## **SIEMENS**

## Data sheet

## 3RT2025-2XF40-0LA2



CONT. F. RAILW. A., AC-3, 7.5KW/400V, 1NO+1NC, . DC 110V, 0,7...1,25\*US, M. VARISTOR INTEGRATED, 3-POLE SIZE S0, SPRING-TYPE TERM.

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)			
<ul> <li>of the contactor typical</li> </ul>		10 000 000	
<ul> <li>of the contactor with added electronics- compatible auxiliary switch block typical</li> </ul>		5 000 000	
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>		10 000 000	
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			

<ul> <li>at AC-3 Rated value maximum</li> </ul>	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	A	40
Rated value	^	35
— up to 690 V at ambient temperature 60 °C Rated value	A	55
• at AC-2 at 400 V Rated value	A	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

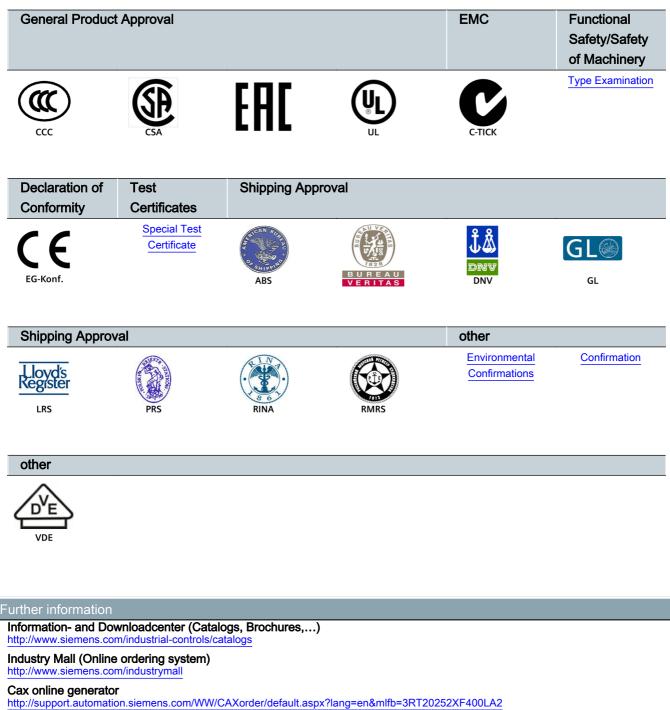
• at DC-1		
— at 24 V Rated value	А	35
— at 110 V Rated value	А	35
— at 220 V Rated value	А	35
— at 440 V Rated value	А	2.9
— at 600 V Rated value	А	1.4
• at DC-3 at DC-5		
— at 110 V Rated value	А	35
— at 220 V Rated value	А	10
— at 24 V Rated value	А	35
— at 440 V Rated value	А	0.6
— at 600 V Rated 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		4.000
• at AC-3 maximum	1/h	1 000
Control circuit/ Control:		
Type of voltage of the control supply voltage		DC
Control supply voltage for DC		
Rated value	V	110
Operating range factor control supply voltage rated		0.7 1.25
value of the magnet coil for DC		with verifier
Design of the surge suppressor	W	with varistor
Closing power of the magnet coil for DC Holding power of the magnet coil for DC	W	13.2 1.56
I MARINE POWER OF THE HIAGHER CONTINUE DO	vv	1.00

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		165
at 230 V Rated value	А	10
at 200 V Rated value	A	3
at 690 V Rated value	A	1
Operating current		
at DC-12 at 125 V Rated value	А	2
at DC-12 at 220 V Rated value	A	-
at DC-12 at 200 V Rated value     at DC-12 at 600 V Rated value	A	0.15
	A	0.9
at DC-13 at 125 V Rated value	A	0.3
• at DC-13 at 220 V Rated value	A	0.3
at DC-13 at 600 V Rated value	A	0.1
Operating current		
• at DC-12	•	
— at 60 V Rated value	A	6
— at 110 V Rated value	A	3
• at DC-13		
— at 24 V Rated value	A	10
— at 60 V Rated value	A	2
— at 110 V Rated value	A	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
• at 600 V Rated value	А	17
yielded mechanical performance [hp]		
<ul> <li>for single-phase AC motor at 110/120 V Rated value</li> </ul>	metric hp	1
<ul> <li>for single-phase AC motor at 230 V Rated value</li> </ul>	metric hp	3
<ul> <li>for three-phase AC motor at 200/208 V Rated value</li> </ul>	metric hp	3
<ul> <li>for three-phase AC motor at 220/230 V Rated value</li> </ul>	metric hp	5

value         hp         metric         hp           • for three-phase AC motor at 575/600 V Rated         metric         15           • for three-phase AC motor at 575/600 V Rated         hp         A600 / Q600           Short-circuit         • A600 / Q600         Short-circuit           Design of the fuse link         • for short-circuit protection of the main circuit         • gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A           • with type of assignment 1 required         • 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         sufface; can be tilted forward and backward by +/- 22.5° no vertical mounting surface; can be tilted forward and backward by +/- 22.5° no vertical mounting surface; can be tilted forward and backward by +/- 22.5° no vertical mounting surface; can be tilted forward and backward by +/- 22.5° no vertical mounting surface; can be tilted forward and backward by +/- 22.5° no vertical mounting surface; can be tilted forward and backward by +/- 22.5° no vertical mounting surface; can be tilted forward and backward by +/- 22.5° no vertical mounting for bion           Nounting type         screw and snap-on mounting on 03 5m standard mounting relia according to DIN EN 50022           • Side-by-side mounting         mm         102           With the approximation of the auxiliary motor and the side mounting         mm         0           • with side-by-side mounting         mm         0	<ul> <li>for three-phase AC motor at 460/480 V Rated</li> </ul>	metric	10
value         hp           Contact rating of the auxiliary contacts acc. to UL         A600 / Q600           Short-circuit:         Design of the fuse link <ul> <li>for short-circuit protection of the main circuit</li> <li>with type of assignment 1 required</li> <li>for short-circuit protection of the auxiliary switch required</li> <li>stillation/ mounting/ dimensions:</li> <li>#/-180* rotation possible on vertical mounting surface: can be tilted forward and backward by +/- 22.5* on vertical mounting surface</li> <li>stide-by-side mounting</li> <li>Side-by-side mounting</li> <li>Yes</li> <li>Height</li> <li>mm</li> <li>102</li> <li>With side-by-side mounting</li> <li>forwards</li> <li>mm</li> <li>according to DIN EN 50022</li> <li>Side-by-side mounting</li> <li>forwards</li> <li>mm</li> <li>forwards</li> <li>mm</li> <li>according to DIN EN 50022</li> <li>for grounded parts</li> <li>at the side</li> <li>mm</li> <li>at the side</li> <li>at the side</li> <li>mm</li> <li>at the side</li> <li>mm</li> <li>at the side</li> <li>mm<td>value</td><td>hp</td><td></td></li></ul>	value	hp	
Short-circuit:         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: 63 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         Mounting type       screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 Yes         Height       mm       102         Width       mm       102         Width       mm       107         Required spacing • with side-by-side mounting - forwards       mm       0         - upwards       mm       0         - at the side       mm       0         - at the side       mm       0         - at the side       mm       0         - downwards       mm       0         - at the side       mm       0         - at the side       mm       0         - at the side       mm       6         - at the side       mm       0         - at the side       mm       0			15
Design of the fuse link <ul> <li>for short-circuit protection of the main circuit</li> <li>with type of assignment 1 required</li> <li>with type of assignment 2 required</li> <li>for short-circuit protection of the auxiliary switch required</li> </ul> gL/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: 25 A           Installation/ mounting/ dimensions:         #/-180° rotation possible on vertical mounting surface: can be tilted forward and backward by +/-22.5° on vertical mounting surface           Mounting type <ul> <li>Side-by-side mounting</li> <li>Yes</li> </ul> Height         mm         102           Width         mm         45           Depth         mm         107           Required spacing <ul> <li>with side-by-side mounting</li> <li>mm</li> <li>downwards</li> <li>quwards</li> <li>downwards</li> <li>quwards</li> <li>downwards</li> <li>for grounded parts</li> <li>for grounded parts</li> <li>for grounded parts</li> <li>for grounded parts</li> <li>downwards</li> <li>quwards</li> <li>at the side</li> <li>downwards</li> <li>at the side</li> <li>downwards</li> <li>mm</li> <li>oownards</li> <li>at the side</li> <li>mm</li> <li>downwards<td>Contact rating of the auxiliary contacts acc. to UL</td><td>-</td><td>A600 / Q600</td></li></ul>	Contact rating of the auxiliary contacts acc. to UL	-	A600 / Q600
• for short-circuit protection of the main circuit         gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A           with type of assignment 2 required         gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A           • for short-circuit protection of the auxiliary switch required         fuse gL/gG: 10 A           Installation/ mounting/ dimensions:         */-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         0           - growards         mm         0           - upwards         mm         0           - downwards         mm         0           - at the side         mm         0           - forwards         mm         0           - at the side         mm         0           - Backwards         mm         0           - at the side	Short-circuit:		
	Design of the fuse link		
A method63 Å- with type of assignment 2 required63 Å• for short-circuit protection of the auxiliary switch requiredfuse gL/gG: 10 ÅInstallation/ mounting/ dimensions:+/-180° rotation possible on vertical mounting surface; 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 mountingremHeightmm102YeesWidthmm0	<ul> <li>for short-circuit protection of the main circuit</li> </ul>		
25 Å         • for short-circuit protection of the auxiliary switch required       25 Å         Installation/ mounting/ dimensions:       fuse gL/gG: 10 Å         Installation/ 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 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       mm       0         - forwards       mm       0         - gackwards       mm       0         - upwards       mm       0         - at the side       mm       0         - gackwards       mm       0         - at the side       mm       0	— with type of assignment 1 required		
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       -       -         - forwards       mm       0         - gadwards       mm       0         - downwards       mm       0         - at the side       mm       0         - backwards       mm       0         - upwards       mm       0         - forwards       mm       0         - at the side       mm       0         - backwards       mm       0         - at the side       mm       6         - downwards       mm	— with type of assignment 2 required		
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       mm       102         Width       mm       45         Depth       mm       107         Required spacing       mm       0         - backwards       mm       0         - upwards       mm       0         - at the side       mm       0         - backwards       mm       0         - at the side       mm       0         - backwards       mm       0         - downwards       mm       0         - upwards       mm       0         - at the side       mm			fuse gL/gG: 10 A
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       mm       102         Width       mm       45         Depth       mm       107         Required spacing       mm       0         - backwards       mm       0         - upwards       mm       0         - at the side       mm       0         - backwards       mm       0         - at the side       mm       0         - backwards       mm       0         - downwards       mm       0         - upwards       mm       0         - at the side       mm	Installation/ mounting/ dimensions:		
Side-by-side mountingmounting rail according to DIN EN 50022Heightmm102Widthmm45Depthmm107Required spacingmm107• with side-by-side mountingmm0- forwardsmm0- grawardsmm0- downwardsmm0- at the sidemm0- forwardsmm0- at the sidemm0- forwardsmm0- at the sidemm0- forwardsmm0- forwardsmm0- at the sidemm0- forwardsmm0- downwardsmm0- at the sidemm6- downwardsmm0			surface; can be tilted forward and backward by +/-
Heightmm102Widthmm45Depthmm107Required spacing	Mounting type		
Widthmm45Depthmm107Required spacing• with side-by-side mounting forwardsmm0- Backwardsmm0- upwardsmm0- downwardsmm0- at the sidemm0- forwardsmm0- at the sidemm0- forwardsmm0- forwardsmm0- at the sidemm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- at the sidemm0- upwardsmm0- at the sidemm0- at the sidemm0- at the sidemm0- at the sidemm6- downwardsmm0	<ul> <li>Side-by-side mounting</li> </ul>		Yes
Depthmm107Required spacingrFrequired spacing• with side-by-side mountingmm0- forwardsmm0- Backwardsmm0- upwardsmm0- downwardsmm0- at the sidemm0- forwardsmm0- at the sidemm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- mandationmm0- mandationmm0- mat the sidemm0- at the sidemm0- at the sidemm0- at the sidemm6- downwardsmm0	Height	mm	102
Required spacingImage: Figure Fig	Width	mm	45
• with side-by-side mountingImmImm- forwardsmm0- Backwardsmm0- upwardsmm0- downwardsmm0- at the sidemm0• for grounded partsImm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- forwardsmm0- hackwardsmm0- upwardsmm6- at the sidemm0- downwardsmm0	Depth	mm	107
- forwardsmm0- Backwardsmm0- upwardsmm0- downwardsmm0- at the sidemm0• for grounded parts forwardsmm0- Backwardsmm0- Backwardsmm0- horwardsmm0- backwardsmm0- at the sidemm0- upwardsmm0- at the sidemm0- at the sidemm6- downwardsmm0	Required spacing		
	<ul> <li>with side-by-side mounting</li> </ul>		
- upwardsmm0- downwardsmm0- at the sidemm0• for grounded parts forwardsmm0- Backwardsmm0- upwardsmm0- at the sidemm0- backwardsmm0- upwardsmm0- at the sidemm6- downwardsmm0	— forwards	mm	0
- downwardsmm0- at the sidemm0• for grounded parts forwardsmm0- Backwardsmm0- upwardsmm0- at the sidemm6- downwardsmm0	— Backwards	mm	0
- at the sidemm0• for grounded partsmm0- forwardsmm0- Backwardsmm0- upwardsmm0- at the sidemm6- downwardsmm0	— upwards	mm	0
<ul> <li>for grounded parts</li> <li>forwards</li> <li>mm</li> <li>Backwards</li> <li>mm</li> <li>mm</li> <li>mm</li> <li>mm</li> <li>mm</li> <li>mm</li> <li>forwards</li> <li>mm</li> <li>mm</li> <li>mm</li> <li>forwards</li> <li>mm</li> <li>mm</li> <li>forwards</li> <li>forwards</li></ul>	— downwards	mm	0
forwardsmm0 Backwardsmm0 upwardsmm0 at the sidemm6 downwardsmm0	— at the side	mm	0
— Backwardsmm0— upwardsmm0— at the sidemm6— downwardsmm0	<ul> <li>for grounded parts</li> </ul>		
upwardsmm0 at the sidemm6 downwardsmm0	— forwards	mm	0
— at the side     mm     6       — downwards     mm     0	— Backwards	mm	0
— downwards mm 0	— upwards	mm	0
	— at the side	mm	6
● for live parts	— downwards	mm	0
	• for live parts		
— forwards mm 0	— forwards	mm	0
— Backwards mm 0	— Backwards	mm	0
— upwards mm 0	— upwards	mm	0
— downwards mm 0	— downwards	mm	0

— at the side	mm	6
Connections/ Terminals:		
Type of electrical connection		
• for main current circuit		spring-loaded terminals
<ul> <li>for auxiliary and control current circuit</li> </ul>		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)
<ul> <li>finely stranded without core end processing</li> </ul>		2x (1 6 mm²)
<ul> <li>for AWG conductors for main contacts</li> </ul>		2x (18 8)
<ul> <li>for auxiliary contacts</li> </ul>		
— single or multi-stranded		2x (0,5 2,5 mm²)
— finely stranded with core end processing		2x (0.5 1.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>		2x (0.5 2.5 mm²)
<ul> <li>for AWG conductors for auxiliary contacts</li> </ul>		2x (20 14)
Safety related data:		
B10 value with high demand rate acc. to SN 31920		1 000 000
Proportion of dangerous failures		
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	%	40
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	%	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	m	2 000
maximum		
Ambient temperature	°C	40 170
• during operation	°C	-40 +70
during storage	°C	-55 +80
Certificates/ approvals:		



Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

http://support.automation.siemens.com/WW/view/en/3RT20252XF400LA2/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT20252XF400LA2&lang=en

