SIEMENS

Data sheet

3RT2017-2KF42-1LA0



traction contactor, AC-3e/AC-3, 12 A, 5.5 kW / 400 V, 3-pole, 110 V DC, 0.7-1.25* Us, with integrated suppressor diode, auxiliary contacts: 1 NC, spring-loaded terminal, size: S00, with plugged on series resistor, upright mounting position

product brand name	SIRIUS		
product designation	Power contactor		
design of the product	With extended operating range		
product type designation	3RT2		
General technical data			
size of contactor	S00		
product extension			
 function module for communication 	No		
auxiliary switch	Yes		
power loss [W] for rated value of the current			
 at AC in hot operating state 	3.6 W		
 at AC in hot operating state per pole 	1.2 W		
 without load current share typical 	4 W		
insulation voltage			
 of main circuit with degree of pollution 3 rated value 	690 V		
 of auxiliary circuit with degree of pollution 3 rated value 	690 V		
surge voltage resistance			
 of main circuit rated value 	6 kV		
 of auxiliary circuit rated value 	6 kV		
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V		
shock resistance at rectangular impulse			
• at DC	7.3g / 5 ms, 4.7g / 10 ms		
shock resistance with sine pulse			
• at DC	11,4g / 5 ms, 7,3g / 10 ms		
mechanical service life (operating cycles)			
 of contactor typical 	30 000 000		
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000		
 of the contactor with added auxiliary switch block typical 	10 000 000		
reference code according to IEC 81346-2	Q		
Substance Prohibitance (Date)	10/01/2009		
Ambient conditions			
installation altitude at height above sea level maximum	2 000 m		
ambient temperature			
 during operation 	-40 +70 °C		
 during storage 	-55 +80 °C		
relative humidity minimum	10 %		
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %		
Main circuit			

number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
 at AC-3 rated value maximum 	690 V
 at AC-3e rated value maximum 	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated	22 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	22 A
— up to 690 V at ambient temperature 60 °C rated value	20 A
 at AC-2 at 400 V rated value 	12 A
• at AC-3	
— at 400 V rated value	12 A
— at 500 V rated value	9.2 A
— at 690 V rated value	6.7 A
● at AC-3e	
— at 400 V rated value	12 A
— at 500 V rated value	9.2 A
— at 690 V rated value	6.7 A
• at AC-4 at 400 V rated value	8.5 A
minimum cross-section in main circuit	
 at maximum AC-1 rated value 	4 mm²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	4.1 A
at 690 V rated value	3.3 A
operational current	0.071
at 1 current path at DC-1	
— at 24 V rated value	20 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
with 2 current paths in series at DC-1	0.071
— at 24 V rated value	20 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.7 A
with 3 current paths in series at DC-1	
— at 24 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	20 A
— at 440 V rated value	1.3 A
— at 600 V rated value	1 A
at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 110 V rated value	0.1 A
• with 2 current paths in series at DC-3 at DC-5	
- at 24 V rated value	20 A
— at 110 V rated value	0.35 A
• with 3 current paths in series at DC-3 at DC-5	
- at 24 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	1.5 A
— at 440 V rated value	0.2 A
— at 600 V rated value	0.2 A 0.2 A
operating power	0.27
at AC-2 at 400 V rated value	5.5 kW
■ at AU-2 at 400 v rateu value	0.0 KV∜

• at AC-3 — at 230 V rated value		
— at 230 V rated value		
	3 kW	
— at 400 V rated value	5.5 kW	
— at 500 V rated value	5.5 kW	
— at 690 V rated value	5.5 kW	
• at AC-3e		
— at 230 V rated value	3 kW	
— at 400 V rated value	5.5 kW	
— at 500 V rated value	5.5 kW	
— at 690 V rated value	5.5 kW	
operating power for approx. 200000 operating cycles at AC-		
4	0.111	
• at 400 V rated value	2 kW	
at 690 V rated value	2.5 kW	
short-time withstand current in cold operating state up to 40 °C		
 limited to 1 s switching at zero current maximum 	200 A; Use minimum cross-section acc. to AC-1 rated value	
 limited to 5 s switching at zero current maximum 	123 A; Use minimum cross-section acc. to AC-1 rated value	
 limited to 10 s switching at zero current maximum 	96 A; Use minimum cross-section acc. to AC-1 rated value	
 limited to 30 s switching at zero current maximum 	74 A; Use minimum cross-section acc. to AC-1 rated value	
Imited to 60 s switching at zero current maximum	61 A; Use minimum cross-section acc. to AC-1 rated value	
no-load switching frequency		
• at DC	1 500 1/h	
operating frequency		
• at AC-2 at AC-3e maximum	750 1/h	
● at AC-4 maximum	250 1/h	
Control circuit/ Control		
type of voltage	DC	
type of voltage of the control supply voltage	DC	
control supply voltage at DC		
rated value	110 V	
operating range factor control supply voltage rated value of magnet coil at DC		
• initial value	0.7	
● full-scale value	1.25	
design of the surge suppressor	suppressor diode	
closing power of magnet coil at DC	13 W	
holding power of magnet coil at DC	4 W	
closing delay		
• at DC	25 130 ms	
opening delay		
• at DC	7 20 ms	
arcing time	10 15 ms	
control version of the switch operating mechanism	E1 - A2	
Auxiliary circuit		
number of NC contacts for auxiliary contacts	1	
operational current at AC-12 maximum	10 A	
operational current at AC-15		
• at 230 V rated value	10 A	
at 230 V rated valueat 400 V rated value	3 A	
 at 230 V rated value at 400 V rated value at 500 V rated value 	3 A 2 A	
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value 	3 A	
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12	3 A 2 A 1 A	
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value 	3 A 2 A 1 A 10 A	
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value 	3 A 2 A 1 A 10 A 6 A	
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value 	3 A 2 A 1 A 10 A 6 A 6 A	
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 110 V rated value 	3 A 2 A 1 A 10 A 6 A 6 A 3 A	
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value at 110 V rated value at 125 V rated value 	3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A	
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value 	3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A	
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value at 110 V rated value at 125 V rated value 	3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A	

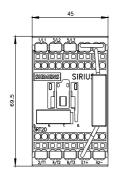
at 24 V rated value	10 A		
• at 48 V rated value	2 A		
 at 60 V rated value 	2 A		
 at 110 V rated value 	1 A		
 at 125 V rated value 	0.9 A		
• at 220 V rated value	0.3 A		
 at 600 V rated value 	0.1 A		
UL/CSA ratings			
full-load current (FLA) for 3-phase AC motor			
• at 480 V rated value	11 A		
• at 600 V rated value	11 A		
yielded mechanical performance [hp]			
for single-phase AC motor			
— at 110/120 V rated value	0.5 hp		
— at 230 V rated value	2 hp		
• for 3-phase AC motor			
— at 200/208 V rated value	3 hp		
— at 220/230 V rated value	3 hp		
— at 460/480 V rated value	7.5 hp		
- at 575/600 V rated value	10 hp		
contact rating of auxiliary contacts according to UL	A600 / Q600		
	A0007 Q000		
Short-circuit protection	No		
product function short circuit protection	No		
design of the fuse link			
for short-circuit protection of the main circuit			
— with type of coordination 1 required	gG: 50A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)		
— with type of assignment 2 required	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)		
 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 V, 1 kA)		
Installation/ mounting/ dimensions			
mounting position	standing, on horizontal mounting surface		
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715		
side-by-side mounting	Yes		
side-by-side mounting height	Yes 70 mm		
height	70 mm		
height width	70 mm 45 mm		
height width depth	70 mm 45 mm		
height width depth required spacing	70 mm 45 mm		
height width depth required spacing • with side-by-side mounting	70 mm 45 mm 121 mm		
height width depth required spacing • with side-by-side mounting — forwards	70 mm 45 mm 121 mm 10 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards	70 mm 45 mm 121 mm 10 mm 10 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — upwards — upwards	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — forwards — upwards — at the side	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 6 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — downwards — upwards — upwards — upwards — at the side — downwards	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 6 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — at the side • for grounded parts — forwards — at the side — forwards — at the side — for live parts — forwards • for live parts — forwards	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm		
height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — at the side • for grounded parts — forwards — at the side — forwards — at the side — downwards • for live parts — forwards — upwards • for live parts — upwards — upwards	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - upwards - at the side - forwards - upwards - at the side - forwards - at the side - downwards • for live parts - forwards - upwards - downwards - forwards - downwards	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm 10 mm		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - upwards - forwards - upwards - forwards - nupwards - ownwards • for live parts - forwards - upwards - downwards • for live parts - downwards - at the side - downwards - upwards - at the side	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - upwards - at the side - downwards - at the side - downwards • for live parts - forwards - upwards - at the side - downwards • for live parts - at the side - downwards - at the side - downwards - at the side - downwards - at the side	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm 10 mm		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side - forwards - at the side - downwards - at the side - downwards • for live parts - forwards - upwards - at the side - downwards • for live parts - at the side - downwards - at the side - downwards - at the side Variation - at the side - operations/ Terminals type of electrical connection	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm 10 mm		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side • for grounded parts - forwards - at the side - downwards • for live parts - forwards - upwards - at the side - downwards • for live parts - at the side - downwards - at the side Connections/Terminals type of electrical connection • for main current circuit	70 mm 45 mm 121 mm 10 mm 10 mm 10 mm 0 mm 10 mm		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - upwards - forwards - upwards - forwards - upwards - for grounded parts - forwards - upwards - forwards - upwards - downwards • for live parts - forwards - upwards - downwards - forwards - upwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit	70 mm 45 mm 121 mm 10 mm 1		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side • for grounded parts - forwards - upwards - at the side - downwards • for live parts - forwards - upwards - downwards • for live parts - downwards - at the side Oconnections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts	70 mm 45 mm 121 mm 10 mm 1		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side • for grounded parts - forwards - upwards - at the side - downwards • for live parts - forwards - upwards - downwards • for live parts - downwards - at the side Other connections/Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil	70 mm 45 mm 121 mm 10 mm 1		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side • for grounded parts - forwards - upwards - at the side - downwards • for live parts - forwards - upwards - downwards • for live parts - forwards - upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections for main contacts	70 mm 45 mm 121 mm 10 mm 1		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side • for grounded parts - forwards - upwards - at the side - downwards • for live parts - forwards - upwards - downwards • for live parts - downwards - at the side Other connections/Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil	70 mm 45 mm 121 mm 10 mm 1		
height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side • for grounded parts - forwards - upwards - at the side - downwards • for live parts - forwards - upwards - downwards • for live parts - forwards - upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections for main contacts	70 mm 45 mm 121 mm 10 mm 20 mm 2		

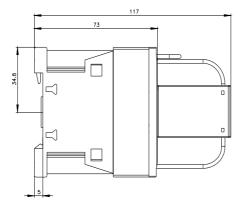
 tinely stranded v 	with core end processing		2x (0.5 2.5 mm²)				
 finely stranded v 	without core end processing	9	2x (0.5 2.5 mm²)				
type of connectable of	conductor cross-sections						
 for auxiliary cont 	tacts						
— solid or stra	anded		2x (0,5 4 mm²)				
— finely stran	ided with core end process	ing	2x (0.5 2.5 mm²)				
— finely stran	ided without core end proce	essing	2x (0.5 2.5 mm²)				
 for AWG cables 	for auxiliary contacts		2x (20 12)				
AWG number as code section	AWG number as coded connectable conductor cross section						
 for main contact 	S		20 12				
 for auxiliary cont 	contacts		20 12				
Safety related data							
product function							
 mirror contact ad 	ccording to IEC 60947-4-1		Yes				
 positively driven 	operation according to IEC	60947-5-1	No				
B10 value with high de	mand rate according to SN	31920	1 000 000				
proportion of danger	ous failures						
 with low demand 	d rate according to SN 319	20	40 %				
 with high deman 	nd rate according to SN 319	920	73 %				
failure rate [FIT] with lo	ow demand rate according t	to SN 31920	100 FIT				
T1 value for proof test 61508	interval or service life acco	rding to IEC	20 a				
protection class IP or	n the front according to I	EC 60529	IP20				
touch protection on t	he front according to IEC	60529	finger-safe, for vertical contac	t from the front			
Communication/ Proto	col						
product function bus	communication		No				
Certificates/ approvals							
Gonoral Draduct Area	vroval						
General Product App	Jiovai						
General Product App							
	Confirmation	<u>ردد</u>		KC	EHC		
EMC		CCC Declaration of	Conformity	KC Test Certificates	EAC		
SEA CEA	<u>Confirmation</u> Functional Safety/Safety of Ma-	Declaration of C	Conformity		ERF Type Test Certific- ates/Test Report		
EMC EXC	Confirmation Functional Safety/Safety of Ma- chinery Type Examination Cer-	CE		Test Certificates			
EMC RCM	Confirmation Functional Safety/Safety of Ma- chinery Type Examination Cer-	CE		Test Certificates			
EMC RCM	Confirmation Functional Safety/Safety of Ma- chinery Type Examination Cer-	CE		Test Certificates			
EMC RCM	Confirmation Functional Safety/Safety of Ma- chinery Type Examination Cer- tificate	EG-Konf.	UK CA	Test Certificates			
EMC EMC Marine / Shipping	Confirmation Functional Safety/Safety of Ma- chinery Type Examination Cer- tificate	EG-Konf.	UK LIN	Test Certificates	ates/Test Report		

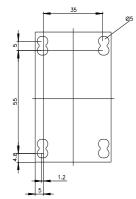
Further information
Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business
Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).
Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875
Information- and Downloadcenter (Catalogs, Brochures,)
https://www.siemens.com/ic10
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2017-2KF42-1LA0
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-2KF42-1LA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2KF42-1LA0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2017-2KF42-1LA0⟨=en
Characteristic: Tripping characteristics, I ² t, Let-through current

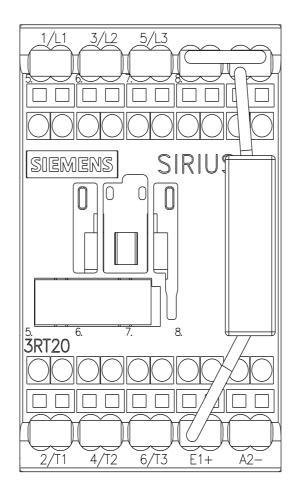
https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2KF42-1LA0/char

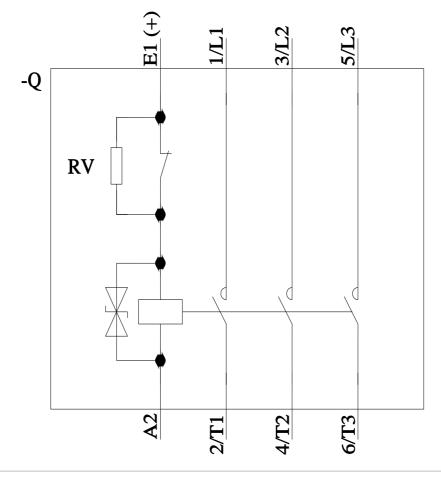
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2017-2KF42-1LA0&objecttype=14&gridview=view1











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