SIEMENS

Data sheet 3RT2028-1AC24



power contactor, AC-3e/AC-3, 38 A, 18.5 kW / 400 V, 3-pole, 24 V AC, 50/60 Hz, auxiliary contacts: 2 NO + 2 NC, screw terminal, size: S0, removable 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 	9.6 W
 at AC in hot operating state per pole 	3.2 W
without load current share typical	2.7 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 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 (operating 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 %
Environmental footprint	
Environmental Product Declaration(EPD)	Yes

Global Warming Potential [CO2 eq] total	74.2 kg
Global Warming Potential [CO2 eq] during manufacturing	1.9 kg
Global Warming Potential [CO2 eq] during operation	72.4 kg
Global Warming Potential [CO2 eq] after end of life	-0.117 kg
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	50 A
value	30 A
— up to 690 V at ambient temperature 60 °C rated	42 A
value	
• at AC-3	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	38 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	31.5 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	30.8 A
— up to 690 V for current peak value n=20 rated value	21 A
• at AC-6a	20.5.4
— 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 up to 500 V for current peak value n=30 rated value 	20.5 A 21.4 A
— up to 690 V for current peak value n=30 rated value	21 A
minimum cross-section in main circuit at maximum AC-1 rated	10 mm²
value	
operational current for approx. 200000 operating cycles at	
AC-4	10 A
at 400 V rated value at 600 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 60 V rated value	20 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 60 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	

	27.4
— at 60 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 60 V rated value	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 60 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 60 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-2 at 400 V rated value	18.5 kW
• at AC-3	10.0 KW
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
	10.5 KVV
• at AC-3e	44 1/4/
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
operating power for approx. 200000 operating cycles at AC-	
• 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 230 V for current peak value n=20 rated value 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 up to 500 V for current peak value n=20 rated value	26.6 kVA
up to 690 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value	25 kVA
	ZUNVA
operating apparent power at AC-6a	8.1 kVΔ
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	18.5 kVA
up to 690 V for current peak value n=30 rated value about time withstend current in cold energing state up to	25 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	593 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	341 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 	199 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 60 s switching at zero current maximum	162 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	

* all AC-3 maximum * all AC-4 maximum * 250 /th * all AC-4 maximum * all AC-12 m		
# AR-C3 maximum	at AC-1 maximum	1 000 1/h
* al AC 3e maximum 750 1hh 3 AC 4 maximum 280 3h 3h 3c 4 maximum 280 3h 3h 3c 4 maximum 280 3h 3c 4 maximu	• at AC-2 maximum	750 1/h
## AC-A maximum Syno of Vortage of the control supply voltage at AC * at 60 ter ratied value * at 60 ter	• at AC-3 maximum	750 1/h
Second S	• at AC-3e maximum	750 1/h
Type of voltage of the control supply voltage at AC	• at AC-4 maximum	250 1/h
Security	Control circuit/ Control	
Security		AC
e at 60 Hz rated value 24 V		24.1/
Operating range factor control supply voltage rated value of magnet coil at AC 0.8 1.1 0.85 1.1		
a 10 10 12 0 0 0 0 0 0 0 0 0		24 V
a 16 0 Hz		
	5	0.0 1.1
apparent pick-up power of magnet coil at AC		
# at 50 Hz		0.85 1.1
• at 80 Hz		
Inductive power factor with closing power of the coil		
	● at 60 Hz	79 VA
■ at 60 Hz apparent holding power of magnet coil at AC ■ at 50 Hz ■ at 60 Hz ■ at AC ■ at AC ■ at AC ■ at AC ■ aroing delay ■ at AC ■ aroing time ■ at AC ■ aroing time ■ aroing time ■ aroing time ■ control version of the switch operating mechanism Auxiliary circuit □ number of NC contacts for auxiliary contacts instantaneous contact □ aroing time □ axiliary contacts instantaneous □ axiliary contacts instantaneous □ axiliary contacts for auxiliary contacts instantaneous □ axiliary ax	inductive power factor with closing power of the coil	
apparent holding power of magnet coil at AC	● at 50 Hz	0.72
• at 50 Hz • at 60 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz • at AC surphing delay • at AC arcing time • at AC arcing time control version of the switch operating mechanism Standard A1 - A2 Auxiliary drout number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum 10 A operational current at AC-12 maximum operational current at DC-12 • at 250 V rated value • at 690 V rated value • at 600 V rated value • at 84 V rated value • at 87 vated value • at 87 vated value • at 87 vated value • at 88 vated value • at 89 vated value • at 89 vated value • at 100 V rated value • at 80 V rated	• at 60 Hz	0.74
at 160 Hz inductive power factor with the holding power of the coil at 150 Hz 0.25 0.28	apparent holding power of magnet coil at AC	
at 160 Hz inductive power factor with the holding power of the coil at 150 Hz 0.25 0.28		10.5 VA
Inductive power factor with the holding power of the coil • at 60 Hz	• at 60 Hz	
• at 50 Hz		
closing delay		0.25
closing delay		
e at AC opening delay e at AC arcing time control version of the switch operating mechanism Control version of the switch operating mechanism contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum 10 A operational current at AC-15 e at 230 v rated value at 400 V rated value 3 A at 690 V rated value 1 A operational current at DC-12 e at 24 V rated value 6 A at 480 V rated value 6 A at 480 V rated value 9 at 110 V rated value 6 A at 110 V rated value 9 at 110 V rated value 9 at 110 V rated value 9 at 125 V rated value 9 at 125 V rated value 9 at 24 V rated value 9 at 27 V rated value 9 at 28 V rated value 9 at 29 V rated value 9 at 110 V rated value 9 at 110 V rated value 9 at 125 V rated value 9 at 24 V rated value 9 at 25 V rated value 9 at 27 V rated value 9 at 28 V rated value 9 at 29 V rated value 9 at 20 V rated value 9 at 110 V rated value 9 at 110 V rated value 9 at 125 V rated value 9 at 110 V rated value 9 at 125 V rated value 9 at 110 V rated value 9 at 125 V rated value 9 at 100 V rated value		0.20
opening delay		0 40
■ at AC arcing time		8 40 ms
arcing time		
control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts 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 • at 500 V rated value • at 690 V rated value • at 690 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 24 V rated value • at 125 V rated value • at 125 V rated value • at 24 V rated value • at 125 V rated value • at 3A • at 125 V rated value • at 3A • at 125 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 125 V rated value • at 125 V rated value • at 600 V rated value • at 25 V rated value • at 26 V rated value • at 27 V rated value • at 28 V rated value • at 30 V rated value • at 48 V rated value • at 48 V rated value • at 60 V		
Auxillary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 110 V rated value • at 220 V rated value • at 220 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 4110 V rated value • at 48 V rated value • at 4110 V rated value • at 48 V rated value • at 110 V rated value • at 220 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 600 V rated value		
number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value • at 24 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 41 10 V rated value • at 42 V rated value • at 41 10 V rated value • at 42 V rated value • at 41 10 V rated value • at 42 V rated value • at 42 V rated value • at 41 10 V rated value • at 42 V rated value • at 42 V rated value • at 42 V rated value • at 43 V rated value • at 44 V rated value • at 4500 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 48 V rated value • at 60 V rated value		Standard A1 - A2
contact number of NO contacts for auxiliary contacts 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 • at 500 V rated value • at 690 V rated value • at 690 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 24 V rated value • at 25 V rated value • at 25 V rated value • at 26 V rated value • at 27 V rated value • at 28 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value • at 60 V rated value • at 60 V rated value • at 20 V rated value • at 30 V rated value • at 30 V rated value • at 48 V rated value • at 20 V rated value • at 30 V rated value • at 30 V rated value • at 40 V rated value • at 60 V rated value • at 60 V rated value • at 60 V rated value • at 10 V rated value • at 10 V rated value • at 20 V rated value • at 10 V rated value • at 20 V rated value • at 20 V rated value • at 20 V rated value	Auxiliary circuit	
number of NO contacts for auxiliary contacts instantaneous contact 2 operational current at AC-12 maximum 10 A operational current at AC-15		2
contact operational current at AC-12 maximum 10 A operational current at AC-15		
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 690 V rated value 1 A operational current at DC-12 10 A • at 24 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 6 A • at 24 V rated value 2 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 60 V rated value 2 A • at 25 V rated value 0.9 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)		2
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 1 A operational current at DC-12 10 A • at 24 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 6 A • at 24 V rated value 2 A • at 48 V rated value 2 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 110 V rated value 2 A • at 125 V rated value 0.9 A • at 220 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)		10.0
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value 1 A Operational current at DC-12 at 24 V rated value at 24 V rated value 6 A at 6 A at 6 A at 110 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 24 V rated value at 25 V rated value at 24 V rated value at 25 V rated value at 26 V rated value at 27 V rated value at 20 V rated value at 3 A at 600 V rated value at 70 A <	_ ·	10 A
 at 400 V rated value at 500 V rated value at 690 V rated value 1 A Operational current at DC-12 at 24 V rated value 6 A at 60 V rated value 6 A at 110 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 24 V rated value at 10 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rat	•	
 at 500 V rated value at 690 V rated value 1 A operational current at DC-12 at 24 V rated value 6 A at 60 V rated value 6 A at 110 V rated value at 220 V rated value at 220 V rated value at 60 O V rated value at 220 V rated value at 24 V rated value at 36 O V rated value at 48 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 250 V		
• at 690 V rated value 10 A operational current at DC-12 • at 24 V rated value 6 A • at 48 V rated value 6 A • at 60 V rated value 3 A • at 110 V rated value 2 A • at 220 V rated value 1 A • at 600 V rated value 1 A • at 600 V rated value 2 A • at 24 V rated value 1 A • at 600 V rated value 2 A operational current at DC-13 • at 24 V rated value 2 A • at 48 V rated value 2 A • at 60 V rated value 3 A • at 60 V rated value 4 A • at 60 V rated value 5 A • at 24 V rated value 6 A • at 48 V rated value 7 A • at 25 V rated value 9 A • at 110 V rated value 1 A • at 125 V rated value 1 A • at 125 V rated value 1 A • at 125 V rated value 1 A • at 220 V rated value 1 A • at 220 V rated value 1 A • at 220 V rated value 1 A • at 600 V rated value 1 A		
operational current at DC-12 • at 24 V rated value		
 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value onerational 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 110 V rated value at 125 V rated value at 120 V rated value at 600 V rated value	at 690 V rated value	1A
 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 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 20 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 600 V rated value	operational current at DC-12	
 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 600 V rated value at 600 V rated value at 24 V rated value 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 110 V rated value at 125 V rated value at 220 V rated value at 200 V rated value at 600 V rated value at 300 V rated value at 600 V rated value <li< td=""><td></td><td></td></li<>		
 at 110 V rated value at 125 V rated value 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 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 125 V rated value at 220 V rated value at 200 V rated value at 600 V rated value at 700 V rated value at 700 V rated	• at 24 V rated value	10 A
 at 125 V rated value 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 at 48 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 220 V rated value at 600 V rated value 		
 at 220 V rated value at 600 V rated value 0.15 A 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 220 V rated value at 600 V rated value 	• at 48 V rated value	6 A
 at 220 V rated value at 600 V rated value 0.15 A 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 220 V rated value at 600 V rated value 	at 48 V rated valueat 60 V rated value	6 A 6 A
	at 48 V rated valueat 60 V rated valueat 110 V rated value	6 A 6 A 3 A
operational current at DC-13 o at 24 V rated value 6 A o at 48 V rated value 2 A o at 60 V rated value 2 A o at 110 V rated value 1 A o at 125 V rated value 0.9 A o at 220 V rated value 0.3 A o at 600 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA)	 at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value 	6 A 6 A 3 A 2 A
 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 220 V rated value at 600 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 	6 A 6 A 3 A 2 A 1 A
 at 48 V rated value at 60 V rated value at 110 V rated value 1 A at 125 V rated value at 220 V rated value at 600 V rated v	 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 	6 A 6 A 3 A 2 A 1 A
 at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 600 V rated value <l< td=""><td> 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 operational current at DC-13</td><td>6 A 6 A 3 A 2 A 1 A 0.15 A</td></l<>	 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 operational current at DC-13	6 A 6 A 3 A 2 A 1 A 0.15 A
 at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value contact reliability of auxiliary contacts 1 A faulty switching per 100 million (17 V, 1 mA) 	 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 operational current at DC-13 at 24 V rated value 	6 A 6 A 3 A 2 A 1 A 0.15 A
 at 125 V rated value at 220 V rated value at 600 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) 	 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 operational current at DC-13 at 24 V rated value at 48 V rated value 	6 A 6 A 3 A 2 A 1 A 0.15 A
 at 220 V rated value at 600 V rated value contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) 	 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 operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value 	6 A 6 A 3 A 2 A 1 A 0.15 A
◆ at 600 V rated value O.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA)	 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 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 	6 A 6 A 3 A 2 A 1 A 0.15 A
contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA)	 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 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 	6 A 6 A 3 A 2 A 1 A 0.15 A
	 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 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 115 V rated value at 125 V rated value at 125 V rated value 	6 A 6 A 3 A 2 A 1 A 0.15 A
UL/CSA ratings	 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 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 110 V rated value at 125 V rated value at 220 V rated value 	6 A 6 A 3 A 2 A 1 A 0.15 A 6 A 2 A 2 A 1 A 0.9 A 0.3 A
	 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 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 at 600 V rated value at 600 V rated value 	6 A 6 A 3 A 2 A 1 A 0.15 A 6 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A

full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	34 A
• at 600 V rated value	27 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	3 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	25 hp
— at 575/600 V rated value	25 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
	A000 / Q000
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 DIN rail according to DIN EN 60715
side-by-side mounting	Yes
height	85 mm
width	45 mm
depth	141 mm
·	1+1 (1111)
required spacing	
with side-by-side mounting	40
— 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 (1 2.5 mm²), 2x (2.5 10 mm²)
solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
for AWG cables for main contacts	2x (16 12), 2x (14 8)
connectable conductor cross-section for main contacts	
solid	1 10 mm²
	1 10 mm²
stranded finely stranded with core and processing	
finely stranded with core end processing	1 10 mm²
connectable conductor cross-section for auxiliary contacts	0.5 2.5 mm²
solid or stranded	0.5 2.5 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 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 	16 8
 for auxiliary contacts 	20 14
Safety related data	
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
B10 value with high demand rate according to SN 31920	1 000 000
product function positively driven operation according to IEC 60947-5-1	No
product function mirror contact according to IEC 60947-4-1	Yes
suitability for use safety-related switching OFF	Yes; applies only to contactor operating mechanism
IEC 61508	
T1 value for proof test interval or service life according to IEC 61508	20 a
Electrical Safety	
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
Approvals Certificates	

General Product Approval









Confirmation



General Product Approval

EMV

Test Certificates

Marine / Shipping

<u>KC</u>





Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping











Miscellaneous

other

other Environment

Confirmation Confirmation EPD Typ II/III (with life cylce assessment)

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/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2028-1AC24

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2028-1AC24

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1AC24

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

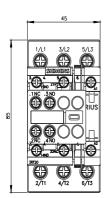
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2028-1AC24&lang=en

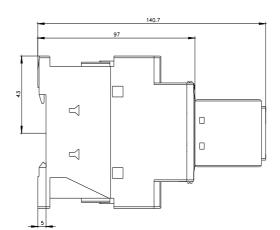
Characteristic: Tripping characteristics, I^2t , Let-through current

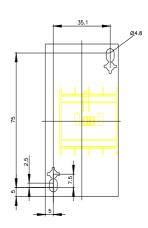
https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1AC24/char

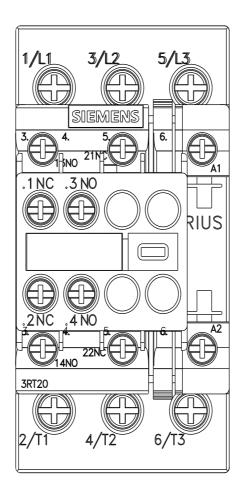
Further characteristics (e.g. electrical endurance, switching frequency)

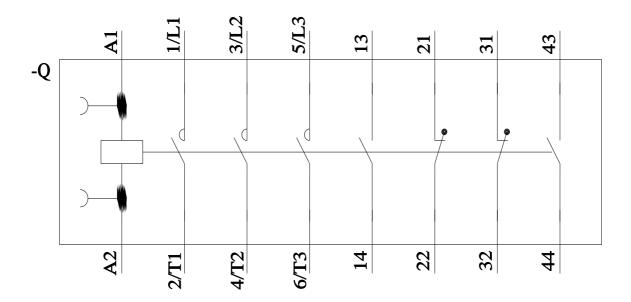
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2028-1AC24&objecttype=14&gridview=view1











last modified:

1/17/2024