



power contactor, AC-3e/AC-3 265 A, 132 kW / 400 V AC (50-60 Hz) / DC U_c: 440-480 V 3-pole, auxiliary contacts 2 NO + 2 NC drive: conventional main circuit: busbar control and auxiliary circuit: spring-loaded terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
General technical data	
size of contactor	S10
product extension	
• function module for communication	No
• auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	54 W
• at AC in hot operating state per pole	18 W
• without load current share typical	7.4 W
type of calculation of power loss current-dependent	quadratic
insulation voltage	
• of main circuit with degree of pollution 3 rated value	1 000 V
• of auxiliary circuit with degree of pollution 3 rated value	500 V
surge voltage resistance	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	8,5 g / 5 ms, 4,2 g / 10 ms
• at DC	8,5 g / 5 ms, 4,2 g / 10 ms
shock resistance with sine pulse	
• at AC	13,4 g / 5 ms, 6,5 g / 10 ms
• at DC	13,4 g / 5 ms, 6,5 g / 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 (day/month/year)	05/01/2012
SVHC substance name	Lead CAS-No. 7439-92-1
Net Weight	6.592 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 maximum	95 %
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
number of NC contacts for main contacts	0
operating voltage	
• at AC-3 rated value maximum	1 000 V
• at AC-3e rated value maximum	1 000 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	330 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	330 A
— up to 690 V at ambient temperature 60 °C rated value	300 A
— up to 1000 V at ambient temperature 40 °C rated value	150 A
— up to 1000 V at ambient temperature 60 °C rated value	150 A
• at AC-3	
— at 400 V rated value	265 A
— at 500 V rated value	265 A
— at 690 V rated value	265 A
— at 1000 V rated value	95 A
• at AC-3e	
— at 400 V rated value	265 A
— at 500 V rated value	265 A
— at 690 V rated value	265 A
— at 1000 V rated value	95 A
• at AC-4 at 400 V rated value	230 A
• at AC-5a up to 690 V rated value	290 A
• at AC-5b up to 400 V rated value	219 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	265 A
— up to 400 V for current peak value n=20 rated value	265 A
— up to 500 V for current peak value n=20 rated value	265 A
— up to 690 V for current peak value n=20 rated value	265 A
— up to 1000 V for current peak value n=20 rated value	95 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	184 A
— up to 400 V for current peak value n=30 rated value	184 A
— up to 500 V for current peak value n=30 rated value	184 A
— up to 690 V for current peak value n=30 rated value	184 A
— up to 1000 V for current peak value n=30 rated value	95 A
minimum cross-section in main circuit at maximum AC-1 rated value	185 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	117 A
• at 690 V rated value	105 A
operational current	
• at 1 current path at DC-1	

— at 24 V rated value	300 A
— at 60 V rated value	300 A
— at 110 V rated value	33 A
— at 220 V rated value	3.8 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.6 A
● with 2 current paths in series at DC-1	
— at 24 V rated value	300 A
— at 60 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	300 A
— at 440 V rated value	4 A
— at 600 V rated value	2 A
● with 3 current paths in series at DC-1	
— at 24 V rated value	300 A
— at 60 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	300 A
— at 440 V rated value	11 A
— at 600 V rated value	5.2 A
● at 1 current path at DC-3 at DC-5	
— at 24 V rated value	300 A
— at 60 V rated value	11 A
— at 110 V rated value	3 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.18 A
— at 600 V rated value	0.125 A
● with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	300 A
— at 60 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	2.5 A
— at 440 V rated value	0.65 A
— at 600 V rated value	0.37 A
● with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	300 A
— at 60 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	300 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
operating power	
● at AC-3	
— at 230 V rated value	75 kW
— at 400 V rated value	132 kW
— at 500 V rated value	160 kW
— at 690 V rated value	250 kW
— at 1000 V rated value	132 kW
● at AC-3e	
— at 230 V rated value	75 kW
— at 400 V rated value	132 kW
— at 500 V rated value	160 kW
— at 690 V rated value	250 kW
— at 1000 V rated value	132 kW
operating power for approx. 200000 operating cycles at AC-4	
● at 400 V rated value	66 kW
● at 690 V rated value	102 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 1000 V for current peak value n=20 rated value	100 kVA 180 kVA 220 kVA 310 kVA 160 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 1000 V for current peak value n=30 rated value	70 kVA 120 kVA 150 kVA 220 kVA 160 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 60 s switching at zero current maximum	4 880 A; Use minimum cross-section acc. to AC-1 rated value 4 045 A; Use minimum cross-section acc. to AC-1 rated value 2 785 A; Use minimum cross-section acc. to AC-1 rated value 1 664 A; Use minimum cross-section acc. to AC-1 rated value 1 276 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency • at AC • at DC	2 000 1/h 2 000 1/h
operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3e — maximum • at AC-4 maximum	800 1/h 250 1/h 500 1/h 500 1/h 130 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value	440 ... 480 V 440 ... 480 V
control supply voltage at DC rated value	440 ... 480 V
operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value	0.8 1.1
operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz	0.8 ... 1.1 0.8 ... 1.1
design of the surge suppressor	with varistor
apparent pick-up power • at minimum rated control supply voltage at AC — at 50 Hz — at 60 Hz • at maximum rated control supply voltage at AC — at 60 Hz — at 50 Hz	490 VA 490 VA 590 VA 590 VA
apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz	590 VA 590 VA
inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz	0.9 0.9
apparent holding power • at minimum rated control supply voltage at DC • at maximum rated control supply voltage at DC	6.1 VA 7.4 VA
apparent holding power	

• at minimum rated control supply voltage at AC — at 50 Hz — at 60 Hz • at maximum rated control supply voltage at AC — at 50 Hz — at 60 Hz	5.6 VA 5.6 VA 6.7 VA 6.7 VA
inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz	0.9 0.9
closing power of magnet coil at DC	650 W
holding power of magnet coil at DC	7.4 W
closing delay • at AC • at DC	30 ... 95 ms 30 ... 95 ms
opening delay • at AC • at DC	40 ... 80 ms 40 ... 80 ms
arcing time	10 ... 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
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 • at 400 V rated value • at 500 V rated value • at 690 V rated value	6 A 3 A 2 A 1 A
operational current at DC-12 • 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	10 A 6 A 6 A 3 A 2 A 1 A 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 600 V rated value	10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
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 • at 600 V rated value	240 A 242 A
yielded mechanical performance [hp] • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value	75 hp 100 hp 200 hp 250 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 - with type of coordination 2 required - for short-circuit protection of the auxiliary switch required	gG: 500 A (690 V, 100 kA) gG: 400 A (690 V, 100 kA), aM: 315 A (690 V, 50 kA), BS88: 400 A (415 V, 50 kA) gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
fastening method side-by-side mounting	Yes
fastening method	screw fixing
height	210 mm
width	145 mm
depth	202 mm
required spacing - with side-by-side mounting - forwards 20 mm - upwards 10 mm - downwards 10 mm - at the side 0 mm - for grounded parts - forwards 20 mm - upwards 10 mm - at the side 10 mm - downwards 10 mm - for live parts - forwards 20 mm - upwards 10 mm - downwards 10 mm - at the side 10 mm	
Connections/ Terminals	
type of electrical connection - for main current circuit - for auxiliary and control circuit - at contactor for auxiliary contacts - of magnet coil	Connection bar spring-loaded terminals Spring-type terminals Spring-type terminals
width of connection bar	25 mm
thickness of connection bar	6 mm
diameter of holes	11 mm
number of holes	1
type of connectable conductor cross-sections for AWG cables for main contacts	2/0 ... 500 kcmil
connectable conductor cross-section for main contacts stranded	70 ... 240 mm²
connectable conductor cross-section for auxiliary contacts - solid or stranded - finely stranded with core end processing - finely stranded without core end processing	0.25 ... 2.5 mm² 0.25 ... 1.5 mm² 0.25 ... 2.5 mm²
type of connectable conductor cross-sections - for auxiliary contacts - solid 2x (0.25 ... 2.5 mm²) - solid or stranded 2x (0.25 ... 2.5 mm²) - finely stranded with core end processing 2x (0.25 ... 1.5 mm²) - finely stranded without core end processing 2x (0.25 ... 2.5 mm²) - for AWG cables for auxiliary contacts 2x (24 ... 14)	
AWG number as coded connectable conductor cross section for auxiliary contacts	24 ... 14
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	IP00; IP20 with box terminal/cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover

Approvals Certificates

Environmental Product Declaration	
• global warming potential [CO2 eq] / during manufacturing	31.5 kg
• global warming potential [CO2 eq] / during sales	2.6 kg
• global warming potential [CO2 eq] / during operation	521 kg
• global warming potential [CO2 eq] / after end of life	-7.22 kg
• global warming potential [CO2 eq] / total	548 kg

Environment	General Product Approval
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[Environmental Confirmations](#)



Siemens
EcoTech



General Product Approval	EMV	Functional Safety
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[Type Examination Certificate](#)

Test Certificates	Maritime application	other
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other	Railway
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Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RT1065-2AR36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1065-2AR36>

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

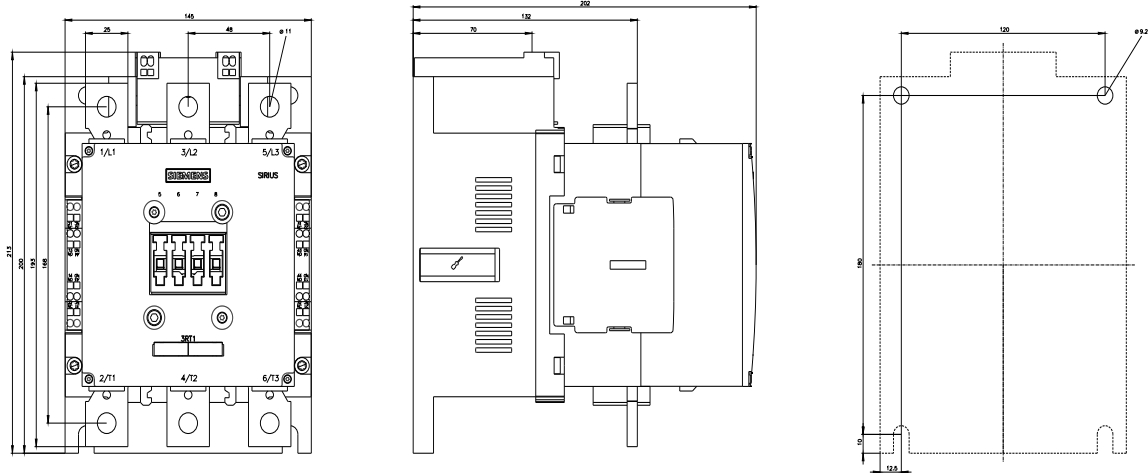
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Characteristic curves

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