SIEMENS

Data sheet

3RT2038-1CL24-3MA0



power contactor, AC-3e/AC-3, 80 A, 37 kW / 400 V, 3-pole, 230 V AC, 50/60 Hz, with plugged-in varistor, auxiliary contacts: 2 NO + 2 NC, screw terminal, size: S2, captive auxiliary switch

product brand name SiRUS product type designation 9wer contactor product type designation 3R12 Contract of \$2 size of contactor \$2 ifunction module for communication No - durating switch No power loss [W] for rated value of the current * - et AC in hot operating state per pole 5.7 W - et AC in hot operating state per pole 5.7 W - 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 auxiliary circuit rated value 690 V - of auxiliary circuit rated value 64 KV - of auxiliary circuit rated value 64 V - of auxiliary circuit rated value 10.00 V		
product type designation 3RT2 General technical data	product brand name	SIRIUS
Concrait technical data S2 size of contactor S2 product extension No • function module for communication No • auxiliary switch No ower loss [W] for rated value of the current - • at AC in hot operating state 17.1 W • at AC in hot operating state projole 5.7 W • without load current share typical 7.2 W insulation voltage 690 V • 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 64 V • of main circuit rated value 64 V • of main circuit rated value 64 V • of auxiliary circuit rated value 100 V • at AC 9.8g / 5 ms, 6.5g / 10 ms • at AC 15.3g / 5 ms, 10.1g / 10 ms mechanical service life (operating cycles) 10 000 000 • of the contactor with added 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	product designation	Power contactor
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• at AC in hot operating state per pole 5.7 W • without load current share typical 17.2 W insulation voltage 690 V • of main circuit with degree of pollution 3 rated value 690 V • surge voltage resistance 690 V • of main circuit with degree of pollution 3 rated value 690 V • of main circuit with degree of pollution 3 rated value 68 V • of main circuit with degree of pollution separation between coll and main contacts according to EN 60947-1 400 V * at AC 9.8g / 5 ms, 6.5g / 10 ms • at AC 9.8g / 5 ms, 6.5g / 10 ms • at AC 9.8g / 5 ms, 10.1g / 10 ms mechanical service life (operating cycles) 10 000 000 • of contactor typical 10 000 000 • 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 10 000 000 • of the contactor with added 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 10 000 000	power loss [W] for rated value of the current	
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• of main circuit rated value 6 kV • of auxiliary circuit rated value 6 kV maximum permissible voltage for protective separation between coll and main contacts according to EN 60947-1 400 V shock resistance at rectangular impulse 9.8g / 5 ms, 6.5g / 10 ms • at AC 9.8g / 5 ms, 6.5g / 10 ms shock resistance with sine pulse - • at AC 15.3g / 5 ms, 10.1g / 10 ms mechanical service life (operating cycles) - • of ontactor typical 10 000 000 • 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 10 000 000 reference code according to IEC 81346-2 Q Ambient conditions 2 000 m ambient temperature - • during operation -25 +60 °C • during storage -55 +80 °C relative humidity at 55 °C according to IEC 60068-2-30 maximum 95 %	 of auxiliary circuit with degree of pollution 3 rated value 	690 V
• 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 9.8g / 5 ms, 6.5g / 10 ms • at AC 9.8g / 5 ms, 6.5g / 10 ms shock resistance with sine pulse 9.8g / 5 ms, 10.1g / 10 ms • at AC 15.3g / 5 ms, 10.1g / 10 ms mechanical service life (operating cycles) 10 000 000 • of contactor typical 10 000 000 • 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 10 000 000 • of the contactor with added auxiliary switch block typical 10 000 000 • of the contactor with added auxiliary switch block typical 10 000 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 2000 m ambient temperature -25 +60 °C • during storage -25 +60 °C • during storage -55 +80 °C relative humidity at 55 °C according to IEC 60068-2-30 35 % maximum <td< td=""><td>surge voltage resistance</td><td></td></td<>	surge voltage resistance	
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 400 V shock resistance at rectangular impulse at AC 9.8g / 5 ms, 6.5g / 10 ms shock resistance with sine pulse at AC 15.3g / 5 ms, 10.1g / 10 ms mechanical service life (operating cycles) of contactor typical 10 000 000 of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical 10 000 000 10 000 000 feference code according to IEC 81346-2 Q Substance Prohibitance (Date) 10/01/2014 Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature during operation -25 +60 °C ext +60 °C stallation altitude at 55 °C according to IEC 60068-2-30 maximum 	 of main circuit rated value 	6 kV
coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse • at AC 9.8g / 5 ms, 6.5g / 10 ms shock resistance with sine pulse • at AC 15.3g / 5 ms, 10.1g / 10 ms mechanical service life (operating cycles) 10 000 000 • of contactor typical 10 000 000 • 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 10 000 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 10/01/2014 Ambient conditions 2000 m ambient temperature -25 +60 °C • 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 95 %	 of auxiliary circuit rated value 	6 kV
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Substance Prohibitance (Date) 10/01/2014 Ambient conditions 2 000 m installation altitude at height above sea level maximum 2 000 m ambient temperature -25 +60 °C • 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 %	 of the contactor with added auxiliary switch block typical 	10 000 000
Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature -25 +60 °C • 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	reference code according to IEC 81346-2	Q
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relative humidity at 55 °C according to IEC 60068-2-30 95 % maximum 95 % Main circuit 95 %	during storage	-55 +80 °C
maximum	relative humidity minimum	10 %
		95 %
number of poles for main current circuit 3	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	90 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	90 A
— up to 690 V at ambient temperature 60 $^\circ C$ rated value	80 A
• at AC-3	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
• at AC-3e	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
at AC-4 at 400 V rated value	55 A
at AC-5a up to 690 V rated value	79.2 A
at AC-5b up to 400 V rated value	66.4 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	70 A
— up to 400 V for current peak value n=20 rated value	70 A
— up to 500 V for current peak value n=20 rated value	70 A
— up to 690 V for current peak value n=20 rated value	58 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	46.7 A
— up to 400 V for current peak value n=30 rated value	46.7 A
— up to 500 V for current peak value n=30 rated value	46.7 A
— up to 690 V for current peak value n=30 rated value	46.7 A
minimum cross-section in main circuit at maximum AC-1 rated value	35 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	30 A
at 690 V rated value	24 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	55 A
— at 60 V rated value	23 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
 with 2 current paths in series at DC-1 	
— at 24 V rated value	55 A
— at 60 V rated value	45 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1A
— at 600 V rated value	0.8 A
 with 3 current paths in series at DC-1 	
— at 24 V rated value	55 A
— at 60 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	45 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
• at 1 current path at DC-3 at DC-5	

— at 24 V rated value	35 A
— at 60 V rated value	6 A
— at 220 V rated value	1 A
— at 440 V rated value	0.1 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	55 A
— at 60 V rated value	45 A
— at 110 V rated value	25 A
— at 220 V rated value	5 A
— at 440 V rated value	0.27 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	55 A
— at 60 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	25 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.35 A
operating power	
at AC-2 at 400 V rated value	37 kW
• at AC-3	
- at 230 V rated value	22 kW
— at 200 V rated value	37 kW
	37 KW
- at 500 V rated value	
— at 690 V rated value	45 kW
• at AC-3e	
- at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	37 kW
— at 690 V rated value	45 kW
operating power for approx. 200000 operating cycles at AC- 4	
 at 400 V rated value 	15.8 kW
at 690 V rated value	21.8 kW
operating apparent power at AC-6a	
up to 230 V for current peak value n=20 rated value	27.8 kVA
• up to 400 V for current peak value n=20 rated value	48.4 kVA
• up to 500 V for current peak value n=20 rated value	60.6 kVA
	69.3 kVA
up to 690 V for current peak value n=20 rated value	00.0 KVA
operating apparent power at AC-6a	18.6 kV/A
up to 230 V for current peak value n=30 rated value	18.6 kVA
• up to 400 V for current peak value n=30 rated value	32.3 kVA
up to 500 V for current peak value n=30 rated value	40.4 kVA
up to 690 V for current peak value n=30 rated value	55.8 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	1 298 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	898 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	640 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	414 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	333 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
at AC-1 maximum	700 1/h
	350 1/h
• at AC-2 maximum	
• at AC-3 maximum	500 1/h
at AC-3e maximum	500 1/h
at AC-4 maximum	150 1/h
Control circuit/ Control	

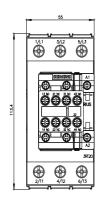
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• at 50 Hz rated value	230 V
• at 60 Hz rated value	230 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.85 1.1
design of the surge suppressor	with varistor
apparent pick-up power of magnet coil at AC	
• at 50 Hz	210 VA
• at 60 Hz	188 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.69
• at 60 Hz	0.65
apparent holding power of magnet coil at AC	
• at 50 Hz	17.2 VA
• at 60 Hz	16.5 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.36
• at 60 Hz	0.39
closing delay	
• at AC	10 80 ms
opening delay	
• at AC	10 18 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 instantaneous	2
contact	
number of NO contacts for auxiliary contacts instantaneous contact	2
operational current at AC-12 maximum	10 A
operational current at AC-15	
 at 230 V rated value 	6 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	6 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
at 110 V rated value	1A
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)
JL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	65 A
	62 A
at 600 V rated value	02 A
yielded mechanical performance [hp] • for single-phase AC motor	

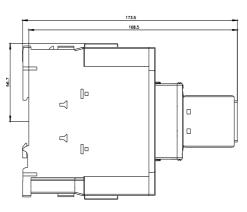
— at 110/120 V rated value	5 hp		
— at 230 V rated value	15 hp		
 for 3-phase AC motor 			
— at 200/208 V rated value	20 hp		
— at 220/230 V rated value	25 hp		
— at 460/480 V rated value	50 hp		
— at 575/600 V rated value	60 hp		
contact rating of auxiliary contacts according to UL	A600 / Q600		
Short-circuit protection			
design of the fuse link			
 for short-circuit protection of the main circuit 			
— with type of coordination 1 required	gG: 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: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (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	Yes		
height	114 mm		
width	55 mm		
depth	174 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	Screw-type terminals		
type of connectable conductor cross-sections for main contacts			
solid or stranded	2x (1 35 mm²), 1x (1 50 mm²)		
 finely stranded with core end processing 	2x (1 25 mm²), 1x (1 35 mm²)		
connectable conductor cross-section for main contacts			
 finely stranded with core end processing 	1 35 mm²		
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)		
 for AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14)		
AWG number as coded connectable conductor cross section			
• for main contacts	18 1		

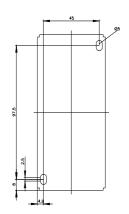
 for auxiliary con 	itacts		20 14			
afety related data						
product function						
	ccording to IEC 60947-4-1		Yes			
	operation according to IEC	60947-5-1	No			
			1 000 000			
B10 value with high demand rate according to SN 31920 proportion of dangerous failures						
	d rate according to SN 319	20	40 %			
	nd rate according to SN 319		73 %			
	ow demand rate according		100 FIT			
	interval or service life acco		20 a			
61508			200			
protection class IP of	n the front according to II	EC 60529	IP20			
touch protection on t	the front according to IEC	60529	finger-safe, for vertical conta	ct from the front		
suitability for use						
 safety-related system 	witching OFF		Yes			
ertificates/ approvals	;					
General Product App	proval					
() E		<u>Confirmatio</u>		<u>KC</u>	EHC	
EMC	Functional Safety/Safety of Ma- chinery	Declaration of	Conformity	Test Certificates		
RCM	Type Examination Cer- tificate	CE EG-Konf.	UK CA	<u>Type Test Certific-</u> ates/Test Report	Special Test Certific- ate	
Marine / Shipping						
ABS	BUREAU VERITAS		Lloyd's Register uis	PRS	RINA	
Marine / Shipping	other		Railway	Dangerous Good	Environment	
RMRS RMRS	<u>Confirmation</u>	<u>Confirmatio</u>	n <u>Vibration and Shock</u>	Transport Information	Environmental Con- firmations	
https://press.siemens.r Siemens is working of Please contact your lo EAC relevant market (Information on the pa https://support.industry Information- and Dow https://www.siemens.c Industry Mall (Online https://mall.industry.sie Cax online generator http://support.automati Service&Support (Ma	other than the sanctioned E ackaging y.siemens.com/cs/ww/en/vii wnloadcenter (Catalogs, E com/ic10 e ordering system) emens.com/mall/en/en/Cata r ion.siemens.com/WW/CAX anuals, Certificates, Chara	existemens-wind-do ent EAC certifica tatus of validity of AEU member sta ew/109813875 Brochures,) alog/product?mlfbe order/default.aspx acteristics, FAQs	tes. the EAC certification if you inte tes Russia or Belarus). =3RT2038-1CL24-3MA0 ?lang=en&mlfb=3RT2038-1CL ,)		ly these products to an	
Image database (pro		on drawings, 3D ı	- <u>-3MAU</u> nodels, device circuit diagra 2038-1CL24-3MA0⟨=en	ms, EPLAN macros,)		
					hongo without potic	

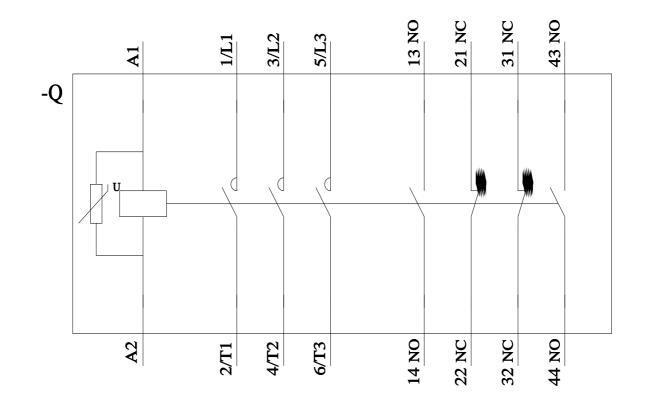
6/30/2023

Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1CL24-3MA0/char Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2038-1CL24-3MA0&objecttype=14&gridview=view1









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2/10/2023 🖸