN 50022 • Side-by-side mounting Yes Height mm 85 Woth mm 45 Depth mm 97 Required spacing - - • with side-by-side mounting mm 0 - forwards mm 0 - growards mm 0 - at the side mm 0 - forwards mm 0 - at the side mm 0 - downwards mm 0 - at the side mm 0 - at the side mm 0 - downwards	— with type of assignment 1 required		
required Image: constraint of the side mounting position	— with type of assignment 2 required		
mounting position +/-180° rotation possible on vertical mounting surface; can be tilled 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 85 Width mm 45 Depth mm 97 Required spacing - • with side-by-side mounting mm — forwards mm — ackwards mm — downwards mm — for grounded parts - — forwards mm — forwards mm — at the side mm — downwards mm — forwards mm — at the side mm — downwards mm — at the side mm — downwards mm — at the side mm — adownwards mm — ackwards mm — ackwards mm — ackwards mm — ackwards mm <			fuse gL/gG: 10 A
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Heightmm85Widthmm45Depthmm97Required spacing• with side-by-side mounting- forwardsmm0- forwardsmm0- gackwardsmm0- upwardsmm0- downwardsmm0- at the sidemm0- forwardsmm0- forwardsmm0- at the sidemm0- forwardsmm0- at the sidemm0- at the sidemm0- forwardsmm0- at the sidemm0- forwardsmm0- at the sidemm0- at	Mounting type		
Widthnm45Depthnm97Required spacing• with side-by-side mounting- forwardsmm0- forwardsmm0- Backwardsmm0- upwardsmm0- downwardsmm0- at the sidemm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- at the sidemm0- upwardsmm0- at the sidemm0- upwardsmm0- at the sidemm0- at the sidemm0- downwardsmm0- forwardsmm0- forwardsmm0	 Side-by-side mounting 		Yes
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Required spacingImage: Section of the system ounting• with side-by-side mountingmm0- forwardsmm0- Backwardsmm0- upwardsmm0- downwardsmm0- downwardsmm0- at the sidemm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- backwardsmm0- at the sidemm6- at the sidemm0- at the sidemm6- downwardsmm0- forwardsmm0- forw	Width	mm	45
with side-by-side mountingImm0- forwardsmm0- Backwardsmm0- upwardsmm0- downwardsmm0- at the sidemm0- for grounded parts forwardsmm0- Backwardsmm0- at the sidemm0- forwardsmm0- at the sidemm0- at the sidemm0- upwardsmm6- at the sidemm0- at the sidemm0- for live partsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- marketsmm0- marketsmm0 </td <td>Depth</td> <td>mm</td> <td>97</td>	Depth	mm	97
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	— 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
— Backwardsmm0— upwardsmm0	• for live parts		
— upwards mm 0	— 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)
Apparent pick-up power of the magnet coil with AC		
• at 50 Hz	V·A	68
• at 60 Hz	V·A	67
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		SO
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 Produc	t Approval			EMC	Functional Safety/Safety of Machinery
CCC	CSA		EHC	С-тіск	Type Examination
Declaration of Conformity	Test Certificates	3	Shipping App	proval	
EG-Konf.	Special Test Certificate	<u>Type Test</u> Certificates/Test <u>Report</u>	ABS	BUREAU VERITAS	DINV DNV
Shipping Approv	/al				other
GL	Llovd's Register LRS	PRS	RINA	RMRS	<u>Confirmation</u>
other					
Environmental Confirmations					

urther information

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