



contactor AC-1, 18 A, 400 V / 40 °C, 4-pole, 24 V DC, screw terminal, size: S00

product brand name	SIRIUS
product designation	Contactor
product type designation	3RT23
General technical data	
size of contactor	S00
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	4.4 W
• at AC in hot operating state per pole	1.1 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 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 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	30 000 000
• 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
Net Weight	292 g
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	18 A
• at AC-1 — up to 690 V at ambient temperature 40 °C rated value	18 A
— up to 690 V at ambient temperature 60 °C rated value	16 A
• at AC-3 — at 400 V rated value	9 A
• at AC-4 at 400 V rated value	8.5 A
minimum cross-section in main circuit at maximum AC-1 rated value	2.5 mm ²
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	16 A
— at 60 V rated value	16 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	16 A
— at 60 V rated value	16 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	16 A
— at 60 V rated value	16 A
— at 110 V rated value	16 A
— at 220 V rated value	16 A
— at 440 V rated value	1.3 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	16 A
— 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	
— at 24 V rated value	16 A
— 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	16 A
— at 60 V rated value	16 A
— at 110 V rated value	16 A
— at 220 V rated value	1.5 A
— at 440 V rated value	0.2 A
operating power	
• at AC-3 at 400 V rated value	4 kW
• at AC-4 at 400 V rated value	4 kW
no-load switching frequency	
• at DC	10 000 1/h
operating frequency at AC-1 maximum	1 000 1/h
Control circuit/ Control	
type of voltage	DC
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
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	
• at DC	7 ... 13 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	
• attachable	2
number of NO contacts for auxiliary contacts	
• attachable	2
Short-circuit protection	
design of the fuse link	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 35 A (690 V, 100 kA)
— with type of coordination 2 required	gG: 20 A (690 V, 100 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	58 mm
width	45 mm
depth	73 mm
required spacing	
• with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
• for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
• at contactor for auxiliary contacts	Screw-type terminals
• of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ²
— solid or stranded	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ²
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• for AWG cables for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
connectable conductor cross-section for main contacts	
• solid	0.5 ... 4 mm ²

• solid or stranded	0.5 ... 4 mm ²
• stranded	0.5 ... 4 mm ²
• finely stranded with core end processing	0.5 ... 2.5 mm ²
connectable conductor cross-section for auxiliary contacts	
• solid or stranded	0.5 ... 4 mm ²
• finely stranded with core end processing	0.5 ... 2.5 mm ²
type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
— solid or stranded	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ²
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• for AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
AWG number as coded connectable conductor cross-section for main contacts	20 ... 12
AWG number as coded connectable conductor cross-section for auxiliary contacts	20 ... 12

Safety related data

product function	
• mirror contact according to IEC 60947-4-1	Yes; with 3RH29
• 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
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Approvals Certificates

Environmental Product Declaration	
• global warming potential [CO ₂ eq] / during manufacturing	1.55 kg
• global warming potential [CO ₂ eq] / during operation	183 kg
• global warming potential [CO ₂ eq] / after end of life	-0.249 kg
• global warming potential [CO ₂ eq] / total	184 kg

Environment	General Product Approval
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[Environmental Confirmations](#)



General Product Approval	EMV	Test Certificates	Maritime application
		Type Test Certificate/Test Report	Special Test Certificate

Maritime application	other
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					Miscellaneous
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other	Railway	Dangerous goods
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	Confirmation	Special Test Certificate	Transport Information
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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=3RT2316-1BB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2316-1BB40>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2316-1BB40&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2316-1BB40>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)



