SIEMENS

Data sheet

3RT2015-2AP01



CONTACTOR, AC-3, 3KW/400V, 1NO, AC 230V, 50/60 HZ, 3-POLE, SZ S00 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 		30 000 000
 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	56
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	А	18
— up to 690 V at ambient temperature 40 °C Rated value	А	18
— up to 690 V at ambient temperature 60 °C Rated value	A	16
• at AC-2 at 400 V Rated value	А	7
• at AC-3		
— at 400 V Rated value	А	7
— at 500 V Rated value	А	6
— at 690 V Rated value	А	4.9
 at AC-4 at 400 V Rated value 	А	6.5
Operating current with 1 current path		
● at DC-1		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	1.5
— at 220 V Rated value	А	0.6
— at 440 V Rated value	А	0.42
— at 600 V Rated value	А	0.42
• at DC-3 at DC-5		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	0.1
Operating current with 2 current paths in series		
● at DC-1		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	8.4
— at 220 V Rated value	А	1.2
— at 440 V Rated value	А	0.6
— at 600 V Rated value	А	0.5
• at DC-3 at DC-5		
— at 110 V Rated value	А	0.25
— at 24 V Rated value	А	15
Operating current with 3 current paths in series		
● at DC-1		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	15
— at 220 V Rated value	А	15
— at 440 V Rated value	А	0.9
— at 600 V Rated value	А	0.7

• at DC-3 at DC-5 - - at 110 V Rated value A 15 - at 22 V Rated value A 0.14 - at 24 V Rated value A 0.14 - at 440 V Rated value A 0.14 - at 600 V Rated value A 0.14 - at 600 V Rated value A 0.14 - at AC-1 at 400 V Rated value kW 1 • at AC-1 at 400 V Rated value kW 3 - at 230 V Rated value kW 3 • at AC-1 - - - at 230 V Rated value kW 6 - at 230 V Rated value kW 6.3 - at 230 V Rated value kW 10.5 - at 690 V Rated value kW 19 • at AC-3 - - - at 230 V Rated value kW 15 - at 230 V Rated value kW 15 - at 4200 V Rated value kW 15 - at 400 V Rated value kW 15 - at 400 V Rated value kW 15			
at 220 V Rated valueA1.2- at 24 V Rated valueA15- at 40 V Rated valueA0.14- at 600 V Rated valueA0.14Operating power at AC-1 at 400 V Rated valuekW3- at AC-2 at 400 V Rated valuekW3- at 230 V Rated valuekW3Operating power at 230 V Rated valuekW6- at 230 V Rated valuekW6.3- at 230 V Rated valuekW6.3- at 400 V at 60 °C Rated valuekW10.5- at 400 V at 60 °C Rated valuekW18- at 400 V at 60 °C Rated valuekW18- at 400 V at 60 °C Rated valuekW18- at 690 V Rated valuekW15- at 400 V Rated valuekW1.5- at 400 V Rated valuekW1.5- at 400 V Rated valuekW1.15Operating power for ≥ 200000 operating cycles at AC-4-AC-4• at 400 V Rated valuekW1.15Operating frequency• at 400 V Rated valuekW1.15Operating power for ≥ 200000 operating cycles at AC-4-• at 400 V Rated valuekW1.15Operating frequency• at 600 V Rated valuekW1.15Operating frequency• at 600 V Rated valueV230• at 60 Hz Rated valueV230• at 60 Hz <td< td=""><td>● at DC-3 at DC-5</td><td></td><td></td></td<>	● at DC-3 at DC-5		
	— at 110 V Rated value	А	15
	— at 220 V Rated value	А	1.2
	— at 24 V Rated value	А	15
Operating power Image: state of the stat	— at 440 V Rated value	А	0.14
• at AC-1 at 400 V Rated value KW 11 • at AC-2 at 400 V Rated value KW 3 • at AC-4 at 400 V Rated value KW 3 • at AC-1 KW 6 • at AC-1 - - • at AC-1 KW 6 • at AC-1 KW 6.3 - at 230 V Rated value KW 6.3 - at 400 V at 60 °C Rated value KW 10.5 - at 690 V Rated value KW 18 - at 690 V Rated value KW 15 - at 230 V Rated value KW 3 - at 400 V Rated value KW 15 - at 400 V Rated value KW 15 - at 400 V Rated value KW 15 - at 400 V Rated value KW 115 Operating power for ≥ 20000 operating cycles at AC-4 - • at 400 V Rated value KW 1.15 • at 400 V Rated value KW 1.15 • at 600 V Rated value V 230 • at 600 V Rated value V 230 • at 50 Hz Rated value V 230	— at 600 V Rated value	А	0.14
at AC-2 at 400 V Rated valueKW3• at AC-2 at 400 V Rated valueKW3• at AC-1 at 230 V at 60 °C Rated valueKW6- at 230 V Rated valueKW6.3- at 230 V Rated valueKW10.5- at 690 V Rated valueKW18- at 690 V Rated valueKW19• at AC-3 at 690 V Rated valueKW3- at 690 V Rated valueKW3- at 690 V Rated valueKW3- at 690 V Rated valueKW4Operating power for 2 200000 operating cycles at AC-3 at 400 V Rated valueKW1.15- at 600 V Rated valueKW1.15- operating frequency • at AC-3 maximum at 60 V Rated valueV230- at 50 Hz Rated valueV230- at 50 Hz Rated valueV230- at 50 Hz1.1- at 60 Hz1.1- at 60 Hz1.1- at 60 Hz1.1- at 60 Hz1.1 <trr>- at 60 Hz1.1<!--</td--><td>Operating power</td><td>_</td><td></td></trr>	Operating power	_	
at AC-4 at 400 V Rated value KW 3 Operating power - - • at AC-1 KW 6 at 230 V Rated value KW 6.3 at 400 V at 60 °C Rated value KW 10.5 at 600 V Rated value KW 10.5 at 600 V Rated value KW 18 at 600 V Rated value KW 19 • at AC-3 - - at 230 V Rated value KW 1.5 at 600 V Rated value KW 3 at 600 V Rated value KW 4 Operating power for 2 200000 operating cycles at AC-3 - at 600 V Rated value KW 1.15 Operating power for 2 200000 operating cycles at AC-4 - - at 400 V Rated value KW 1.15 Operating frequency - - - at 400 V Rated value KW 1.15 Operating frequency - - - at 60 V Rated value V 230 Operating range factor control supply voltage rated - 230 - at 60 Hz	 at AC-1 at 400 V Rated value 	kW	11
Operating power image: image	 at AC-2 at 400 V Rated value 	kW	3
• at AC-1- at 230 V at 60 °C Rated valueKW6- at 230 V Rated valueKW6.3- at 400 V at 60 °C Rated valueKW10.5- at 690 V Rated valueKW18- at 690 V Rated valueKW19• at AC-3 at 230 V Rated valueKW1.5- at 230 V Rated valueKW3- at 690 V Rated valueKW4Operating power for ≥ 200000 operating cycles at AC-3 at 690 V Rated valueKW1.15- at 690 V Rated valueV2.30- at 690 V Rated valueV2.30- at 690 V Rated valueV2.30- at 60 V Rated valueV2.30- at 50 Hz0.8 1.1- at 50 Hz0.8 1.1- at 50 Hz0.8 1.1- at 60 Hz0.8 1.1	• at AC-4 at 400 V Rated value	kW	3
- at 230 V at 60 °C Rated valueKW6- at 230 V Rated valueKW6.3- at 400 V at 60 °C Rated valueKW10.5- at 690 V Rated valueKW18- at 690 V Rated valueKW19• at AC-3 at 230 V Rated valueKW3- at 690 V Rated valueKW3- at 690 V Rated valueKW4- at 690 V Rated valueKW4- at 690 V Rated valueKW1.5- at 690 V Rated valueKW1.15Operating power for 2 200000 operating cycles at AC-4 at 400 V Rated valueKW1.15Operating frequency • at AC-3 maximumJ/h750Control circuit/ Control:Type of voltage of the control supply voltageACControl supply voltage with AC • at 50 Hz Rated valueV230· at 60 Hz Rated valueV230· at 60 Hz· at 60 Hz.<	Operating power		
Initial controlKW6.3- al 230 V Rated valuekW10.5- al 690 V at 60 °C Rated valuekW18- al 690 V Rated valuekW19• at AC-3 al 230 V Rated valuekW19• at AC-3 al 400 V Rated valuekW3- al 690 V Rated valuekW4Operating power for ≥ 20000 operating cycles at AC-4-AC-4• at 400 V Rated valuekW1.15• at 690 V Rated valuekW1.15• at 690 V Rated valuekW1.15• at 600 V Rated valueV2.30• at AC-3 maximum1/h750Control circuit/ Control:-2.30• at 60 Hz Rated valueV2.30• at 60 Hz Rated valueV2.30• at 60 Hz0.8 1.1• at 60 Hz0.8 1.1• at 60 Hz-0.8 1.1• at 60 Hz-0.8 1.1• at 60 Hz-0.8 1.1• at 60 Hz-0.8 1.1	● at AC-1		
- at 400 V at 60 °C Rated value kW 10.5 - at 690 V Rated value kW 18 - at 690 V Rated value kW 19 • at AC-3 - - - at 230 V Rated value kW 1.5 - at 400 V Rated value kW 3 - at 690 V Rated value kW 4 Operating power for ≥ 200000 operating cycles at AC-4 - • at 400 V Rated value kW 1.15 • at 400 V Rated value kW 1.15 • at 400 V Rated value kW 1.15 • at 600 V Rated value kW 1.15 • at 600 V Rated value kW 1.15 • at 600 V Rated value kW 1.15 Operating frequency - - • 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 60 Hz Rated value V 230 230 Operating range factor control supply voltage rated 0.8 1.1 0.85 1.1	— at 230 V at 60 °C Rated value	kW	6
- at 690 V at 60 °C Rated value kW 18 - at 690 V Rated value kW 19 • at AC-3 - - - at 230 V Rated value kW 1.5 - at 400 V Rated value kW 3 - at 690 V Rated value kW 4 Operating power for ≥ 200000 operating cycles at AC-4 KW 1.15 • at 400 V Rated value kW 1.15 • at 400 V Rated value kW 1.15 • at 690 V Rated value kW 1.15 • at 600 V Rated value kW 1.15 Operating frequency • th AC-3 maximum 1/h • 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 60 Hz Rated value V 230 Operating range factor control supply voltage rated value V 230 Operating range factor control supply voltage rated value 0.8 1.1 • at 60 Hz 0.8 1.1 0.85 1.1	— at 230 V Rated value	kW	6.3
at 630 V Rated value KW 19 • at AC-3 - at 230 V Rated value KW 1.5 at 400 V Rated value KW 3 at 690 V Rated value KW 4 Operating power for ≥ 20000 operating cycles at AC-4 KW 1.15 • at 400 V Rated value KW 1.15 • at 690 V Rated value KW 1.15 Operating frequency KW 1.15 • at AC-3 maximum 1/h 750 Control circuit/ Control:	— at 400 V at 60 °C Rated value	kW	10.5
at AC-3Image from the origon of t	— at 690 V at 60 °C Rated value	kW	18
at 230 V Rated valueKW1.5 at 400 V Rated valueKW3 at 690 V Rated valueKW4Operating power for > 200000 operating cycles at AC-4KW1.15• at 400 V Rated valueKW1.15• at 690 V Rated valueKW1.15• at AC-3 maximum1/h750Control circuit/ Control:Type of voltage of the control supply voltageAC• at 50 Hz Rated valueV230• at 60 Hz Rated valueV230• at 60 Hz0.8 1.1• at 60 Hz0.8 1.1• at 60 Hz0.8 1.1• at 60 Hz0.8 1.1	— at 690 V Rated value	kW	19
	• at AC-3		
	— at 230 V Rated value	kW	1.5
Operating power for ≥ 200000 operating cycles at AC-4 KW 1.15 • at 400 V Rated value KW 1.15 • at 690 V Rated value KW 1.15 Operating frequency • • • at AC-3 maximum 1/h 750 Control circuit/ Control: Type of voltage of the control supply voltage AC Control supply voltage with AC • 230 • at 50 Hz Rated value V 230 Operating range factor control supply voltage rated value of the magnet coil with AC 0.8 1.1 • at 50 Hz 0.8 1.1 • at 60 Hz 0.8 1.1	— at 400 V Rated value	kW	3
AC-4Image: control supply controls• at 400 V Rated valueKW1.15• at 690 V Rated valueKW1.15Operating frequency • at AC-3 maximum1/h750• at AC-3 maximum1/h750Control circuit/ Control:	— at 690 V Rated value	kW	4
• at 690 V Rated value kW 1.15 Operating frequency • at AC-3 maximum 1/h 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 4 • at 50 Hz Rated value V 230 • at 60 Hz Rated value V 230 Operating range factor control supply voltage rated value of the magnet coil with AC 0.8 1.1 • at 50 Hz 0.8 1.1 • at 50 Hz 0.8 1.1 • at 60 Hz 0.8 1.1			
Operating frequency • at AC-3 maximum1/h750Control circuit/ Control:1/h750Type of voltage of the control supply voltageACControl supply voltage with AC • at 50 Hz Rated valueV230Operating range factor control supply voltage rated value of the magnet coil with AC • at 50 HzV230Operating range factor control supply voltage rated value of the magnet coil with AC • at 50 Hz • at 60 HzV230Operating range factor control supply voltage rated value of the magnet coil with AC • at 60 Hz0.8 1.1 0.85 1.1Auxiliary circuit:0	• at 400 V Rated value	kW	1.15
• at AC-3 maximum1/h750Control circuit/ Control:Type of voltage of the control supply voltageACControl supply voltage with ACAC• at 50 Hz Rated valueV230• at 60 Hz Rated valueV230Operating range factor control supply voltage rated value of the magnet coil with AC0.8 1.1• at 50 Hz0.8 1.1• at 60 Hz0	• at 690 V Rated value	kW	1.15
Control circuit/ Control: Type of voltage of the control supply voltage AC Control supply voltage with AC V • at 50 Hz Rated value V • at 60 Hz Rated value V Operating range factor control supply voltage rated value of the magnet coil with AC 0.8 1.1 • at 50 Hz 0.8 1.1 • at 60 Hz 0.85 1.1	Operating frequency	-	
Type of voltage of the control supply voltageACControl supply voltage with ACV• at 50 Hz Rated valueV• at 60 Hz Rated valueVOperating range factor control supply voltage rated value of the magnet coil with ACV• at 50 Hz0.8 1.1• at 60 Hz0.85 1.1Auxiliary circuit:VNumber of NC contacts • for auxiliary contacts — instantaneous contact0	• at AC-3 maximum	1/h	750
Control supply voltage with ACV230• at 50 Hz Rated valueV230• at 60 Hz Rated valueV230Operating range factor control supply voltage rated value of the magnet coil with AC0.8 1.1• at 50 Hz0.8 1.1• at 60 Hz0.85 1.1• at 60 Hz0.85 1.1		_	
• at 50 Hz Rated valueV230• at 60 Hz Rated valueV230Operating range factor control supply voltage rated value of the magnet coil with ACV230• at 50 Hz0.8 1.1• at 60 Hz0.85 1.1Auxiliary circuit:VVNumber of NC contacts • for auxiliary contacts — instantaneous contactI• at at at a so the second contact of the sec		_	AC
• at 60 Hz Rated valueV230Operating range factor control supply voltage rated value of the magnet coil with ACV230• at 50 Hz0.8 1.10.8 1.1• at 60 Hz0.85 1.10.85 1.1Auxiliary circuit:VVVNumber of NC contacts - instantaneous contact0		M	220
Operating range factor control supply voltage rated value of the magnet coil with AC 0.8 1.1 • at 50 Hz 0.8 1.1 • at 60 Hz 0.85 1.1			
value of the magnet coil with AC 0 • 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 0		V	230
• at 60 Hz • for auxiliary circuit: • for auxiliary contacts • for auxiliary contacts • instantaneous contact 0			
Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 0	• at 50 Hz		0.8 1.1
Number of NC contacts • for auxiliary contacts — instantaneous contact 0	● at 60 Hz		0.85 1.1
for auxiliary contacts instantaneous contact 0			
— instantaneous contact 0			
	-		
Number of NO contacts			0
	Number of NO contacts		

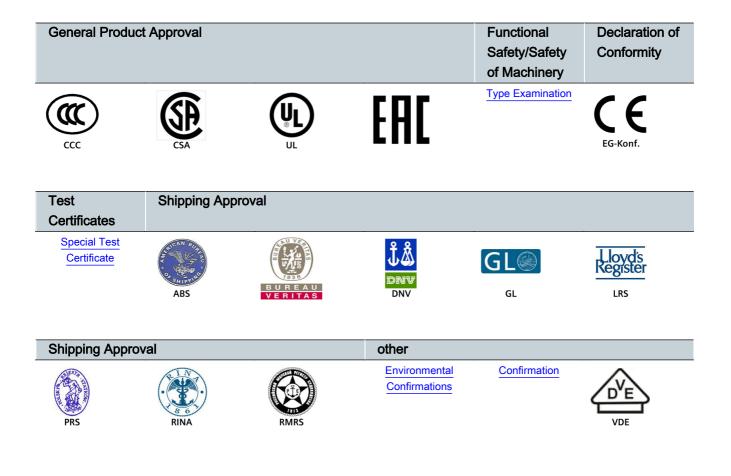
 for auxiliary contacts 		
— instantaneous contact		1
Product expansion Auxiliary switch		Yes
Operating current at AC-15	-	
• at 230 V Rated value	А	10
● at 400 V Rated value	А	3
● at 690 V Rated value	А	1
Operating current	-	
• at DC-12 at 125 V Rated value	А	2
• at DC-12 at 220 V Rated value	А	1
• at 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	4.8
• at 600 V Rated value	А	6.1
yielded mechanical performance [hp]		
 for single-phase AC motor at 110/120 V Rated value 	metric hp	0.25
 for single-phase AC motor at 230 V Rated value 	metric hp	0.75
 for three-phase AC motor at 200/208 V Rated value 	metric hp	1.5
 for three-phase AC motor at 220/230 V Rated value 	metric hp	2
 for three-phase AC motor at 460/480 V Rated value 	metric hp	3
 for three-phase AC motor at 575/600 V Rated value 	metric hp	5
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: 35 A
— with type of assignment 2 required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A
 for short-circuit protection of the auxiliary switch required 		fuse gL/gG: 10 A
nstallation/ 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	69.5
Width	mm	45
Depth	mm	73
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		spring-loaded terminals
 for auxiliary and control current circuit 		spring-loaded terminals

 for main contacts 		
— single or multi-stranded		2x (0,5 4 mm²)
 — finely stranded with core end processing 		2x (0.5 2.5 mm²)
— finely stranded without core end		2x (0.5 2.5 mm²)
processing		
 for AWG conductors for main contacts 		2x (20 12)
 for auxiliary contacts 		
— single or multi-stranded		2x (0,5 4 mm²)
 — finely stranded with core end processing 		2x (0.5 2.5 mm²)
 finely stranded without core end 		2x (0.5 2.5 mm²)
processing		
 for AWG conductors for auxiliary contacts 		2x (20 12)
Apparent pick-up power of the magnet coil with AC	-	
● at 50 Hz	V·A	27
• at 60 Hz	V·A	31.7
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
Note		with 3RH29
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		S00
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:



Further information

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=3RT20152AP01

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RT20152AP01/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=3RT20152AP01&lang=en

