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Data sheet 3RT2316-1BB40



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 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 DC	6,7 g / 5 ms, 4,2 g / 10 ms
shock resistance with sine pulse	
● at DC	10,5 g / 5 ms, 6,6 g / 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 (day/month/year)	10/01/2009
Net Weight	278.8 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	

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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 mm²
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

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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 terminal
type of connectable conductor cross-sections	
● for main contacts	
— solid	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
— solid or stranded	2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm²
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
● for AWG cables for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
connectable conductor cross-section for main contacts	

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● solid	0.5 ... 4 mm²
● solid or stranded	0.5 ... 4 mm²
● stranded	0.5 ... 4 mm²
● finely stranded with core end processing	0.5 ... 2.5 mm²
connectable conductor cross-section for auxiliary contacts	
● solid or stranded	0.5 ... 4 mm²
● finely stranded with core end processing	0.5 ... 2.5 mm²
type of connectable conductor cross-sections	
● for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
— solid or stranded	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 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), 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
Approvals Certificates	
Environmental Product Declaration	
● global warming potential [CO2 eq] / during manufacturing	1.55 kg
● global warming potential [CO2 eq] / during operation	183 kg
● global warming potential [CO2 eq] / after end of life	-0.249 kg
● global warming potential [CO2 eq] / total	184 kg

Environment

Environmental Confirmations

General Product Approval

General Product Approval

EMV

Test Certificates

Special Test Certificate

Type Test Certificates/Test Report

Maritime application

Maritime application

other

Confirmation

other

Miscellaneous

Railway

Special Test Certificate

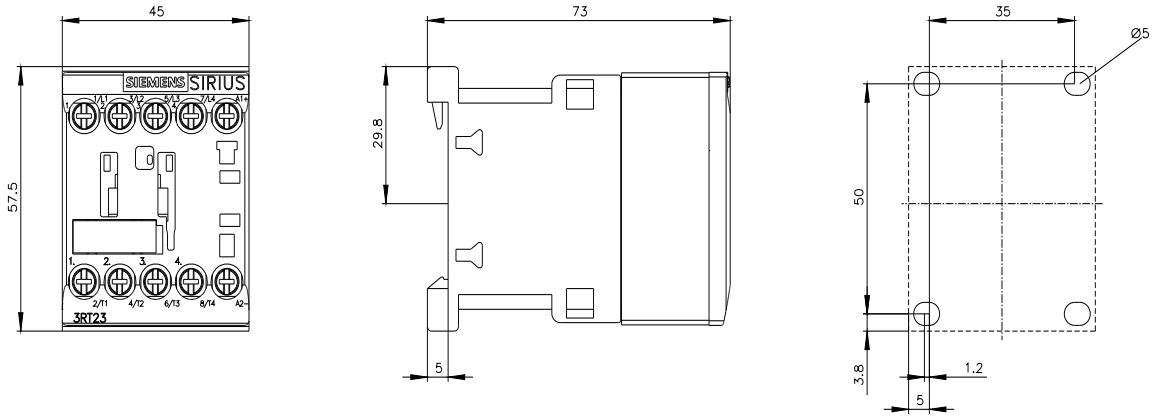
Dangerous goods

Transport Information

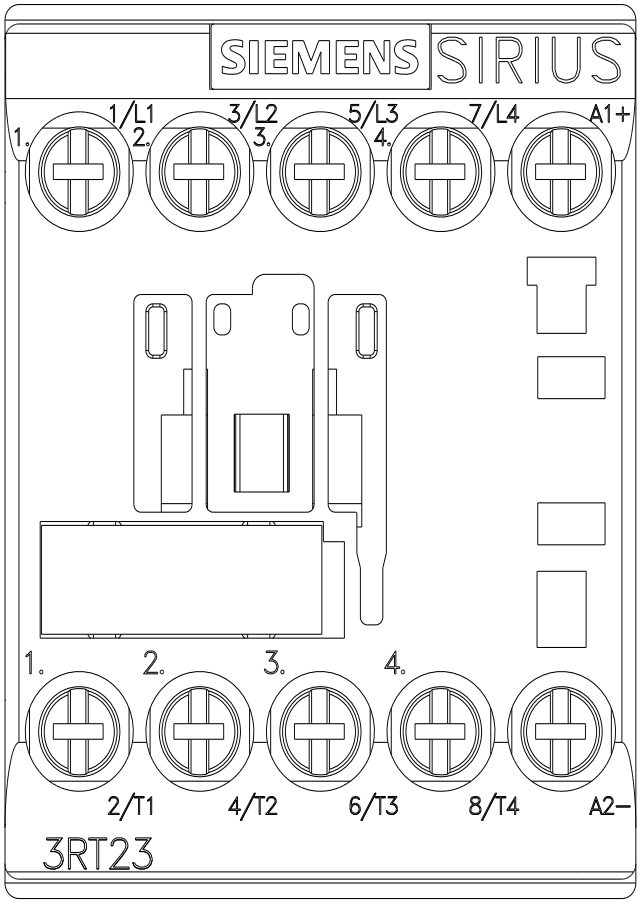
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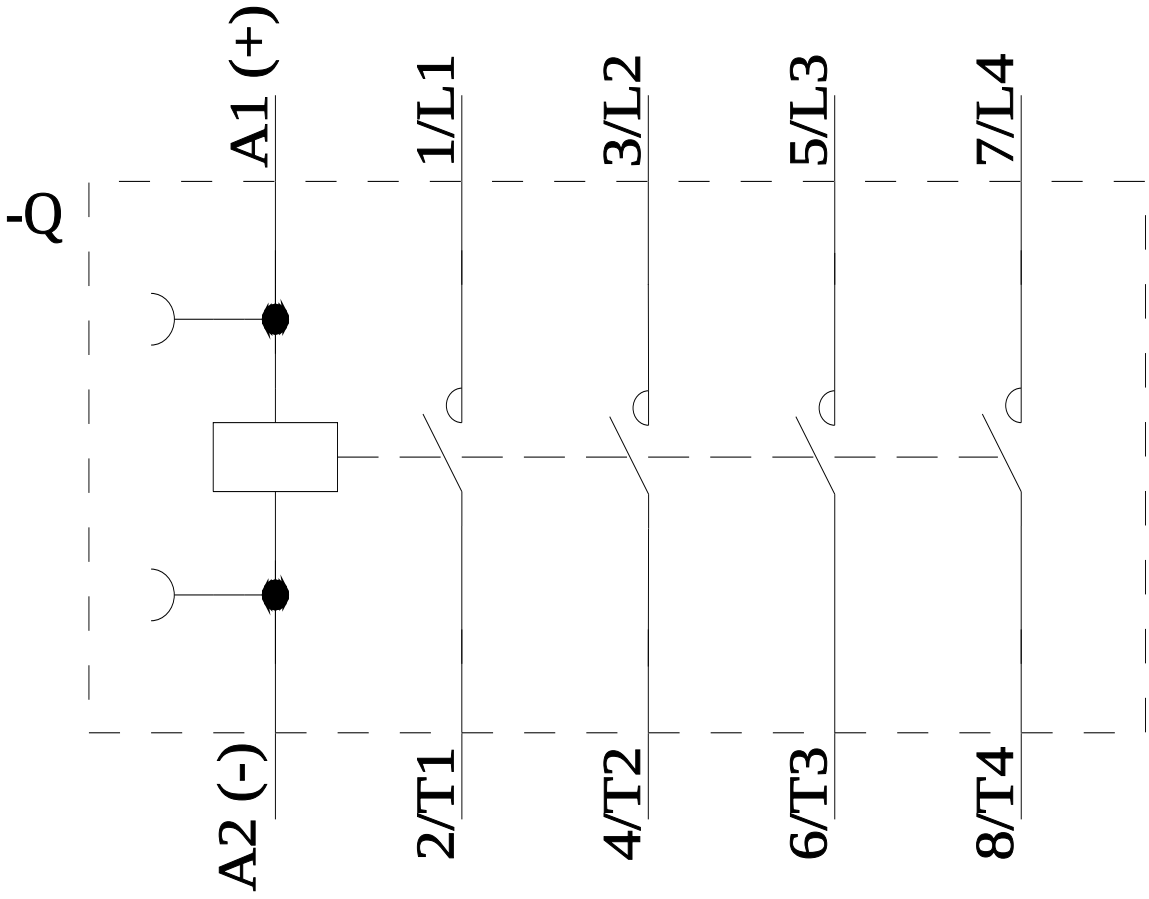
Further information

Information on the packaging
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Information for data generation and storage
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Information- and Downloadcenter (Catalogs, Brochures,…)
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Industry Mall (Online ordering system)
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Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
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