SIEMENS

Data sheet

3RT2017-1WB42



power contactor, AC-3e/AC-3, 12 A, 5.5 kW / 400 V, 3-pole, 24 V DC, 0.85-1.85* Us, with varistor plugged on, auxiliary contacts: 1 NC, screw terminal, size: S00, not expandable with auxiliary switch

meduat brand name	
product brand name	SIRIUS
product designation	Coupling contactor
product type designation	3RT2
General technical data	
size of contactor	S00
product extension	
 function module for communication 	No
auxiliary switch	No
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 	1.6 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
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

a at AC 2a rated value maximum	690 V		
at AC-3e rated value maximum	090 V		
• at AC-1 at 400 V at ambient temperature 40 °C rated	22 A		
value			
• at AC-1	22 A		
— up to 690 V at ambient temperature 40 °C rated value			
— 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	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			
— 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	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 60 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 24 v rated value — at 60 V rated value	20 A 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 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-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				
Imited 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	10 000 1/h				
operating frequency	4 000 4/1-				
• 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	24 V				
operating range factor control supply voltage rated value of	24 V				
magnet coil at DC	0.95				
initial value	0.85				
• full-scale value	1.85				
design of the surge suppressor	with varistor				
closing power of magnet coil at DC	1.6 W				
holding power of magnet coil at DC	1.6 W				

closing delay	05 400 mm			
• at DC	25 120 ms			
opening delay				
• at DC	5 20 ms			
arcing time	10 15 ms			
control version of the switch operating mechanism	Standard A1 - A2			
Auxiliary circuit	1			
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	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				
at 600 V rated value	0.15 A			
operational current at DC-13	40.4			
at 24 V rated value	10 A			
at 48 V rated value	2 A			
at 60 V rated value at 110 V rated value	2 A 1 A			
at 110 V rated value				
at 125 V rated value at 220 V rated value	0.9 A			
at 220 V rated value	0.3 A 0.1 A			
at 600 V rated value contact reliability of auxiliary contacts	0.1 A 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				
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface			
fastening method				
	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715			
side-by-side mounting	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes			
-				
side-by-side mounting	Yes			
side-by-side mounting height	Yes 58 mm			

 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	Screw-type terminals			
type of connectable conductor cross-sections for main contacts				
• solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²			
solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²			
 finely stranded with core end processing 	2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²)			
connectable conductor cross-section for main contacts				
• solid	0.5 4 mm²			
stranded	0.5 4 mm²			
 finely stranded with core end processing 	0.5 2.5 mm²			
connectable conductor cross-section for auxiliary contacts				
 solid or stranded 	0.5 4 mm²			
 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 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²			
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)			
 for AWG cables for auxiliary contacts 	2x (2016), 2x (1814), 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			
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			
suitability for use				
safety-related switching OFF	Yes			
Certificates/ approvals				
General Product Approval				

(SP) Car	<u>Confirmation</u>			KC	EHC
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Confo	rmity	Test Certificates	
RCM	Type Examination Cer- tificate	UK CA	C C EG-Konf.	Type Test Certific- ates/Test Report	Special Test Certific- ate
Marine / Shipping					
ABS	BUREAU VERITAS		Lloyds Register uis	PRS	RINA
Marine / Shipping	other		Railway	Dangerous Good	Environment
RARS R	<u>Confirmation</u>		Vibration and Shock	Transport Information	Environmental Con- firmations
https://press.siemens. Siemens is working of Please contact your lo EAC relevant market (Information on the p	d to exit the Russian mark com/global/en/pressrelease on the renewal of the curr cal Siemens office on the s other than the sanctioned E ackaging y siemens.com/cs/ww/en/vi	/siemens-wind-down-rus ent EAC certificates. tatus of validity of the EA AEU member states Rus	C certification if you inten	d to import or offer to supp	ly these products to an

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=3RT2017-1WB42

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-1WB42

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-1WB4

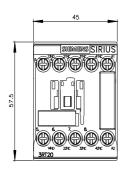
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2017-1WB42&lang=en

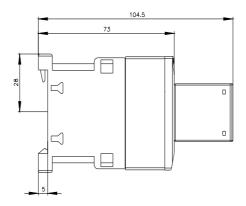
Characteristic: Tripping characteristics, I2t, Let-through current

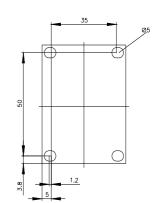
https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-1WB42/char

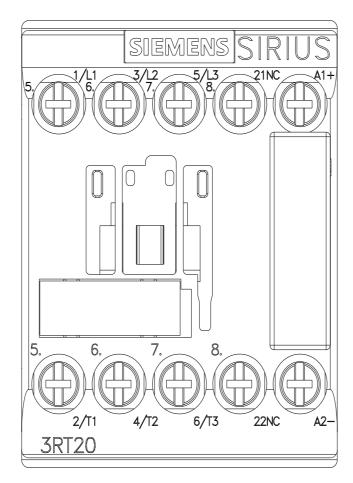
Further characteristics (e.g. electrical endurance, switching frequency)

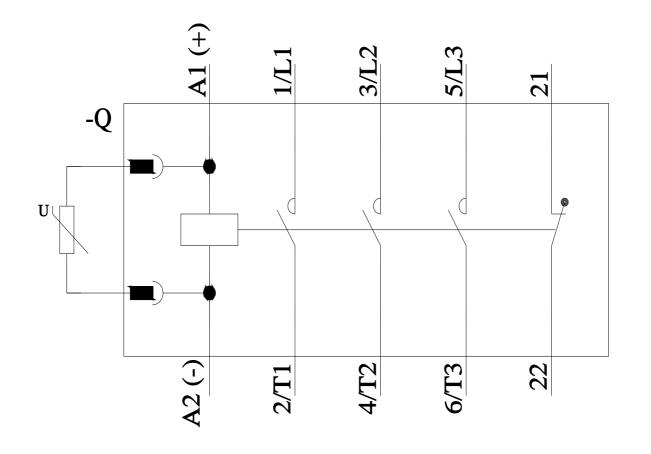
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