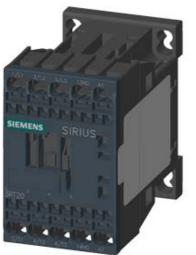
## **SIEMENS**

## Data sheet

## 3RT2018-2AP01



CONTACTOR, AC-3, 7.5KW/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)				
<ul> <li>of the contactor typical</li> </ul>		30 000 000		
<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	128		
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	22
Rated value		
— up to 690 V at ambient temperature 40 °C Rated value	A	22
— up to 690 V at ambient temperature 60 °C Rated value	A	20
• at AC-2 at 400 V Rated value	А	16
• at AC-3		
— at 400 V Rated value	А	16
— at 500 V Rated value	А	12.4
— at 690 V Rated value	А	8.9
• at AC-4 at 400 V Rated value	А	11.5
Operating current with 1 current path		
• at DC-1		
— at 24 V Rated value	А	20
— at 110 V Rated value	А	2.1
— at 220 V Rated value	А	0.8
— at 440 V Rated value	А	0.6
— at 600 V Rated value	А	0.6
● at DC-3 at DC-5		
— at 24 V Rated value	А	20
— 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	20
— at 110 V Rated value	А	12
— at 220 V Rated value	А	1.6
— at 440 V Rated value	А	0.8
— at 600 V Rated value	А	0.7
• at DC-3 at DC-5		
— at 110 V Rated value	А	0.35
— at 24 V Rated value	А	20
Operating current with 3 current paths in series		
● at DC-1		
— at 24 V Rated value	А	20
— at 110 V Rated value	А	20
— at 220 V Rated value	А	20
— at 440 V Rated value	А	1.3
— at 600 V Rated value	А	1

• al DC-3 at DC-5       -         - at 110 V Rated value       A       20         - at 220 V Rated value       A       20         - at 24 V Rated value       A       0.2         - at 440 V Rated value       A       0.2         - at 440 V Rated value       A       0.2         - at 440 V Rated value       KW       13         • at AC-1 at 400 V Rated value       KW       7.5         • at AC-1 at 400 V Rated value       KW       7.5         • at AC-1 at 400 V Rated value       KW       7.5         • at AC-1 at 400 V Rated value       KW       7.5         - at 230 V Rated value       KW       7.5         - at 230 V Rated value       KW       7.5         - at 400 V Rated value       KW       3.5         Operating frequency       A			
	• at DC-3 at DC-5		
	— at 110 V Rated value	А	20
India of the second s	— at 220 V Rated value	А	1.5
Letter valueA0.2Operating power	— at 24 V Rated value	А	20
Operating power         HW         13           • at AC-1 at 400 V Rated value         KW         7.5           • at AC-2 at 400 V Rated value         KW         5.5           Operating power         •         •           • at AC-1 at 400 V Rated value         KW         7.5           • at AC-1         -         -           • at AC-1         -         -           • at 230 V Rated value         KW         7.5           - at 230 V Rated value         KW         7.5           - at 230 V Rated value         KW         13           - at 690 V Rated value         KW         22           - at 690 V Rated value         KW         22           - at 690 V Rated value         KW         7.5           • at 400 V Rated value         KW         3.5           • at 400 V Rated value         KW         3.5           • at 690 V Rated value         V         230           • at 690 V Rated value         V         230           • at 60 Hz         0.8 1.1 <t< td=""><td>— at 440 V Rated value</td><td>А</td><td>0.2</td></t<>	— at 440 V Rated value	А	0.2
• at AC-1 at 400 V Rated valueKW13• at AC-2 at 400 V Rated valueKW7.5• at AC-4 at 400 V Rated valueKW5.5Operating pover• at AC-1	— at 600 V Rated value	А	0.2
at AC-2 at 400 V Rated value     KW     7.5       • at AC-4 at 400 V Rated value     KW     5.5       Operating power     -     -       • at AC-1     -     -       • at AC-1     -     -       - at 230 V at 60 °C Rated value     KW     7.5       - at 230 V Rated value     KW     13       - at 400 V Rated value     KW     22       - at 690 V Rated value     KW     22       - at 690 V Rated value     KW     7.5       - at 230 V Rated value     KW     7.5       - at 400 V Rated value     KW     7.5       - at 400 V Rated value     KW     7.5       - at 690 V Rated value     KW     7.5       - at 400 V Rated value     KW     7.5       - at 400 V Rated value     KW     7.5       - at 400 V Rated value     KW     7.5       - at 690 V Rated value     KW     3.5       Operating frequency     -     -       • at 60 V Rated value     V     230       Operating range factor control supply volt	Operating power	-	
at AC-4 at 400 V Rated value       KW       5.5         Operating power       - at 230 V at 60 °C Rated value       KW       7.5         - at 230 V Rated value       KW       7.5         - at 400 V at 60 °C Rated value       KW       22         - at 600 V Rated value       KW       7.5         - at 600 V Rated value       KW       22         - at 600 V Rated value       KW       7.5         - at 600 V Rated value       KW       7.5         - at 400 V Rated value       KW       7.5         - at 400 V Rated value       KW       7.5         - at 600 V Rated value       KW       7.5         - at 400 V Rated value       KW       2.5         • at 400 V Rated value       KW       2.5         • at 400 V Rated value       KW       2.5         • at 600 V Rated value       KW       2.5         • at 600 V Rated value       V       230         Operating range factor control supply voltage rated       V       230         Operating range factor control supply voltage rated	<ul> <li>at AC-1 at 400 V Rated value</li> </ul>	kW	13
Operating power	• at AC-2 at 400 V Rated value	kW	7.5
• at AC-1VM7.5- at 230 V at 60 °C Rated valueKW7.5- at 230 V Rated valueKW13- at 400 V at 60 °C Rated valueKW22- at 690 V Rated valueKW22- at 690 V Rated valueKW4- at 230 V Rated valueKW4- at 230 V Rated valueKW4- at 400 V Rated valueKW7.5- at 230 V Rated valueKW7.5- at 230 V Rated valueKW7.5- at 690 V Rated valueKW2.5- at 690 V Rated valueKW2.5- at 690 V Rated valueKW3.5- at 690 V Rated valueKW3.5- at 690 V Rated valueKW2.5- at 690 V Rated valueKW3.5- at 690 V Rated valueKW2.5- at 690 V Rated valueKW3.5- at 690 V Rated valueKW3.5- at 690 V Rated valueKW2.5- at 690 V Rated valueKW3.5- at 690 V Rated valueKW3.5- at 690 V Rated valueV3.5- at 690 V Rated valueV2.5- at 690 V Rated valueV2.5- at 690 V Rated valueKW3.5- at 690 V Rated valueV2.5- at 60 HzControl supply voltage ratedAC- at 60 Hz </td <td>• at AC-4 at 400 V Rated value</td> <td>kW</td> <td>5.5</td>	• at AC-4 at 400 V Rated value	kW	5.5
- at 230 V at 60 °C Rated valueKW7.5- at 230 V Rated valueKW7.5- at 400 V at 60 °C Rated valueKW13- at 690 V Rated valueKW22- at 690 V Rated valueKW22- at 400 V Rated valueKW4- at 400 V Rated valueKW7.5- at 400 V Rated valueKW7.5- at 690 V Rated valueKW2.5AC4KW3.5• at 400 V Rated valueKW3.5• at 400 V Rated valueKW3.5• at 400 V Rated valueKW2.5• at 400 V Rated valueKW2.5• at 400 V Rated valueKW3.5• at 400 V Rated valueKW2.5• at 400 V Rated valueKW3.5• at 60 V Rated valueV230• at 60 - 3 maximumV230• at 60 Hz Rated valueV230• at 60 Hz Rated valueV230• at 60 Hz0.8 1.1• at 60 Hz0.8 1.1 <trr>• at 60 Hz0.8 1.1&lt;</trr>	Operating power	-	
- at 230 V Rated valueKW7.5- at 400 V at 60 °C Rated valueKW13- at 690 V Rated valueKW22- at 690 V Rated valueKW22- at 630 V Rated valueKW22- at 400 V Rated valueKW4- at 400 V Rated valueKW7.5- at 690 V Rated valueKW7.5- at 690 V Rated valueKW7.5Operating power for 200000 operating cycles at AC-3-AC-4KW3.5Operating frequency • at AC-3 maximumKW3.5Operating frequency • at AC-3 maximumN750Control circuit/ Control:-ACControl supply voltage with AC • at 60 Hz Rated valueV230Operating range factor control supply voltage rated value of the magnet coil with AC • at 50 Hz • at 60 Hz0.8 1.1Outsiliary contacts • for auxiliary contacts00	• at AC-1		
- at 400 V at 60 °C Rated value       kW       13         - at 690 V at 60 °C Rated value       kW       22         - at 690 V Rated value       kW       22         - at 230 V Rated value       kW       4         - at 400 V Rated value       kW       7.5         - at 690 V Rated value       kW       7.5         Operating power for ≥ 200000 operating cycles at AC-4       KW       2.5         • at 400 V Rated value       kW       3.5         Operating frequency	— at 230 V at 60 °C Rated value	kW	7.5
- at 600 V at 60 ° C Rated value       KW       22         - at 600 V Rated value       KW       22         • at AC-3       -       -         - at 230 V Rated value       KW       4         - at 400 V Rated value       KW       7.5         - at 690 V Rated value       KW       7.5         - at 690 V Rated value       KW       7.5         Operating power for ≥ 200000 operating cycles at AC-4       KW       3.5         • at 400 V Rated value       KW       3.5         Operating frequency       -       -         • at AC-3 maximum       1/h       750         Control circuit/ Control:       -       -         Control supply voltage with AC       -       -         • at 60 Hz Rated value       V       230       -         • at 60 Hz Rated value       V       230       -         • at 60 Hz       0.8 1.1	— at 230 V Rated value	kW	7.5
	— at 400 V at 60 °C Rated value	kW	13
• at AC-3       - at 230 V Rated value       KW       4         - at 400 V Rated value       KW       7.5         - at 690 V Rated value       KW       7.5         Operating power for ≥ 200000 operating cycles at AC-4       KW       2.5         • at 400 V Rated value       KW       3.5         Operating frequency       - at AC-3 maximum       750         • at AC-3 maximum       1/h       750         Control circuit/ Control:	— at 690 V at 60 °C Rated value	kW	22
at 230 V Rated valueKW4 at 400 V Rated valueKW7.5 at 690 V Rated valueKW7.5Operating power for 2 20000 operating cycles at AC-4KW2.5- at 400 V Rated valueKW3.5Operating frequency - at 690 V Rated valueKW3.5Operating frequency - at AC-3 maximum1/h750Control circuit/ Control:	— at 690 V Rated value	kW	22
at 400 V Rated value     KW     7.5       at 690 V Rated value     KW     7.5       Operating power for ≥ 200000 operating cycles at AC-4     KW     2.5       • at 400 V Rated value     KW     3.5       Operating frequency     KW     3.5       • at AC-3 maximum     1/h     750       Control circuit/ Control:	• at AC-3		
	— at 230 V Rated value	kW	4
Operating power for ≥ 200000 operating cycles at AC-4     KW     2.5       • at 400 V Rated value     KW     3.5       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       • 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     0.85 1.1	— at 400 V Rated value	kW	7.5
AC-4Image: constraint of the second seco	— at 690 V Rated value	kW	7.5
• at 690 V Rated valuekW3.5Operating frequency • at AC-3 maximum1/h750Control circuit/ Control:ACType 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 coll with AC 			
Operating frequency • at AC-3 maximum1/h750Control circuit/ Control:ACType 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 Hz0.8 1.1 0.85 1.1Auxiliary circuit:Output 00	• at 400 V Rated value	kW	2.5
• 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 Hz0.8 1.1• at 60 Hz0.8 1.1• at 60 Hz0	• at 690 V Rated value	kW	3.5
Control circuit/ Control:       AC         Type of voltage of the control supply voltage       AC         Control supply voltage with AC       V         • at 50 Hz Rated value       V       230         Operating range factor control supply voltage rated value of the magnet coil with AC       V       230         • at 50 Hz       0.8 1.1       0.85 1.1         • at 60 Hz       0       0	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 ACV230• at 50 Hz0.8 1.1• at 60 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 1.1• at 60 Hz0.85 1.1• at 60 Hz0.85 1.1			AC
• at 60 Hz Rated valueV230Operating range factor control supply voltage rated value of the magnet coil with AC0.8• at 50 Hz0.80.8• at 60 Hz0.850.85Auxiliary circuit:VNumber of NC contacts • for auxiliary contacts — instantaneous contact0			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     0.8 1.1       • at 50 Hz     0.8 1.1       • at 60 Hz     0.85 1.1		V	230
<ul> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>Auxiliary circuit:</li> <li>Auxiliary contacts         <ul> <li>for auxiliary contacts</li> <li>instantaneous contact</li> <li>0</li> </ul> </li> </ul>			
• at 60 Hz O.85 1.1 Auxiliary circuit: Number of NC contacts     • for auxiliary contacts     — instantaneous contact O	-		08 11
Auxiliary circuit:       Number of NC contacts       • for auxiliary contacts       — instantaneous contact       0			
Number of NC contacts     Image: Contact s       • for auxiliary contacts     0	- al 00 112		0.00 1.1
for auxiliary contacts         — instantaneous contact         0			
— instantaneous contact 0			
	-		
Number of NO contacts			0
	Number of NO contacts		

<ul> <li>for auxiliary contacts</li> </ul>		
— 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	14
● at 600 V Rated value	А	11
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	2
<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
<ul> <li>for three-phase AC motor at 460/480 V Rated value</li> </ul>	metric hp	10
<ul> <li>for three-phase AC motor at 575/600 V Rated value</li> </ul>	metric hp	10
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> </ul>			
— 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	
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>		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	
<ul> <li>Side-by-side mounting</li> </ul>		Yes	
Height	mm	69.5	
Width	mm	45	
Depth	mm	73	
Required spacing			
<ul> <li>with side-by-side mounting</li> </ul>			
— forwards	mm	0	
— Backwards	mm	0	
— upwards	mm	0	
— downwards	mm	0	
— at the side	mm	0	
<ul> <li>for grounded parts</li> </ul>			
— 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	
<ul> <li>for auxiliary and control current circuit</li> </ul>		spring-loaded terminals	

<ul> <li>for main contacts</li> </ul>		
— single or multi-stranded		2x (0,5 4 mm²)
<ul> <li>— finely stranded with core end processing</li> </ul>		2x (0.5 2.5 mm²)
— finely stranded without core end		2x (0.5 2.5 mm²)
processing		
<ul> <li>for AWG conductors for main contacts</li> </ul>		2x (20 12)
<ul> <li>for auxiliary contacts</li> </ul>		
— single or multi-stranded		2x (0,5 4 mm²)
<ul> <li>— finely stranded with core end processing</li> </ul>		2x (0.5 2.5 mm²)
— finely stranded without core end		2x (0.5 2.5 mm²)
processing		
<ul> <li>for AWG conductors for auxiliary contacts</li> </ul>		2x (20 12)
Apparent pick-up power of the magnet coil with AC		
● at 50 Hz	V·A	37
• at 60 Hz	V·A	43
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
• Note		with 3RH29
T1 value for proof test interval or service life acc. to	у	20
IEC 61508	,	
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		
<ul> <li>during operation</li> </ul>	°C	-25 +60
• during storage	°C	-55 +80

Certificates/ approvals:

General Produc	ct Approval			Functional Safety/Safety of Machinery	Declaration of Conformity
CCC	CSA	EHC		Type Examination	EG-Konf.
Test Certificates	Shipping App	proval			
Special Test Certificate	ABS	BUREAU VERITAS	DINV DNV	GL	Lloyd's Register LRS
Shipping Appro	val		other		
PRS	RINA	RMRS	Environmental Confirmations	<u>Confirmation</u>	

## 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=3RT20182AP01

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RT20182AP01/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=3RT20182AP01&lang=en

