Data sheet



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 24 V DC, with integrated diode, auxiliary contacts: 2 NO + 2 NC, spring-loaded terminal, size: S00, captive auxiliary switch

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S00
product extension	
 function module for communication 	No
auxiliary switch	No
power loss [W] for rated value of the current	
 at AC in hot operating state 	0.9 W
 at AC in hot operating state per pole 	0.3 W
 without load current share typical 	4 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated value 	690 V
surge voltage resistance	
 of main circuit rated value 	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at DC	10,5g / 5 ms, 6,6g / 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
SVHC substance name	Lead - 7439-92-1
Weight	0.376 kg
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	95 %

Environmental Product Declaration(EPD) global warming potential [CO2 eq] total global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during aperation global warming potential [CO2 eq] during operation 152 kg global warming potential [CO2 eq] after end of life number of poles for main current circuit 3 number of Poles for main current circuit 3 number of NO contacts for main current circuit 3 number of NO contacts for main current e at AC-3 a rated value maximum e at AC-1 at 400 V at ambient temperature 40 °C rated value e at AC-1 e up to 690 V at ambient temperature 40 °C rated value e at AC-3 e at AC-5 e a
Environmental Product Declaration(EPD) global warming potential (CO2 eq) total global warming potential (CO2 eq) during manufacturing global warming potential (CO2 eq) during manufacturing global warming potential (CO2 eq) during operation 152 kg global warming potential (CO2 eq) after end of life -0.305 kg Main circuit number of Poles for main current circuit 3 number of NO contacts for main contacts operating voltage • at AC-3 rated value maximum 690 V • at AC-3 rated value maximum 690 V operational current • at AC-1 at 400 V at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value • at AC-3 — at 400 V rated value • at AC-3 — at 400 V rated value — at 500 V rated value • at AC-3 — at 400 V rated value • at AC-3e — at 400 V rated value • at AC-3e — at 400 V rated value • at AC-3e — at 400 V rated value • at AC-3e — at 400 V rated value • at AC-4 at 400 V rated value — at 500 V rated value — at 500 V rated value — at 690 V rated value • at AC-5 by to 100 V rated value • at AC-6 at 400 V rated value — at AC-8a — up to 230 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value • at AC-6a — up to 230 V for current peak value n=20 rated value • at AC-6a — up to 500 V for current peak value n=20 rated value • at AC-6a — up to 230 V for current peak value n=20 rated value • at AC-6a — up to 230 V for current peak value n=20 rated value • at AC-6a — up to 500 V for current peak value n=20 rated value • at AC-6a — up to 500 V for current peak value n=20 rated value • at AC-6a — up to 230 V for current peak value n=20 rated value
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global warming potential [CO2 eq] during operation 152 kg global warming potential (CO2 eq) after end of life -0.305 kg Main circuit 3 number of poles for main current circuit 3 number of NO contacts for main contacts 3 operating voltage 4
global warming potential [CO2 eq] after end of life
mumber of poles for main current circuit number of NO contacts for main contacts operating voltage • at AC-3 rated value maximum • at AC-3 rated value maximum operational current • at AC-1 at 400 V at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — at AC-3 — at 400 V rated value • at AC-3 — at 400 V rated value — at 590 V rated value — at 590 V rated value — at 500 V rated value — at 690 V rated value 5 A • at AC-5a up to 690 V rated value — up to 230 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value • at AC-6a — up to 230 V for current peak value n=20 rated value • at AC-6a — up to 230 V for current peak value n=20 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value
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— up to 230 V for current peak value n=30 rated value 3.5 A
— up to 500 V for current peak value n=30 rated value 3.6 A
— up to 690 V for current peak value n=30 rated value 3.3 A
minimum cross-section in main circuit at maximum AC-1 rated value 4 mm²
operational current for approx. 200000 operating cycles at AC-4
• at 400 V rated value 4.1 A
at 690 V rated value 3.3 A
operational current
• at 1 current path at DC-1
 — at 24 V rated value — at 60 V rated value 20 A 20 A
— at 50 V rated value 20 A — at 110 V rated value 2.1 A
— at 220 V rated value 2.1 A — at 220 V rated value 0.8 A
— at 440 V rated value 0.6 A
— at 600 V rated value 0.6 A
• with 2 current paths in series at DC-1
— at 24 V rated value 20 A
— at 60 V rated value 20 A
— at 110 V rated value 12 A
— at 220 V rated value 1.6 A
— at 440 V rated value 0.8 A

at 500 V rated value		
	— at 600 V rated value	0.7 A
	 with 3 current paths in series at DC-1 	
	— at 24 V rated value	20 A
	— at 60 V rated value	20 A
	— at 110 V rated value	20 A
	— at 220 V rated value	20 A
- at 1 current path at DC-3 at DC-5	— at 440 V rated value	1.3 A
	— at 600 V rated value	1 A
	• at 1 current path at DC-3 at DC-5	
with 2 current paths in series at DC-3 at DC-5	— at 24 V rated value	20 A
• with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 110 V rated value — at 22 V rated value — at 22 V rated value — at 22 V rated value — at 10 V rated value — at 10 V rated value — at 10 V rated value — at 20 V rated value — at 40 V rated value — at 400 V rated value • at 400 V rated value • at 400 V rated value — at 400 V rated value — at 400 V rated value — at 500 V rated value • up to 500 V rated value • operating apparent power at AC-6a • up to 200 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current p	— at 60 V rated value	0.5 A
	— at 110 V rated value	0.15 A
	 with 2 current paths in series at DC-3 at DC-5 	
with 3 current paths in series at DC-3 at DC-5	— at 24 V rated value	20 A
with 3 current paths in series at DC-3 at DC-5	— at 60 V rated value	5 A
	— at 110 V rated value	0.35 A
	 with 3 current paths in series at DC-3 at DC-5 	
	— at 24 V rated value	20 A
	— at 60 V rated value	20 A
	— at 110 V rated value	20 A
operating power at AC-2 at 40 V rated value at AC-3 — at 230 V rated value — at 40 V rated value — at 40 V rated value — at 40 V rated value — at 690 V rated value — at 500 V rated value — at 690 V rated value operating power for approx. 200000 operating cycles at AC-4 at 400 V rated value operating apparent power at AC-8 up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value 4 kVA short-time withstand current in cold operating state up to 40 C ulimited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s swit	— at 220 V rated value	1.5 A
operating power • at AC-2 at 400 V rated value • at AC-3 — at 230 V rated value — at 500 V rated value — at 690 V rated value — at 690 V rated value — at 690 V rated value — at 230 V rated value — at 690 V rated value — at 400 V rated value — at 690 V rated value Operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximu	— at 440 V rated value	0.2 A
operating power • at AC-2 at 400 V rated value • at AC-3 — at 230 V rated value — at 500 V rated value — at 690 V rated value — at 690 V rated value — at 690 V rated value — at 230 V rated value — at 690 V rated value — at 400 V rated value — at 690 V rated value Operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximu	— at 600 V rated value	0.2 A
at AC-2 at 400 V rated value at AC-3 at AC-3 at AC-3 at AC-3 at AC-3 at AC-3 at 400 V rated value at 400 V rated value at 500 V rated value bt AC-3e at 300 V rated value at 50-5 kW at AC-3e at 230 V rated value bt AC-3e at 200 V rated value at 500 V rated value at 500 V rated value at 500 V rated value bt Ac-3e at 400 V rated value at 500 V rated value bt Ac-3e at 400 V rated value bt Ac-3e at 400 V rated value bt Ac-3e bt Ac-4 at 400 V rated value bt Ac-3e bt Ac-4 at 400 V rated value bt Ac-3e bt Ac-4 bt		
at AC-3 at 230 V rated value at 400 V rated value 4 kW at 690 V rated value 5.5 kW at AC-3e at 230 V rated value 5.5 kW at AC-3e at 230 V rated value 2.2 kW at 400 V rated value 2.2 kW at 690 V rated value 4 kW 5.5 kW soperating power for approx. 200000 operating cycles at AC-4 at 400 V rated value 4 kW 5.5 kW soperating power for approx. 200000 operating cycles at AC-4 at 400 V rated value 2 kW 3 t 680 V rated value 4 t 690 V rated value 2 kW 5.5 kW soperating apparent power at AC-8a 4 up to 230 V for current peak value n=20 rated value 4 t 6 kVA 4 up to 500 V for current peak value n=20 rated value 4 t 6 kVA 5.9 kVA soperating apparent power at AC-8a 4 t 6 kVA 5.9 kVA soperating apparent power at AC-8a 4 t 6 kVA 5.9 kVA soperating apparent power at AC-8a 4 t 6 kVA 5.9 kVA soperating apparent power at AC-8a 4 t 6 kVA 5.9 kVA soperating apparent power at AC-8a 4 t 6 kVA 5.9 kVA soperating apparent power at AC-8a 4 t 6 kVA 5.9 kVA soperating apparent power at AC-8a 4 t 6 kVA 5.9 kVA soperating apparent power at AC-8a 4 t 6 kVA 5.9 kVA soperating apparent power at AC-8a 1.3 kVA 2.4 kVA 3.1 kVA 4 kVA soperating apparent power at AC-8a 1.3 kVA 2.4 kVA 3.1 kVA 4 kVA soperating apparent power at AC-8a 1.3 kVA 2.4 kVA 3.1 kVA 4 kVA soperating apparent power at AC-8a 1.3 kVA 2.4 kVA 3.1 kVA 4 kVA soperating apparent power at AC-8a 1.3 kVA 2.4 kVA 3.1 kVA 4 kVA soperating apparent power at AC-8a 1.3 kVA 2.4 kVA 3.1 kVA 4 kVA soperating apparent po		4 kW
- at 400 V rated value - at 500 V rated value - at 690 V rated value - at 230 V rated value - at 230 V rated value - at 400 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value - at 400 V rated value - at 690 V rated value	• at AC-3	
- at 500 V rated value - at 690 V rated value - at 230 V rated value - at 230 V rated value - at 400 V rated value - at 690 V rated value	— at 230 V rated value	2.2 kW
- at 690 V rated value - at 400 V rated value - at 400 V rated value - at 590 V rated value - at 590 V rated value - at 690 V rated value - at 60 V C - at 60 V C - at 60 V C - at 70 V	— at 400 V rated value	4 kW
- at 690 V rated value - at 400 V rated value - at 400 V rated value - at 590 V rated value - at 590 V rated value - at 690 V rated value - at 60 V rated value -	— at 500 V rated value	4 kW
at AC-3e — at 230 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 690 V rated value — up to 230 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 690 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — in the for 5 switching at zero current maximum — il imited to 1 s switching at zero current maximum — il imited to 5 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60 s switching at zero current maximum — il imited to 60		
- at 230 V rated value - at 400 V rated value - at 690 V rated value - 2 kW - at 690 V rated value - 2 kW - up to 400 V for current peak value n=20 rated value - up to 500 V for current peak value n=20 rated value - up to 690 V for current peak value n=20 rated value - up to 690 V for current peak value n=20 rated value - up to 500 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 690 V for current peak value n=20 rated value - up to 690 V for current peak value n=30 ra		
- at 400 V rated value - at 500 V rated value - at 690 V rated value - 5.5 kW operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 690 V rated value operating apparent power at AC-8a • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • li		2.2 kW
- at 500 V rated value - at 690 V rated value 5.5 kW operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 230 V for current peak value n=30 rated value • up to 230 V for current peak value n=30 rated value • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 65 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s switching at zero current maximum • limited to 80 s		
operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value • up to 230 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 60 s switching at zero current maximum •		
operating power for approx. 200000 operating cycles at AC- • at 400 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 230 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 230 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 230 V for current peak value n=30 rated value • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero curr		
at 400 V rated value at 690 V rated value 2 kW operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum standard requency limited to 60 s switching at zero current maximum standard requency at DC 10 000 1/h operating frequency at AC-1 maximum 1 000 1/h		
• at 690 V rated value operating apparent power at AC-6a • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum		
operating apparent power at AC-6a • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 400 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited for 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching frequency • at DC • at DC • at AC-1 maximum 1 000 1/h	 at 400 V rated value 	2 kW
up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value thin team with stand current in cold operating state up to 40 °C ilimited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum	at 690 V rated value	2.5 kW
up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value 5.9 kVA operating apparent power at AC-6a up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C limited to 1 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum	operating apparent power at AC-6a	
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• up to 690 V for current peak value n=20 rated value operating apparent power at AC-6a • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum •	• up to 400 V for current peak value n=20 rated value	3.6 kVA
operating apparent power at AC-6a • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • tup to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero cur	• up to 500 V for current peak value n=20 rated value	4.6 kVA
up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum state up to 4 kVA 155 A; Use minimum cross-section acc. to AC-1 rated value 66 A; Use minimum cross-section acc. to AC-1 rated value 66 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 10 000 1/h operating frequency at AC-1 maximum 1 000 1/h	• up to 690 V for current peak value n=20 rated value	5.9 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 up to 690 V for current peak value n=30 rated value 4 kVA short-time withstand current in cold operating state up to 40 °C limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum <	operating apparent power at AC-6a	
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 up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching frequency at DC 10 000 1/h operating frequency at AC-1 maximum 1 000 1/h 	• up to 400 V for current peak value n=30 rated value	2.4 kVA
short-time withstand current in cold operating state up to 40 °C • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum for A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 10 000 1/h operating frequency • at AC-1 maximum 1 000 1/h	• up to 500 V for current peak value n=30 rated value	3.1 kVA
• limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching frequency • at DC 10 000 1/h 1000 1/h 1000 1/h	• up to 690 V for current peak value n=30 rated value	4 kVA
 limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s swi		
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 limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum To 400 1/h Limited to 60 s switching frequency at DC 10 000 1/h 10 000 1/h 10 000 1/h 	-	
 limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum 15 A; Use minimum cross-section acc. to AC-1 rated value acc. to AC-1 rated value at DC operating frequency at AC-1 maximum 1 000 1/h 	-	
● limited to 60 s switching at zero current maximum no-load switching frequency ● at DC 10 000 1/h operating frequency ● at AC-1 maximum 1 000 1/h	 limited to 10 s switching at zero current maximum 	
no-load switching frequency	-	
● at DC 10 000 1/h operating frequency ● at AC-1 maximum 1 000 1/h	limited to 60 s switching at zero current maximum	55 A; Use minimum cross-section acc. to AC-1 rated value
operating frequency ● at AC-1 maximum 1 000 1/h		
• at AC-1 maximum 1 000 1/h		10 000 1/h
	operating frequency	
• at AC-2 maximum 750 1/h	• at AC-1 maximum	1 000 1/h
TOU I/II	• at AC-2 maximum	750 1/h

• at AC-3 maximum	750 1/h
at AC-3e maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC rated value	24 V
operating range factor control supply voltage rated value of	
magnet coil at DC	
• initial value	0.8
full-scale value	1.1
design of the surge suppressor	diode
closing power of magnet coil at DC	4 W
holding power of magnet coil at DC	4 W
closing delay • at DC	30 100 ms
opening delay	30 100 HIS
• at DC	38 65 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
design of the auxiliary switch	on the front, non-detachable
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	
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	1A
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	1A
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 40 V rated value	2 A
at 110 V rated value at 125 V rated value	1 A 0.9 A
at 125 V rated value at 220 V rated value	0.9 A 0.3 A
at 220 V rated value at 600 V rated value	0.3 A 0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	aa., ontoining por 100 miniori (11 v, 1 min)
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	7.6 A
• at 600 V rated value	9 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	0.33 hp
— at 230 V rated value	1 hp
• for 3-phase AC motor	
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	7.5 hp

contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA
design of the fuse link	
for short-circuit protection of the main circuit	
with type of coordination 1 required	gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)
with type of assignment 2 required	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)
for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and
featoning mathed side by side mounting	backward by +/- 22.5° on vertical mounting surface
fastening method side-by-side mounting	Yes
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	70 mm 45 mm
width	
depth	121 mm
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	spring-loaded terminals
for auxiliary and control circuit	spring-loaded terminals
at contactor for auxiliary contacts	Spring-type terminals
of magnet coil	Spring-type terminals
type of connectable conductor cross-sections	
for main contacts	
— solid	2x (0.5 4 mm²)
— solid or stranded	2x (0,5 4 mm²)
finely stranded with core end processing	2x (0.5 2.5 mm²)
finely stranded without core end processing	2x (0.5 2.5 mm²)
for AWG cables for main contacts	2x (20 12)
connectable conductor cross-section for main contacts	()
• solid	0.5 4 mm²
stranded	0.5 4 mm²
finely stranded with core end processing	0.5 2.5 mm²
finely stranded with core end processing finely stranded without core end processing	0.5 2.5 mm²
·	0.0 2.0 Hilli
connectable conductor cross-section for auxiliary contacts • solid or stranded	0.5 4 mm ²
	0.5 4 mm ²
finely stranded with core end processing finely stranded without core and processing	0.5 2.5 mm ²
finely stranded without core end processing	0.5 2.5 mm²
type of connectable conductor cross-sections	
for auxiliary contacts	2.42
 — solid or stranded 	2x (0,5 4 mm²)
— finely stranded with core end processing	2x (0.5 2.5 mm²)
 finely stranded with core end processing finely stranded without core end processing for AWG cables for auxiliary contacts 	2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) 2x (20 12)

AWG number as coded connectable conductor cross section	
• for main contacts	20 12
 for auxiliary contacts 	20 12
Safety related data	
product function	
 mirror contact according to IEC 60947-4-1 	Yes
 positively driven operation according to IEC 60947-5-1 	No
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
 with high demand rate according to SN 31920 	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type 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



<u>KC</u>

General Product Approval

EMV

Test Certificates

Marine / Shipping





Special Test Certificate

Type Test Certificates/Test Report





Marine / Shipping











Miscellaneous

other

other

Railway

Dangerous goods

Environment

Confirmation

Special Test Certificate

Transport Information



Environmental Confirmations

Further information

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=3RT2016-2FB44-3MA0

Cax online generator

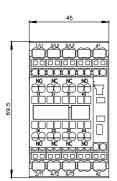
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-2FB44-3MA0

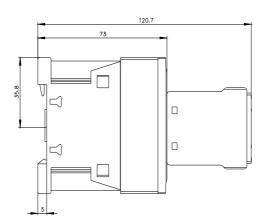
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2FB44-3M

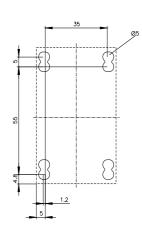
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2016-2FB44-3MA0&lang=en

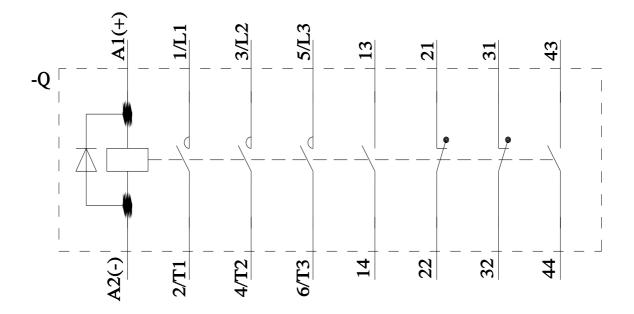
Characteristic: Tripping characteristics, I2t, Let-through current

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-2FB44-3MA0&objecttype=14&gridview=view1









last modified: 1/24/2025 🖸