SIEMENS

Data sheet

3RT2027-1AL24-3MA0



Power contactor, AC-3 32 A, 15 kW / 400 V 2 NO + 2 NC, 230 V AC 50/60 Hz, 3-pole Size S0, Screw terminal Captive auxiliary switch

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S0
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 	6.3 W
 at AC in hot operating state per pole 	2.3 W
 without load current share typical 	10.5 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 AC	8,3g / 5 ms, 5,3g / 10 ms
shock resistance with sine pulse	
• at AC	13,5g / 5 ms, 8,3g / 10 ms
mechanical service life (switching cycles)	
 of contactor typical 	10 000 000
 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 	50 A
● at AC-1	
 — up to 690 V at ambient temperature 40 °C rated value 	50 A
— up to 690 V at ambient temperature 60 °C rated value	42 A
• at AC-3	
— at 400 V rated value	32 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	32 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
 at AC-4 at 400 V rated value 	22 A
 at AC-5a up to 690 V rated value 	44 A
 at AC-5b up to 400 V rated value 	26.5 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	30.8 A
 — up to 400 V for current peak value n=20 rated value 	30.8 A
— up to 500 V for current peak value n=20 rated value	27 A
 up to 690 V for current peak value n=20 rated value at AC-6a 	21 A
 at AC-ba up to 230 V for current peak value n=30 rated value 	20.5 A
 — up to 400 V for current peak value n=30 rated value 	20.5 A
 — up to 500 V for current peak value n=30 rated value 	18 A
— up to 690 V for current peak value n=30 rated value	18 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	12 A
• at 690 V rated value	12 A
operational current	
 at 1 current path at DC-1 	
— at 24 V rated value	35 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— 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	35 A
— at 110 V rated value	35 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	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 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	20 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.09 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	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 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	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
• at AC-3	7.5114
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	15 kW
— at 690 V rated value	18.5 kW
• at AC-3e	7.5114
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	15 kW
— at 690 V rated value	18.5 kW
operating power for approx. 200000 operating cycles at AC-4	
at 400 V rated value	6 kW
 at 690 V rated value 	10.3 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	12.2 kVA
 up to 400 V for current peak value n=20 rated value 	21.3 kVA
• up to 500 V for current peak value n=20 rated value	23.3 kVA
• up to 690 V for current peak value n=20 rated value	25 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	8.1 kVA
• up to 400 V for current peak value n=30 rated value	14.2 kVA
• up to 500 V for current peak value n=30 rated value	15.5 kVA
• up to 690 V for current peak value n=30 rated value	21.5 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	499 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	395 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	260 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	186 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	152 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	1 000 1/h
• at AC-2 maximum	750 1/h
 at AC-3 maximum 	750 1/h

• at AC - maximum 280 1/h Control circuit/ Control supply voltage of the contol supply voltage at AC		750.44
Control circuit/ Control supply voltage AC • at 50 Hz rated value 230 V • at 50 Hz rated value 230 V • at 60 Hz rated value 230 V • at 60 Hz rated value 230 V • at 60 Hz 08 1.1 • at 60 Hz 08 1.1 • at 60 Hz 08 1.1 • at 60 Hz 79 VA inductive power of magnet coil at AC 81 VA • at 60 Hz 072 • at 60 Hz 0.74 • at 60 Hz 0.25 • at 60 Hz 0.25 • at 60 Hz 0.26 closing data 0 10 ms control version of the switch operating mechanism 10 10 ms at 60 Hz 0.26 • at 60 Hz 0.28 operational current at AC-15 0 10 ms • at 60 V rated value 10 10 ms • at 20 V	• at AC-3e maximum	750 1/h
type of voltage of the control supply voltage AC control supply roles at AC 230 V • at 60 Hz rated value 230 V operating range factor control supply voltage rated 230 V value of magnet coil at AC 0.8 1.1 • at 50 Hz 0.72 • at 50 Hz 0.74 • at 50 Hz 0.25 • at 60 Hz 0.25 · at 60 Hz 0.26 colling delay • • at AC 8 40 ms opening delay • • at C 4< 16 ms		250 1/h
control supply voltage at AC 230 V • at 50 Hz rated value 230 V operating range factor control supply voltage rated value 230 V • at 50 Hz 0.8 1.1 • at 50 Hz 0.74 • at 50 Hz 0.72 • at 50 Hz 0.74 • at 50 Hz 0.72 • at 50 Hz 0.74 • at 50 Hz 0.72 • at 50 Hz 0.74 • at 50 Hz 0.25 • at 60 Hz 0.28 closing delay 8 40 ms • at 60 Hz 0.28 closing delay 8 40 ms • at 60 Hz 0.28 closing delay 10 10 ms control version of the switch operating mechanism Avxillary circuit 2 Instanaeous contact 2 Instanaeous contact	Control circuit/ Control	
• at 50 Hz rated value 230 V • at 50 Hz rated value 230 V • at 50 Hz 0.811 • at 50 Hz 0.72 • at 50 Hz 0.74 • apparent holding power of magnet coil at AC • at 50 Hz • at 50 Hz 0.74 • at 50 Hz 0.74 • at 50 Hz 0.74 • at 50 Hz 0.25 • at 50 Hz 0.28 closing delay 4 16 ms • at AC 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10.A operational current at AC-15 2 instanteneous contacts 2 instanteneous contacts 2 instanteneous contacts 2 instanteneous contacts 3A • at 260 V rated value 3A • at 260 V rated value 3A <td>type of voltage of the control supply voltage</td> <td>AC</td>	type of voltage of the control supply voltage	AC
• at 60 Hz rated value280 Voperating range factor control supply voltage rated value of magnet coil at AC0.8 1.1• at 50 Hz0.8 1.1• at 50 Hz0.8 1.1• at 50 Hz0.8 1.1• at 50 Hz0.74• at 50 Hz0.72• at 50 Hz0.74• at 50 Hz0.74• at 50 Hz0.5 VA• at 50 Hz0.74• at 50 Hz0.74• at 50 Hz0.5 VA• at 50 Hz0.25• at 60 Hz0.25• at 60 Hz0.25• at 60 Hz0.28• at 70 Hz0.28• at 80 Hz0.28• at 80 Hz0.10 ms• at 80 Hz0.28• at 80 Hz0.28• at 80 Hz0.28• at 80 Hz0.10 ms• at 80 Hz0.10 ms• at 80 Vrated value10.10 ms• at 20 Vrated value2• at 20 Vrated value6 A• at 20 Vrated value6 A• at 20 Vrated value6 A• at 60 Vrated value7 A• at 20 Vrated value6 A• at 20 Vrated value7 A </td <td>control supply voltage at AC</td> <td></td>	control supply voltage at AC	
operating range factor control supply voltage rated value of magnet coil at AC 0.81.1 • at 50 Hz 0.81.1 • at 60 Hz 0.81.1 • at 60 Hz 0.81.1 • at 50 Hz 0.81.1 • at 50 Hz 0.81.1 • at 50 Hz 0.72 • at 50 Hz 0.72 • at 50 Hz 0.74 apparent holding power of magnet coil at AC 0.5 VA • at 50 Hz 0.74 • at 50 Hz 0.74 • at 60 Hz 0.74 apparent holding power of magnet coil at AC 0.5 VA • at 60 Hz 0.25 • at 60 Hz 0.26 • at 60 Hz 0.28 closing delay • at AC • at AC 8 40 ms opening delay • at AC • at AC 8 40 ms opening delay • at AC • at AC 8 40 ms opening delay • at AC • at AC 8 40 ms opening delay • at AC • at AC	 at 50 Hz rated value 	230 V
value of magnet coil at AC 0.8 1.1 • at 50 Hz 0.8 0.8 • at 50 Hz 0.8 1.1 • at 50 Hz 81 VA 79 VA inductive power factor with closing power of the coil 0.72 0.74 • at 50 Hz 0.72 0.74 • at 50 Hz 0.74 0.74 • at 50 Hz 0.74 0.74 • at 60 Hz 0.74 0.74 • at 60 Hz 0.5 VA 0.5 VA • at 60 Hz 0.25 0.25 • at 60 Hz 0.25 0.25 • at 60 Hz 0.26 0.26 closing delay 0	• at 60 Hz rated value	230 V
• at 50 hz0.811• at 60 hz0.8511• at 50 hz81 VA• at 50 hz79 VAinductive power factor with closing power of the coll0.72• at 60 hz0.74apparent holding power of magnet coll at AC0.74apparent holding power of magnet coll at AC0.5 VA• at 60 hz0.74apparent holding power of magnet coll at AC0.5 VA• at 60 hz0.74• at 60 hz0.74• at 60 hz0.5 VA• at 60 hz0.25• at 60 hz0.26• at 60 hz0.28• coll daly0.28• at AC8 40 ms• opening delay0.1010 ms• at AC940 ms• at AC1010 ms• at AC2• at 30 V contacts for auxiliary contacts• instantaneous contact2• number of NC contacts for auxiliary contacts• at 300 V rated value0.4• at 300 V rated value0.4• at 400 V rated value0.4• at 600 V rated value0.4 <td< td=""><td>operating range factor control supply voltage rated</td><td></td></td<>	operating range factor control supply voltage rated	
• at 80 Hz 0.85 1.1 apparent pick-up power of magnet coil at AC 81 VA • at 60 Hz 70 VA Inductive power factor with closing power of the coll 0.72 • at 60 Hz 0.72 • at 60 Hz 0.74 apparent holding power of magnet coil at AC 0.74 • at 60 Hz 0.25 • at AC 4 • at AC 4 </td <td>value of magnet coil at AC</td> <td></td>	value of magnet coil at AC	
apparent pick-up power of magnet coil at AC 81 VA • at 50 Hz 81 VA inductive power factor with closing power of the coil 0.72 • at 50 Hz 0.72 • at 60 Hz 0.74 apparent holding power of magnet coil at AC 0.74 • at 50 Hz 0.74 • at 50 Hz 0.74 • at 60 Hz 0.74 inductive power factor with the holding power of the coil 0.5 VA • at 60 Hz 0.25 • at 60 Hz 0.26 closing delay 0.4 • at AC 0.8 opening delay 4 • at AC 0.40 ms control version of the switch operating mechanism Standard A1 - A2 Avsiling circuit 10 0 number of NC contacts for auxillary contacts 2 instantaneous contact 2 operational current at AC-12 maximum 10 A operational current at AC-15 6 A • at 600 V rated value 2 A • at 600 V rated value 2 A • at 600 V rated value 1 A operational current at AC-15 6	● at 50 Hz	0.8 1.1
• at 50 Hz 81 VA • at 60 Hz 79 VA inductive power factor with closing power of the coll 0.72 • at 60 Hz 0.74 • at 60 Hz 0.5 VA • at 60 Hz 0.25 • at 60 Hz 0.26 • at 60 Hz 0.27 • at 60 Hz 0.28 • at 60 Hz 0.28 • at 60 Hz 0.26 • at 60 V rator value 2 • at 200 V rator value 6 A • at 200 V rator value <td>• at 60 Hz</td> <td>0.85 1.1</td>	• at 60 Hz	0.85 1.1
• at 60 Hz79 VAinductive power factor with closing power of the coll0.72• at 60 Hz0.74apparent holding power of magnet coll at AC0.74• at 60 Hz10.5 VA• at 60 Hz0.25• at 60 Hz0.25• at 60 Hz0.25• at 60 Hz0.26• at 60 Hz0.28• at 60 Hz0.28• at 60 Hz0.28• at 60 Hz0.28• at 60 Hz0.26• at AC8 40 ms• at AC10 10 ms• at AC10 10 mscontrol version of the switch operating mechanismStandard A1 - A2Auxiliary circuitnumber of NC contacts for auxiliary contactsinstantaneous contactoperational current at AC-15• at 230 V rated value• at 60 V rated value• at 24 V rated value• at 24 V rated value• at 60 V rated value• at 24 V rated value• at 25 V rated val	apparent pick-up power of magnet coil at AC	
Inductive power factor with closing power of the coll 0.72 • at 50 Hz 0.74 apparent holding power of magnet coil at AC 0.74 • at 50 Hz 10.5 VA • at 60 Hz 8.5 VA inductive power factor with the holding power of the coil 0.25 • at 60 Hz 0.26 closing delay 0.28 • at AC 4 16 ms arcing time 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 10 ms number of NC contacts for auxiliary contacts 2 instantaneous contact 2 number of NC contacts for auxiliary contacts 2 instantaneous contact 3.A • at 300 V rated value 3.A • at 400 V rated value 3.A • at 400 V rated value 3.A • at 60 V rated value 6.A • at 60 V rated value 6.A • at 60 V rated value 6.A • at 60 V rated value 3.	• at 50 Hz	81 VA
	• at 60 Hz	79 VA
• at 60 Hz 0,74 apparent holding power of magnet coll at AC • at 50 Hz • at 60 Hz 8.5 VA • at 60 Hz 8.5 VA inductive power factor with the holding power of the coll 0.25 • at 60 Hz 0.26 c at 60 Hz 0.26 c at 60 Hz 0.28 closing delay • at AC • at AC 8 40 ms opening delay • at AC • at AC 4 16 ms arcing time 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 A number of NC contacts for auxiliary contacts 2 number of NO contacts for auxiliary contacts 2 operational current at AC-15 2 operational current at AC-15 2 • at 200 V rated value 6A • at 200 V rated value 10 A operational current at DC-12 • at 24 V rated value • at 22V vrated value 10 A • at 22V vrated value 6A • at 22V vrated value <td>inductive power factor with closing power of the coil</td> <td></td>	inductive power factor with closing power of the coil	
apparent holding power of magnet coil at AC 10.5 VA • at 50 Hz 10.5 VA Inductive power factor with the holding power of the coil 0.25 • at 60 Hz 0.25 • at 60 Hz 0.26 closing delay 0.28 • at AC 8 40 ms opening delay 4 16 ms • at AC 9 40 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 10 ms number of NC contacts for auxiliary contacts 2 instantaneous contact 10 A operational current at AC-12 maximum 10 A operational current at AC-12 maximum 10 A operational current at AC-15 6 • at 200 V rated value 2 A • at 200 V rated value 2 A • at 400 V rated value 3 A • at 600 V rated value 10 A operational current at DC-12 6 A • at 600 V rated value 1 A operational current at DC-12 1 A operational current at DC-13 6 A • at 100 V rated value 3 A	• at 50 Hz	0.72
• at 50 Hz 10.5 VA • at 60 Hz 8.5 VA Inductive power factor with the holding power of the coll 0.25 • at 50 Hz 0.28 closing delay 0.28 • at AC 8 40 ms opening delay 4 16 ms • at AC 4 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10.A number of NC contacts for auxiliary contacts 2 instantaneous contact 2 operational current at AC-12 maximum 10 A operational current at AC-15 6 A • at 200 V rated value 3 A • at 600 V rated value 10 A operational current at DC-12 10 A • at 600 V rated value 3 A • at 600 V rated value 10 A operational current at DC-12 10 A • at 60 V rated value 10 A operational current at DC-12 10 A • at 60 V rated value 10 A operational current at DC-12 10 A • at 60 V rated value 6 A • at 60 V rated value	• at 60 Hz	0.74
• at 60 Hz 8.5 VA inductive power factor with the holding power of the coll 0.25 • at 60 Hz 0.26 (closing delay 0.28 • at AC 8 40 ms opening delay 4 16 ms • at AC 8 40 ms opening delay 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 10 ms number of NC contacts for auxiliary contacts 2 instantaneous contact 10 A operational current at AC-12 maximum 10 A operational current at AC-15 6 • at 200 V rated value 3 A • at 600 V rated value 2 A • at 600 V rated value 10 A operational current at AC-12 10 A operational current at AC-12 6 A • at 200 V rated value 6 A • at 600 V rated value 10 A operational current at DC-12 12 V vrated value • at 60 V rated value 10 A operational current at DC-12 10 A • at 20 V rated value 10 A • at 21 V vrated value 6 A • at 10 V rated value 10 A • at 22 V vrated value 10 A • at 10 V	apparent holding power of magnet coil at AC	
Inductive power factor with the holding power of the coil at 50 Hz at 60 Hz at 60 Hz 0.25 0.28 closing delay at AC 840 ms opening delay at AC 416 ms arcing time 1010 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit number of NC contacts for auxiliary contacts 2 instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 200 V rated value • at 400 V rated value • at 400 V rated value 3 A • at 400 V rated value 10 A operational current at DC-12 • • • at 400 V rated value 10 A operational current at DC-12 • • • at 60 V rated value 10 A • • at 60 V rated value 6 A • • • • • at 20 V rated value 6 A	• at 50 Hz	10.5 VA
coll0.25• at 50 Hz0.26closing delay0.28• at AC8 40 msopening delay4 16 ms• at AC4 16 msarcing time10 10 mscontrol version of the switch operating mechanismAuxiliary circuitnumber of NC contacts for auxiliary contactsinstantaneous contactoperational current at AC-12 maximumoperational current at AC-15• at 200 V rated value• at 600 V rated value• at 600 V rated value• at 600 V rated value• at 400 V rated value• at 220 V rated value• at 220 V rated value• at 220 V rated value• at 420 V rated value• at 430 V rated value• at 440 V rated value• at 440 V rated value• at 450 V rated value• at 440 V rated value• at 240 V rated value• at 440 V rated value• at 240 V rated value• at 240 V rated	• at 60 Hz	8.5 VA
• at 50 Hz 0.25 • at 60 Hz 0.28 closing delay 0.28 • at AC 8 40 ms opening delay 4 16 ms • at AC 4 16 ms arcing time 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 2 number of NC contacts for auxiliary contacts 2 instantaneous contact 2 operational current at AC-12 maximum 10 A operational current at AC-15 6 A • at 200 V rated value 6 A • at 600 V rated value 1 A operational current at DC-12 6 A • at 200 V rated value 6 A • at 200 V rated value 6 A • at 200 V rated value 6 A • at 220 V rated value 1 A operational current at DC-13 6 A • at 200 V rated value 1 A • at 24 V rated value 1 A • at 25 V rated value 2 A • at 220 V rated value 1 A • at 220 V rated value 2 A • at 600 V rated value 2 A • at 24 V rated value 4 A • at 25 V rated value 2 A • at 400 V rated value <td>inductive power factor with the holding power of the</td> <td></td>	inductive power factor with the holding power of the	
• at 60 Hz 0.28 closing delay 8 40 ms • at AC 4 16 ms • at AC 4 16 ms • at AC 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 10 ms number of NC contacts for auxiliary contacts 2 instantaneous contact 10 A operational current at AC-12 maximum 10 A operational current at AC-15 6 • at 230 V rated value 6 A • at 600 V rated value 1A operational current at DC-12 • at 600 V rated value • at 420 V rated value 6 A • at 24 V rated value 6 A • at 250 V rated value 6 A • at 500 V rated value 1A operational current at DC-12 • at 480 V rated value • at 480 V rated value 6 A • at 220 V rated value 6 A • at 420 V rated value 6 A • at 220 V rated value 6 A • at 420 V rated value	coil	
closing delay at AC bit AC closing delay at AC at AC at AC at AC at AC at AC at Component and the second and the sec	• at 50 Hz	0.25
• at AC 8 40 ms opening delay 4 16 ms arcing time 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 10 ms number of NC contacts for auxiliary contacts 2 instantaneous contact 2 operational current at AC-12 maximum 10 A operational current at AC-15 6 A • at 230 V rated value 3 A • at 500 V rated value 2 A • at 690 V rated value 10 A operational current at DC-12 • at 24 V rated value • at 25 V rated value 6 A • at 25 V rated value 10 A operational current at DC-12 • at 24 V rated value • at 25 V rated value 6 A • at 26 V rated value 6 A • at 27 V rated value 10 A • at 48 V rated value 6 A • at 24 V rated value 6 A • at 42 V rated value 6 A • a	• at 60 Hz	0.28
opening delay4 16 msarcing time10 10 mscontrol version of the switch operating mechanismStandard A1 - A2Auxiliary circuitImmber of NC contacts for auxiliary contacts2number of NC contacts for auxiliary contacts2instantaneous contact2operational current at AC-12 maximum10 Aoperational current at AC-156 A• at 230 V rated value3 A• at 600 V rated value10 Aoperational current at DC-12	closing delay	
• at AC 4 16 ms arcing time 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 10 ms number of NC contacts for auxiliary contacts 2 instantaneous contact 2 operational current at AC-12 maximum 10 A operational current at AC-15 6 A • at 230 V rated value 3 A • at 400 V rated value 2 A • at 600 V rated value 10 A operational current at DC-12 • • at 60 V rated value 6 A • at 40 V rated value 6 A • at 40 V rated value 6 A • at 40 V rated value 10 A • at 40 V rated value 10 A • at 60 V rated value 6 A • at 60 V rated value 6 A • at 10 V rated value 6 A • at 25 V rated value 1 A • at 60 V rated value 2 A • at 20 V rated value 2 A • at 20 V rated value 1 A • at 60 V rated value 1 A • at 20 V rated value 6 A	• at AC	8 40 ms
arcing time10 10 mscontrol version of the switch operating mechanismStandard A1 - A2Auxiliary circuit2number of NC contacts for auxiliary contacts2instantaneous contact2operational current at AC-12 maximum10 Aoperational current at AC-156• at 230 V rated value6 A• at 400 V rated value2 A• at 690 V rated value10 Aoperational current at DC-120• at 690 V rated value10 A• at 690 V rated value6 A• at 690 V rated value10 Aoperational current at DC-120• at 24 V rated value6 A• at 600 V rated value10 A• at 600 V rated value6 A• at 100 V rated value6 A• at 600 V rated value6 A• at 25 V rated value10 A• at 26 V rated value2 A• at 20 V rated value2 A• at 600 V rated value6 A• at 600 V rated value1 Aoperational current at DC-136 A• at 24 V rated value6 A• at 25 V rated value6 A• at 26 V rated value1 A• at 27 V rated value6 A• at 28 V rated value1 A• at 20 V rated value1 A• at 20 V rated value1 A• at 20 V rated value2 A• at 20 V rated value2 A• at 20 V rated value2 A• at 100 V rated value1 A• at 125 V rated value1 A	opening delay	
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Auxiliary circuit 2 number of NC contacts for auxiliary contacts instantaneous contact 2 number of NO contacts for auxiliary contacts instantaneous contact 2 operational current at AC-12 maximum 10 A operational current at AC-15 6 A • at 230 V rated value 6 A • at 300 V rated value 2 A • at 690 V rated value 10 A operational current at DC-12 10 A • at 690 V rated value 6 A • at 690 V rated value 6 A • at 600 V rated value 10 A • at 80 V rated value 10 A • at 80 V rated value 6 A • at 80 V rated value 6 A • at 10 V rated value 10 A • at 220 V rated value 10 A • at 220 V rated value 1 A operational current at DC-13 0.15 A operational current at DC-13 6 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 10 V rated value 2 A • at 40 V rated value 2 A • at 60 V rated value 2 A <td< td=""><td>arcing time</td><td>10 10 ms</td></td<>	arcing time	10 10 ms
number of NC contacts for auxiliary contacts instantaneous contact 2 number of NO contacts for auxiliary contacts instantaneous contact 2 operational current at AC-12 maximum 10 A operational current at AC-15 6 A • at 230 V rated value 3 A • at 690 V rated value 1 A operational current at DC-12 10 A • at 690 V rated value 1 A operational current at DC-12 10 A • at 690 V rated value 6 A • at 69 V rated value 6 A • at 60 V rated value 1 A operational current at DC-12 10 A • at 24 V rated value 6 A • at 24 V rated value 6 A • at 24 V rated value 6 A • at 20 V rated value 1 A • at 220 V rated value 2 A • at 220 V rated value 1 A • at 220 V rated value 2 A • at 24 V rated value 6 A • at 20 V rated value 2 A • at 24 V rated value 2 A • at 24 V rated value 2 A • at 40 V rated value 2 A	control version of the switch operating mechanism	Standard A1 - A2
instantaneous contactnumber of NO contacts for auxiliary contacts2instantaneous contact10 Aoperational current at AC-12 maximum10 Aoperational current at AC-156 A• at 230 V rated value3 A• at 500 V rated value1 Aoperational current at DC-1210 A• at 60 V rated value6 A• at 60 V rated value6 A• at 80 V rated value6 A• at 60 V rated value6 A• at 80 V rated value6 A• at 10 V rated value9 A• at 220 V rated value9 A• at 80 V rated value1 A• at 220 V rated value0.15 Aoperational current at DC-136 A• at 80 V rated value2 A• at 60 V rated value2 A• at 60 V rated value2 A• at 80 V rated value2 A• at 80 V rated value2 A• at 10 V rated value2 A• at 10 V rated value1 A• at 10 V rated value2 A• at 10 V rated value2 A• at 10 V rated value1 A• at 125 V rated value0.9 A• at 220 V rated value0.3 A	Auxiliary circuit	
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 at 125 V rated value at 220 V rated value 0.9 A 0.3 A 	• at 60 V rated value	2 A
• at 220 V rated value 0.3 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	• at 600 V rated value	0.1 A
contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA)	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	27 A

● at 600 V rated value	27 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	2 hp
— at 230 V rated value	5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	10 hp
— at 220/230 V rated value	10 hp
— at 460/480 V rated value	20 hp
— at 575/600 V rated value	25 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: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)
— with type of assignment 2 required	gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (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 standard mounting rail according to DIN EN 60715
 side-by-side mounting 	Yes
height	85 mm
width	45 mm
depth	141 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 	$2x(1 - 2.5 \text{ mm}^2) 2x(2.5 - 10 \text{ mm}^2)$
— solid	$2x (1 \dots 2.5 \text{ mm}^2), 2x (2.5 \dots 10 \text{ mm}^2)$ $2x (1 \dots 2.5 \text{ mm}^2), 2x (2.5 \dots 10 \text{ mm}^2)$
— solid or stranded	$2x (1 \dots 2.5 \text{ mm}^2), 2x (2.5 \dots 10 \text{ mm}^2)$ $2x (1 \dots 2.5 \text{ mm}^2), 2x (2.5 \dots 6 \text{ mm}^2), 1x (10 \text{ mm}^2)$
 finely stranded with core end processing at AWG cables for main contacts 	2x (1 2.5 mm ²), 2x (2.5 6 mm ²), 1x 10 mm ²
connectable conductor cross-section for main	2x (16 12), 2x (14 8)
contacts • solid	1 10 mm²
	1 10 mm ²
 stranded 	I IV IIIII ⁻

finely stranded	with core end processi	a	1 10 mm²				
connectable conductor cross-section for auxiliary							
contacts		auxiliary					
solid or stranded		0.5 2.5 mm²					
 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 							
 at AWG cables for auxiliary contacts 			2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14)				
• at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross			,,,,,,	/			
section							
 for main contact 	cts		16 8				
 for auxiliary co 	ntacts		20 14				
Safety related data							
product function							
•	according to IEC 60947	-4-1	Yes				
	en operation according to		No				
5-1	in operation according to		140				
	demand rate according	to SN 31920	450 000				
	proportion of dangerous failures						
	 with low demand rate according to SN 31920 with high demand rate according to SN 31920 						
failure rate [FIT] with low demand rate according to SN			73 % 100 FIT				
31920 T1 value for proof test interval or service life according to IEC 61508			20 y				
protection class IP on the front according to IEC			IP20				
60529 touch protection on the front according to IEC 60529							
	suitability for use			finger-safe, for vertical contact from the front			
-			Yes				
safety-related switching OFF Certificates/ approvals			res				
Certificates/ approva	IS	_					
General Product A	pproval						
(S)	Confirmation	(m)	س	KC	COC		
CSA		CCC			נחנ		
EMC	Functional Safety/Safety of	Declaration of	of Conformity	Test Certificates	Marine / Shipping		
Lino	Machinery	Declaration	, comorning		indinio / onipping		
Â	<u>Type Examination</u> <u>Certificate</u>	CE		<u>Type Test Certific-</u> ates/Test Report	(Sint)		
RCM		EG-Konf.			ABS		
Marine / Shipping					other		
	f Å	Lloude	(all all all all all all all all all al		Confirmation		
		Lloyd's Register			<u>Confirmation</u>		
BUREAU VERITAS		Llovd's Register us	RINA	RMRS	<u>Confirmation</u>		
BUREAU VERITAS		Lloyds Register urs	RINA	RMRS	Confirmation		



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=3RT2027-1AL24-3MA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2027-1AL24-3MA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AL24-3MA0

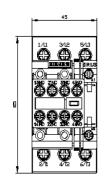
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

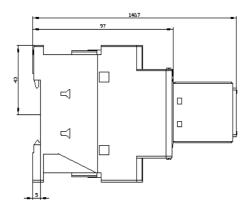
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2027-1AL24-3MA0&lang=en

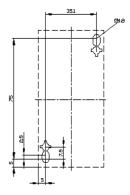
Characteristic: Tripping characteristics, I²t, Let-through current

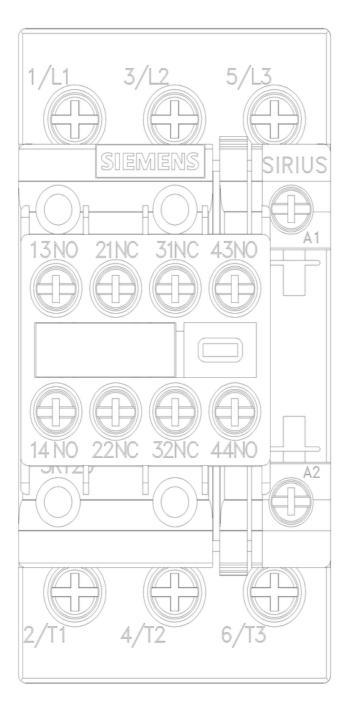
https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AL24-3MA0/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2027-1AL24-3MA0&objecttype=14&gridview=view1









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