SIEMENS

Data sheet

3RT2017-1UB42-1AA0



power contactor, AC-3e/AC-3, 12 A, 5.5 kW / 400 V, 3-pole, 24 V DC, with integrated varistor, auxiliary contacts: 1 NC, screw terminal, size: S00, upright mounting position

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product brand name SIRIUS product designation Coupling contactor product type designation 3RT2 Cannard technical data S00 product extension No • function module for communication No • auxiliary switch Yes • at AC in hot operating state 1.5 W • at AC in hot operating state per pole 0.5 W • of main circuit with degree of pollution 3 rated value 690 V • of auxiliary circuit with degree of pollution 3 rated value 690 V • of auxiliary circuit rated value 6 KV • of contacts ecording to EEN 60047-1 30 000 000					
product type designation 3RT2 General tachnical data	product brand name	SIRIUS			
General technical data S00 size of contactor S00 product extension No • function module for communication No • auxiliary switch Yes power loss [W] for rated value of the current 1.5 W • 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 4W Insulation voltage 690 V • of main circuit with degree of pollution 3 rated value 690 V • of main circuit with degree of pollution 3 rated value 690 V • of main circuit rated value 6 kV • of auxiliary circuit rated value 6 kV • at DC 7.3g / 5 ms, 4.7g / 10 ms shock resistance with sine pulse 30 000 000 • of contactor typical 30 000 000 reference code according to IEC 81346-2 Q Arbient conditions -25 +60 °C • atlolon altitude at height above sea level maximum 2000 m amblent conditions	product designation	Coupling contactor			
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number of poles for main current circuit 3 number of NO contacts for main contacts 3		95 %			
number of NO contacts for main contacts 3	Main circuit				
	number of poles for main current circuit	3			
operating voltage	number of NO contacts for main contacts	3			
	operating voltage				

	2001/
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	20.4
 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	20 A
value • 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	0.1 A
- 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	4 mm ²
value 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	
• at 1 current path at DC-1	20.4
— at 24 V rated value	20 A
- at 60 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 — at 600 V rated value	0.6 A 0.6 A
with 2 current paths in series at DC-1	0.0 A
-	20.4
— at 24 V rated value — at 60 V rated value	20 A 20 A
— at 60 V rated value — at 110 V rated value	20 A 12 A
	12 A 1.6 A
— at 220 V rated value — at 440 V rated value	1.6 A 0.8 A
— at 440 v rated value — at 600 V rated value	0.8 A 0.7 A
	0.1 A
with 3 current paths in series at DC-1 — at 24 V rated value	20 A
— at 60 V rated value	20 A 20 A
— at 100 V rated value	20 A 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 \/ rated value	20.4
- at 24 V rated value	20 A
— at 60 V rated value	0.5 A

— at 110 V rated value	0.15 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	20 A
— at 60 V rated value	5 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 60 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
• 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	
• 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
 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
 limited 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	10 000 1/h
operating frequency	
• 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	
rated value	24 V
operating range factor control supply voltage rated value of magnet coil at DC	
initial value	0.8
• full-scale value	1.1
design of the surge suppressor	with varistor
acordi ol me ange adphicaaoi	

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	7 13 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 instantaneous contact	1			
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	1A			
operational current at DC-12				
• at 24 V rated value	10 A			
at 24 V rated value at 48 V rated value	6 A			
at 48 V fated value at 60 V rated value	6 A			
at 110 V rated value	3 A 2 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)			
Installation/ mounting/ dimensions				
	standing, on horizontal mounting surface			
	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715			
-	Yes			
side-by-side mounting	58 mm			
height				
width	45 mm			
depth	73 mm			

required spacing	
 with side-by-side mounting 	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
 for grounded parts 	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
for auxiliary and control circuit	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
of magnet coil	
type of connectable conductor cross-sections for main contacts	Screw-type terminals
solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
solid solid or stranded	
	2x (0,5 1,5 mm ²), 2x (0,75 2,5 mm ²), 2x 4 mm ²
finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
connectable conductor cross-section for main contacts	0.5 4 mm²
• solid	0.5 4 mm ²
stranded	0.5 4 mm ²
finely stranded with core end processing	0.5 2.5 mm²
connectable conductor cross-section for auxiliary contacts	
solid or stranded	0.5 4 mm ²
finely stranded with core end processing	0.5 2.5 mm²
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid or stranded	2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²), 2x 4 mm ²
— finely stranded with core end processing	2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²)
for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 2x 12
AWG number as coded connectable conductor cross section	
for main contacts	20 12
for auxiliary contacts	20 12
Safety related data	
product function	
mirror contact according to IEC 60947-4-1	Yes
suitability for use safety-related switching OFF	Yes
B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures	
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920	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 a
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Certificates/ approvals	
General Product Approval	

SP.		<u>Confirmation</u>		<u>KC</u>	EHC
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Confor	mity	Test Certificates	
RCM	<u>Type Examination Cer-</u> <u>tificate</u>	CE EG-Konf.	UK CA	<u>Special Test Certific-</u> <u>ate</u>	<u>Type Test Certific-</u> ates/Test Report
Marine / Shipping					
ABS	B U R E A U VER ITAS		Lloyds Register urs	PRS	RINA
Marine / Shipping	other		Railway	Dangerous Good	Environment
RMRS	Confirmation		Vibration and Shock	Transport Information	Environmental Con- firmations
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/c10 Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2017-1UB42-1AA0 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-1UB42-1AA0					

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-1UB42-1AA0

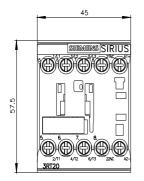
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2017-1UB42-1AA0&lang=en

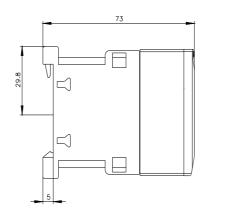
Characteristic: Tripping characteristics, I2t, Let-through current

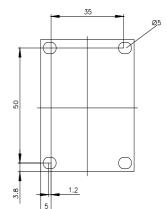
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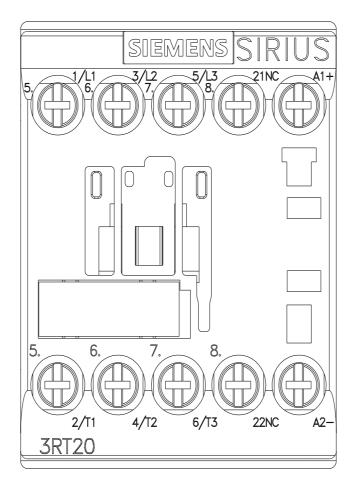
Further characteristics (e.g. electrical endurance, switching frequency)

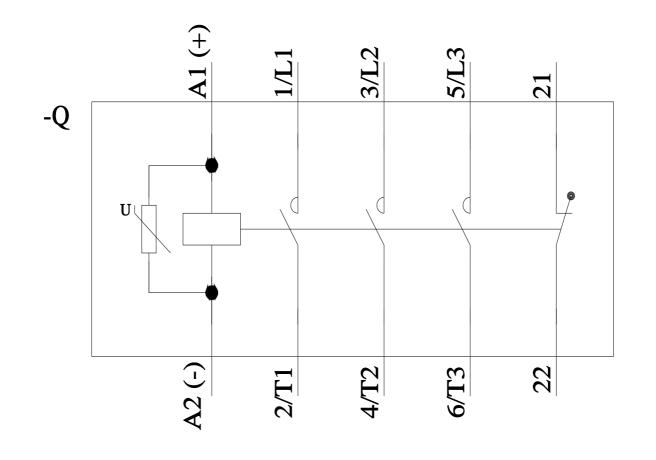
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