



power contactor, AC-3, 51 A, 22 kW / 400 V, 4-pole, 400 V AC, 50 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, frame size: S2

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT23
General technical data	
size of contactor	S2
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	17.2 W
• at AC in hot operating state per pole	4.3 W
• without load current share typical	5.9 W
type of calculation of power loss current-dependent	quadratic
insulation voltage	
• of main circuit with degree of pollution 3 rated value	690 V
• of the auxiliary and control 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
shock resistance at rectangular impulse	
• at AC	11.8 g / 5 ms, 7.4 g / 10 ms
shock resistance with sine pulse	
• at AC	18.5 g / 5 ms, 11.6 g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibition (day/month/year)	10/01/2014
Net Weight	1.132 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	4
number of NO contacts for main contacts	4
type of voltage for main current circuit	AC
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	60 A
• at AC-1 — up to 690 V at ambient temperature 40 °C rated value	60 A
— up to 690 V at ambient temperature 60 °C rated value	55 A
• at AC-3 — at 400 V rated value	51 A
— at 690 V rated value	24 A
• at AC-4 at 400 V rated value	41 A
minimum cross-section in main circuit at maximum AC-1 rated value	25 mm ²
operational current	
• at 1 current path at DC-1 — at 24 V rated value	55 A
— at 60 V rated value	23 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
• with 2 current paths in series at DC-1 — at 24 V rated value	55 A
— at 60 V rated value	55 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
• with 3 current paths in series at DC-1 — at 24 V rated value	55 A
— at 60 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	45 A
— at 440 V rated value	2.9 A
• at 1 current path at DC-3 at DC-5 — at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.1 A
• with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value	45 A
— at 60 V rated value	45 A
— at 110 V rated value	25 A
— at 220 V rated value	5 A
— at 440 V rated value	0.27 A
• with 3 current paths in series at DC-3 at DC-5 — at 24 V rated value	45 A
— at 60 V rated value	45 A
— at 110 V rated value	45 A
— at 220 V rated value	25 A
— at 440 V rated value	0.6 A
operating power	
• at AC-3 at 400 V rated value	22 kW
• at AC-4 at 400 V rated value	22 kW
short-time withstand current in cold operating state up to 40 °C	
• limited to 1 s switching at zero current maximum	628 A; Use minimum cross-section acc. to AC-1 rated value

• 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	628 A; Use minimum cross-section acc. to AC-1 rated value 468 A; Use minimum cross-section acc. to AC-1 rated value 282 A; Use minimum cross-section acc. to AC-1 rated value 227 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
Control circuit/ Control	
type of voltage	AC
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• at 50 Hz rated value	400 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
apparent pick-up power of magnet coil at AC	
• at 50 Hz	190 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.72
apparent holding power of magnet coil at AC	
• at 50 Hz	16 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.37
closing delay	
• at AC	10 ... 80 ms
opening delay	
• at AC	10 ... 18 ms
arcing time	10 ... 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
• attachable • instantaneous contact	2 1
number of NO contacts for auxiliary contacts	1
• attachable • instantaneous contact	2 1
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	10 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 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	10 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	
contact rating of auxiliary contacts according to UL	A600 / P600
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: 160 A (690 V, 100 kA), aM: 80 A (690 V, 100 kA), BS88: 125 A (415 V, 80 kA) gG: 80 A (690 V, 100 kA), aM: 50 A (690 V, 100 kA), BS88: 63 A (415 V, 80 kA) gG: 10 A (690 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 side-by-side mounting	Yes
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	114 mm
width	55 mm
depth	130 mm
required spacing - with side-by-side mounting - forwards - upwards - downwards - at the side - for grounded parts - forwards - upwards - at the side - downwards - for live parts - forwards - upwards - downwards - at the side	10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 6 mm 10 mm 10 mm 10 mm 10 mm 6 mm
Connections/ Terminals	
type of electrical connection - for main current circuit - for auxiliary and control circuit - at contactor for auxiliary contacts - of magnet coil	screw-type terminals screw-type terminals Screw-type terminals screw terminal
type of connectable conductor cross-sections - for main contacts - solid or stranded - finely stranded with core end processing - for AWG cables for main contacts	2x (1 ... 35 mm²), 1x (1 ... 50 mm²) 2x (1 ... 25 mm²), 1x (1 ... 35 mm²) 2x (18 ... 2), 1x (18 ... 1)
connectable conductor cross-section for main contacts - solid or stranded - finely stranded with core end processing	1 ... 50 mm² 1 ... 35 mm²
connectable conductor cross-section for auxiliary contacts - solid or stranded - finely stranded with core end processing	0.5 ... 2.5 mm² 0.5 ... 2.5 mm²
type of connectable conductor cross-sections - for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing - for AWG cables for auxiliary contacts	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (20 ... 16), 2x (18 ... 14)
AWG number as coded connectable conductor cross section for main contacts	18 ... 1

AWG number as coded connectable conductor cross section for auxiliary contacts	20 ... 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
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
Communication/ Protocol	
product function bus communication	No
Approvals Certificates	
Environmental Product Declaration	
• global warming potential [CO2 eq] / during manufacturing	4.83 kg
• global warming potential [CO2 eq] / during operation	297 kg
• global warming potential [CO2 eq] / after end of life	-0.64 kg
• global warming potential [CO2 eq] / total	302 kg
Environment	General Product Approval

[Environmental Confirmations](#)



EMV	Test Certificates	Maritime application
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Maritime application	other
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[Confirmation](#)



Railway	Dangerous goods
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[Special Test Certificate](#)

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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=3RT2336-1AV00-4AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2336-1AV00-4AA0>

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

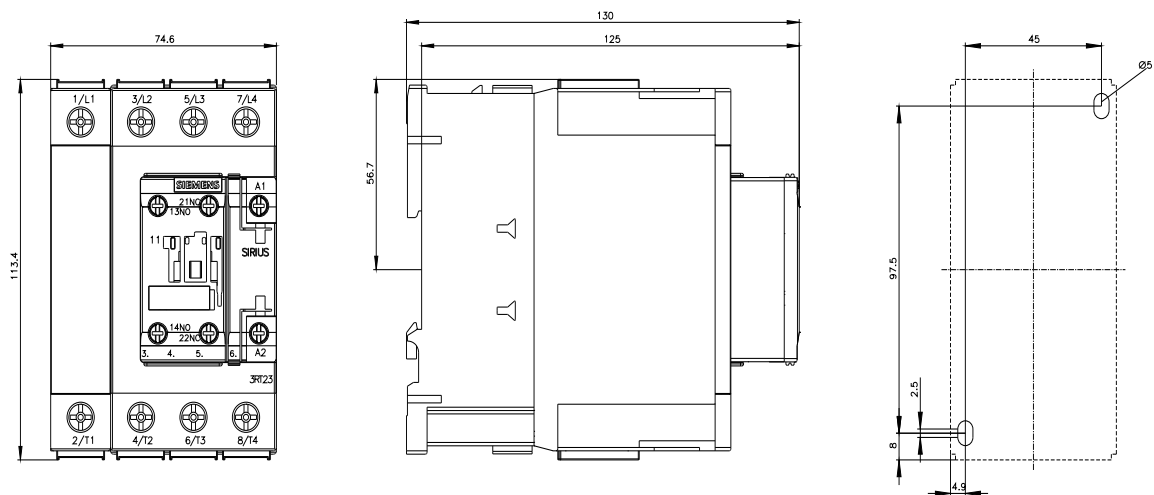
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Cax online generator

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Characteristic curves

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