SIEMENS

Data sheet

3RT2047-1AP00



power contactor, AC-3e/AC-3, 110 A, 55 kW / 400 V, 3-pole, 230 V AC, 50 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal

size of contactor \$3 product extension No • function module for communication No • auxiliary switch Yes power loss [W] for rated value of the current • at AC in hot operating state per pole 7.9 W • at AC in hot operating state per pole 7.9 W • of auxiliary circuit with degree of pollution 3 rated value 1000 V • of auxiliary circuit with degree of pollution 3 rated value 1000 V • of auxiliary circuit with degree of pollution 3 rated value 690 V surge voltage resistance 6 kV • of auxiliary circuit rated value 8 kV • of auxiliary surge voltage for safe isolation between coil and main contacts according to EN 60947-1 690 V shock resistance with sine pulse 16.3g / 5 ms, 6g / 10 ms • at AC 10.3g / 5 ms, 10.g / 10 ms • of the contactor with added electronically optimized auxiliary switch block typical 10 000 000 • of the contactor with added auxiliary switch block typical 10 000 000 • of the contactor with added auxiliary switch block typical <th>201 411 411</th> <th></th>	201 411 411	
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product type designation 3RT2 General technical data	•	
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• during storage -55 +80 °C relative humidity minimum 10 %	ambient temperature	
relative humidity minimum 10 %	during operation	-25 +60 °C
	 during storage 	-55 +80 °C
relative humidity at 55 °C according to IEC 60068-2-30 95 %	relative humidity minimum	10 %
maximum	relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Main circuit	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 	1 000 V
at AC-3 rated value maximum at AC-3e rated value maximum	1 000 V
operational current	1000 V
at AC-1 at 400 V at ambient temperature 40 °C rated value	130 A
● at AC-1	
— up to 690 V at ambient temperature 40 °C	130 A
rated value	
— up to 690 V at ambient temperature 60 °C rated value	110 A
• at AC-3	140.4
— at 400 V rated value	110 A 110 A
— at 500 V rated value — at 690 V rated value	98 A
— at 1000 V rated value	90 A 30 A
• at AC-3e	50 A
— at 400 V rated value	110 A
— at 500 V rated value	110 A
— at 690 V rated value	98 A
— at 1000 V rated value	30 A
 at AC-4 at 400 V rated value 	97 A
 at AC-5a up to 690 V rated value 	120 A
• at AC-5b up to 400 V rated value	110 A
• at AC-6a	
 — up to 230 V for current peak value n=20 rated value 	98 A
 — up to 400 V for current peak value n=20 rated value 	98 A
 — up to 500 V for current peak value n=20 rated value 	98 A
— up to 690 V for current peak value n=20 rated value	98 A
• at AC-6a	65 0 A
 up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated 	65.3 A 65.3 A
value — up to 500 V for current peak value n=30 rated	65.3 A
value — up to 690 V for current peak value n=30 rated	65.3 A
value minimum cross-section in main circuit at maximum AC-1	50 mm ²
rated value operational current for approx. 200000 operating	
cycles at AC-4	
 at 400 V rated value 	46 A
• at 690 V rated value	36 A
operational current	
• at 1 current path at DC-1	100.4
— at 24 V rated value — at 60 V rated value	100 A 60 A
— at 10 V rated value	60 A 9 A
— at 220 V rated value	9 A 2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.0 A 0.4 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	10 A
— at 440 V rated value	1.8 A
— at 600 V rated value	1 A
 with 3 current paths in series at DC-1 	

— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	80 A
— at 440 V rated value	4.5 A
— at 600 V rated value	2.6 A
	2.0 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	40 A
— at 60 V rated value	6 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.15 A
— at 600 V rated value	0.06 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	7 A
— at 440 V rated value	
	0.42 A
— at 600 V rated value	0.16 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	35 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.35 A
operating power	
 at AC-2 at 400 V rated value 	55 kW
• at AC-3	
— at 230 V rated value	30 kW
— at 400 V rated value	55 kW
— at 500 V rated value	75 kW
— at 690 V rated value	90 kW
— at 1000 V rated value	37 kW
• at AC-3e	
- at 230 V rated value	30 kW
— at 400 V rated value	55 kW
— at 500 V rated value	75 kW
— at 690 V rated value	90 kW
— at 1000 V rated value	37 kW
operating power for approx. 200000 operating cycles at AC-4	
 at 400 V rated value 	24.3 kW
 at 690 V rated value 	32.9 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	39 kVA
• up to 400 V for current peak value n=20 rated value	67 kVA
• up to 500 V for current peak value n=20 rated value	84 kVA
• up to 690 V for current peak value n=20 rated value	117 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	26 kVA
	45.2 kVA
• up to 400 V for current peak value n=30 rated value	
• up to 500 V for current peak value n=30 rated value	56.5 kVA
• up to 690 V for current peak value n=30 rated value	78 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	1 960 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	1 502 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	1 095 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	707 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	562 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h

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operating frequency	
at AC-1 maximum	900 1/h
• at AC-2 maximum	350 1/h
• at AC-3 maximum	850 1/h
• at AC-3e maximum	850 1/h
• at AC-4 maximum	200 1/h
Control circuit/ Control	200 1/11
type of voltage of the control supply voltage	AC
control supply voltage at AC	AC
• at 50 Hz rated value	230 V
operating range factor control supply voltage rated	200 V
value of magnet coil at AC	
• at 50 Hz	0.8 1.1
apparent pick-up power of magnet coil at AC	
• at 50 Hz	296 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.61
apparent holding power of magnet coil at AC	
• at 50 Hz	19 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.38
• at 50 Hz closing delay	0.00
• at AC	13 50 ms
opening delay	
• at AC	10 21 ms
arcing time	10 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
instantaneous contact	
number of NO 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 at 400 V rated value 	6 A 3 A
 at 400 V rated value at 500 V rated value 	2 A
at 500 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 	2 A 1 A
 at 220 V rated value at 600 V rated value	
	1 A
at 600 V rated value	1 A
at 600 V rated value operational current at DC-13	1 A 0.15 A
 at 600 V rated value operational current at DC-13 at 24 V rated value 	1 A 0.15 A 10 A
 at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value 	1 A 0.15 A 10 A 2 A 2 A 1 A
 at 600 V rated value operational current at DC-13 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 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A
 at 600 V rated value operational current at DC-13 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 at 220 V rated value 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A
 at 600 V rated value operational current at DC-13 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 at 220 V rated value at 600 V rated value 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
 at 600 V rated value operational current at DC-13 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 at 600 V rated value 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A
 at 600 V rated value operational current at DC-13 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 at 600 V rated value 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
 at 600 V rated value operational current at DC-13 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 at 220 V rated value at 600 V rated value<td>1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)</td>	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
 at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value at 125 V rated value at 220 V rated value at 600 V rated value 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 96 A
 at 600 V rated value operational current at DC-13 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 at 125 V rated value at 220 V rated value at 600 V rated value at 480 V rated value at 600 V rated value at 480 V rated value at 600 V rated value 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
 at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value total current value total current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 600 V rated value 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 96 A
 at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 600 V rated value b for single-phase AC motor 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 96 A 99 A
 at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value total current value total current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 600 V rated value 	1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 96 A

for 2 phone AC				
 for 3-phase AC motor at 200/208 V retail value 	20 hz			
- at 200/208 V rated value	30 hp			
- at 220/230 V rated value	40 hp			
- at 460/480 V rated value	75 hp			
— at 575/600 V rated value contact rating of auxiliary contacts according to UL	100 hp A600 / P600			
	A0007 F 000			
Short-circuit protection				
design of the fuse link				
 for short-circuit protection of the main circuit 				
 — with type of coordination 1 required 	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)			
— with type of assignment 2 required	gG: 200A (690V,100kA), aM: 100A (690V,100kA), BS88: 160A (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			
fastening method	forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715			
 side-by-side mounting 	Yes			
height	140 mm			
width	70 mm			
depth	152 mm			
required spacing				
 with side-by-side mounting 				
— forwards	20 mm			
— upwards	10 mm			
— downwards	10 mm			
— at the side	0 mm			
 for grounded parts 				
— forwards	20 mm			
— upwards	10 mm			
— at the side	10 mm			
— downwards	10 mm			
 for live parts 				
— forwards	20 mm			
— upwards	10 mm			
— downwards	10 mm			
— at the side	10 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				
 finely stranded with core end processing connectable conductor cross-section for main contacts 	2x (2.5 35 mm²), 1x (2.5 50 mm²)			
• solid	2.5 16 mm²			
stranded	6 70 mm ²			
 finely stranded with core end processing 	2.5 50 mm ²			
connectable conductor cross-section for auxiliary contacts				
 solid or stranded 	0.5 2.5 mm ²			
 finely stranded with core end processing 	0.5 2.5 mm ²			
type of connectable conductor cross-sections				
 for auxiliary contacts 				
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)			
 — finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)			
 at AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14)			
AWG number as coded connectable conductor cross section				

 for main contact 	cts		10 2				
	for auxiliary contacts			20 14			
Safety related data							
product function mirror contact:	according to IEC 60947-	4_1	Yes				
	n operation according to		No				
-	demand rate according to	o SN 31920	1 000 000				
proportion of dange			40.04				
	nd rate according to SN and rate according to SN		40 % 73 %				
	low demand rate accord		100 FIT				
T1 value for proof tes IEC 61508	st interval or service life a	according to	20 a				
60529	on the front according		IP20				
suitability for use	the front according to	IEC 60529	-	ertical conta	act from the front		
 safety-related 	-		Yes				
safety-related s Certificates/ approva	-		Yes				
General Product A							
6	(m)	Confirmatio	<u> </u>	5	<u>KC</u>	гпг	
<u></u>	(m)		<u> </u>	עי		EHL	
CSA	ccc		ı	JL			
EMC	Functional Safety/Safety of Machinery	Declaration o	f Conformity		Test Certificates		
RCM	<u>Type Examination</u> <u>Certificate</u>	UK CA		E Konf.	Special Test Certific- ate	<u>Type Test Certific-</u> ates/Test Report	
Marine / Shipping							
-					~	-	
Sal and	ĴÅ	Lloyds	C	66			
a start	DNV	Register	0				
ABS	DNV	LRS	P	RS	RINA	RMRS	
other	Railway	Dangerous G	ood				
		24119010400					
Confirmation	Vibration and Shock	Transport Info	<u>rma-</u>				
		tion					
Further information							
Information on the							

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=3RT2047-1AP00 Cax online generator

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http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2047-1AP00

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2047-1AP00

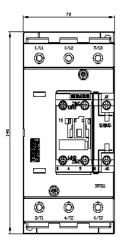
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2047-1AP00&lang=en

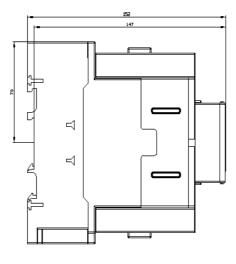
Characteristic: Tripping characteristics, I²t, Let-through current

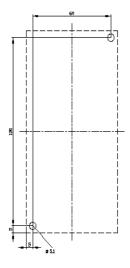
https://support.industry.siemens.com/cs/ww/en/ps/3RT2047-1AP00/char

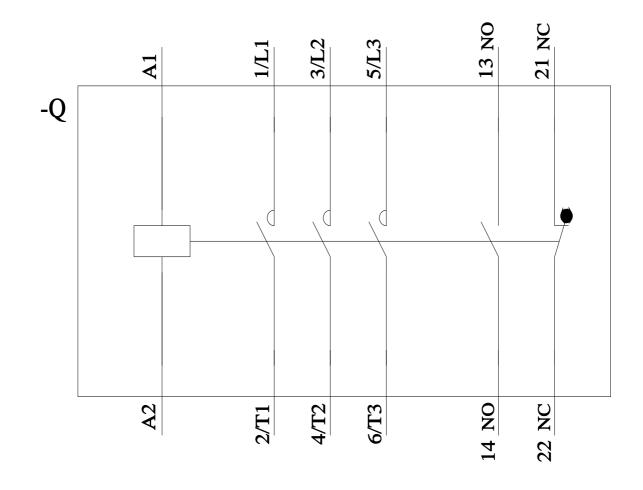
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2047-1AP00&objecttype=14&gridview=view1









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