SIEMENS

Data sheet

3RT2017-2FW42



power contactor, AC-3 12 A, 5.5 kW / 400 V 1 NC, 48 V DC, with diode integrated, 3-pole Size S00, Spring-type terminal

and duct have a some	
product brand name	SIRIUS Bauar contector
product designation	Power contactor
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 	1.5 W
 at AC in hot operating state per pole 	0.5 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 safe isolation 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 (switching 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	-25 +60 °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 value 	22 A
• 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-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
 at AC-5a up to 690 V rated value 	19.4 A
• at AC-5b up to 400 V rated value	9.9 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	7.2 A
 up to 400 V for current peak value n=20 rated value 	7.2 A
— up to 500 V for current peak value n=20 rated value	7.2 A
 up to 690 V for current peak value n=20 rated value 	6.7 A
 at AC-6a up to 230 V for current peak value n=30 rated value 	4.8 A
 up to 400 V for current peak value n=30 rated value 	4.8 A
 up to 500 V for current peak value n=30 rated value 	4.8 A
— up to 690 V for current peak value n=30 rated value	4.8 A
minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating	4 mm ²
cycles at AC-4	
• at 400 V rated value	4.1 A
• at 690 V rated value	3.3 A
operational current	
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 	
- at 24 V rated value	20 A
— at 110 V rated value	12 A
	1.6 A
— at 220 V rated value	
— 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 	

	20.4
— 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
operating power	
at AC-2 at 400 V rated value	5.5 kW
• at AC-3	
- 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
	5.5 KW
• at AC-3e	2 144
— 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	
 at 400 V rated value 	2 kW
• at 690 V rated value	2.5 kW
operating apparent power at AC-6a	
 up to 230 V for current peak value n=20 rated value 	2.8 kVA
 up to 400 V for current peak value n=20 rated value 	4.9 kVA
 up to 500 V for current peak value n=20 rated value 	6.2 kVA
 up to 690 V for current peak value n=20 rated value 	8 kVA
operating apparent power at AC-6a	
 up to 230 V for current peak value n=30 rated value 	1.9 kVA
 up to 400 V for current peak value n=30 rated value 	3.3 kVA
• up to 500 V for current peak value n=30 rated value	4.1 kVA
• up to 690 V for current peak value n=30 rated value	5.7 kVA
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
-	123 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum 	
 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	10 000 1/b
• at DC	10 000 1/h
operating frequency	4.000.4/h
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-3e maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC

control supply voltage at DC	
control supply voltage at DC	49.1/
rated value operating range factor control supply voltage rated	48 V
value of magnet coil at DC	
• initial value	0.8
full-scale value	1.1
design of the surge suppressor	diode
closing power of magnet coil at DC	4 W
holding power of magnet coil at DC	4 W
closing delay	
• at DC	30 100 ms
opening delay	
• at DC	38 65 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
instantaneous contact	
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
 at 24 V rated value 	10 A
 at 48 V rated value 	6 A
 at 60 V rated value 	6 A
 at 110 V rated value 	3 A
 at 125 V rated value 	2 A
 at 220 V rated value 	1 A
• at 600 V rated value	0.15 A
operational current at DC-13	
 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
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
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
Short-circuit protection	
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)

mounting position +100° rotation possible on vertical mounting surface: cond housing surface: fastening method fastening method screw and sang-on mounting onto 35 mm standard mounting rail according to DN EN 60715 • side-by-side mounting Yes height 70 mm width 45 mm deptin 73 mm - upwards 10 mm - downwards 10 mm - sold	requirea			
Investige nounting Investige nounting surface scied-by-side mounting accew and sage-on mounting could 35 mm standard mounting rail according to DIN EN 60715 height 70 mm width 45 mm depth 73 mm required spacing 73 mm - upwards 10 mm - upwards 10 mm - upwards 10 mm - downwards 10 mm - d	nstallation/ mounting/ dimensions			
• side-by-side mounting Yes height 70 mm • depth 73 mm required spacing 73 mm • with side-by-side mounting - - forwards 10 mm - upwards 10 mm - downwards 10 mm - solid or stranded 2x (0.54 mm ⁺) <	mounting position			
height 70 mm width 45 mm depth 73 mm required spacing 73 mm • with side-by-side mounting 73 mm - forwards 10 mm - downwards 10 mm - upwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 10 mm - at he side 6 mm Spring-loaded terminals spring-loaded terminals spring-loaded terminals of or actualitary and control cicuit spring-loaded terminals i for and contacts Spring-type terminals of onger coll Spring-type terminals type of connectable conductor cross-sections 2x (0.5 4 mm ²	fastening method			
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• for grounded parts 0 - forwards 10 mm - upwards 0 mm - at the side 6 mm - downwards 10 mm - downwards 10 mm - forwards 10 mm - downwards 6 mm - one main current circuit spring-loaded terminals * for main current circuit spring-loaded terminals * for main current circuit spring-toget terminals * of magnet coil Spring-type terminals * of magnet coil Spring-type terminals * of magnet coil 2x (0.5 4 mm ²) - solid 2x (0.5 25 mm ²) - solid or stranded 0.5 4 mm ² • at AVG cables for main contacts 2x (0.5 4 mm ²) • solid 0.5 4 mm ² • solid 0.5 4 mm ² • solid 0.5 4 mm ² • for availiary contacts 2x (0.5 4 mm ²) • for availiary contacts 2x (0.5 25 mm ²)	•	10 mm		
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• at AWG cables for auxiliary contacts 2x (20 12) AWG number as coded connectable conductor cross section				
AWG number as coded connectable conductor cross section				
	AWG number as coded connectable conductor cross	ZA (ZV 1Z)		
	for main contacts	20 12		

 for auxiliary cor 	ntacts		20 12		
Safety related data					
product function					
 mirror contact a 	 mirror contact according to IEC 60947-4-1 				
B10 value with high demand rate according to SN 31920		1 000 000			
proportion of dangerous failures					
 with low deman 	id rate according to SN	31920	40 %		
-	nd rate according to SN		73 %		
failure rate [FIT] with low demand rate according to SN 31920		100 FIT			
T1 value for proof test interval or service life according to IEC 61508		20 у			
protection class IP c 60529	on the front according	to IEC	IP20		
-	the front according to	DIEC 60529	finger-safe, for vertical co	ntact from the front	
suitability for usesafety-related s	witching OFF		Yes		
ertificates/ approval	-				
General Product Ap					
SP SM	<u>Confirmation</u>			KC	EHC
EMC	Functional Safety/Safety of Machinery	Declaration of	of Conformity	Test Certificates	
	<u>Type Examination</u> <u>Certificate</u>	CE EG-Konf.	UK CA	<u>Type Test Certific-</u> ates/Test Report	<u>Special Test Certific</u> <u>ate</u>
Marine / Shipping					
ABS	BUREAU VERITAS		Hoyd's Register urs	PRS	RINA
Marine / Shipping	other		Dangerous Good		
KMRS	<u>Confirmation</u>	UDE VDE	<u>Transport Informa-</u> tion		
urther information	wnloadcenter (Catalo	as. Brochures	.)		
https://www.siemens.u Industry Mall (Online	<u>com/ic10</u> e ordering system) iemens.com/mall/en/en	-	?mlfb=3RT2017-2FW42		

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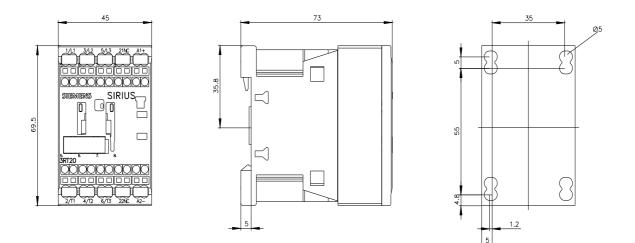
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2FW42

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2017-2FW42&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2FW42/char Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2017-2FW42&objecttype=14&gridview=view1



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