SIEMENS

Data sheet 3RT2337-1NP30

contactor AC-1, 110 A, 400 V / 40 °C, 4-pole, 175-280 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S2

product brand name	SIRIUS
product designation	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	38.8 W
● at AC in hot operating state per pole	9.7 W
● without load current share typical	1 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 AC	7.7g / 5 ms, 4.5g / 10 ms
● at DC	7.7g / 5 ms, 4.5g / 10 ms
shock resistance with sine pulse	
● at AC	12g / 5 ms, 7g / 10 ms
● at DC	12g / 5 ms, 7g / 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 Prohibitance (Date)	10/01/2014
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	1.26 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 %

maximum	
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	162 kg
global warming potential [CO2 eq] during manufacturing	6.76 kg
global warming potential [CO2 eq] during operation	157 kg
global warming potential [CO2 eq] after end of life	-1.08 kg
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	110 A
● at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	110 A
— up to 690 V at ambient temperature 60 °C rated value	95 A
● at AC-3	
— at 400 V rated value	38 A
minimum cross-section in main circuit at maximum AC-1 rated value	35 mm²
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
no-load switching frequency	
● at AC	1 500 1/h

● at DC	1 500 1/h
operating frequency at AC-1 maximum	700 1/h
Control circuit/ Control	
type of voltage	AC/DC
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
● at 50 Hz rated value	175 ... 280 V
● at 60 Hz rated value	175 ... 280 V
control supply voltage at DC rated value	175 ... 280 V
operating range factor control supply voltage rated value of magnet coil at DC	
● initial value	0.8
● full-scale value	1.1
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 ... 1.1
● at 60 Hz	0.8 ... 1.1
design of the surge suppressor	with varistor
inrush current peak	5 A
duration of inrush current peak	30 µs
locked-rotor current mean value	0.2 A
locked-rotor current peak	0.42 A
duration of locked-rotor current	230 ms
holding current mean value	6 mA
apparent pick-up power of magnet coil at AC	
● at 50 Hz	40 VA
● at 60 Hz	40 VA
apparent holding power of magnet coil at AC	
● at 50 Hz	2 VA
● at 60 Hz	2 VA
closing power of magnet coil at DC	23 W
holding power of magnet coil at DC	1 W
closing delay	
● at AC	35 ... 110 ms
● at DC	35 ... 110 ms
opening delay	
● at AC	30 ... 55 ms
● at DC	30 ... 55 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	2
● instantaneous contact	1
number of NO contacts for auxiliary contacts	1
● attachable	2
● instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
● at 230 V rated value	10 A
● at 400 V rated value	3 A
● at 500 V rated value	2 A
● at 690 V rated value	1 A
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	1 A
● at 600 V rated value	0.15 A

operational current at DC-13	
● at 24 V rated value	10 A
● at 48 V rated value	2 A
● at 110 V rated value	1 A
● at 125 V rated value	0.9 A
● at 220 V rated value	0.3 A
● at 600 V rated value	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	gG: 160 A (690 V, 100 kA)
— with type of assignment 2 required	gR: 80 A (690 V, 100 kA)
● for short-circuit protection of the auxiliary switch required	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	75 mm
depth	130 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 or stranded	2x (1 ... 35 mm²), 1x (1 ... 50 mm²)
● finely stranded with core end processing	2x (1 ... 25 mm²), 1x (1 ... 35 mm²)
connectable conductor cross-section for main contacts	
● solid or stranded	1 ... 50 mm²
● finely stranded with core end processing	1 ... 35 mm²
connectable conductor cross-section for auxiliary contacts	
● solid or stranded	0.5 ... 2.5 mm²
● finely stranded with core end processing	0.5 ... 2.5 mm²
● finely stranded without 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)
— 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)
AWG number as coded connectable conductor cross section	
• for main contacts	18 ... 1
• 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	

General Product Approval

CCC EG-Konf. UK CA UL KC EAC

EMV	Test Certificates		Marine / Shipping		
RCM	Special Test Certific-ate	Type Test Certific-ates/Test Report	ABS	BUREAU VERITAS	Lloyd's Register LRS

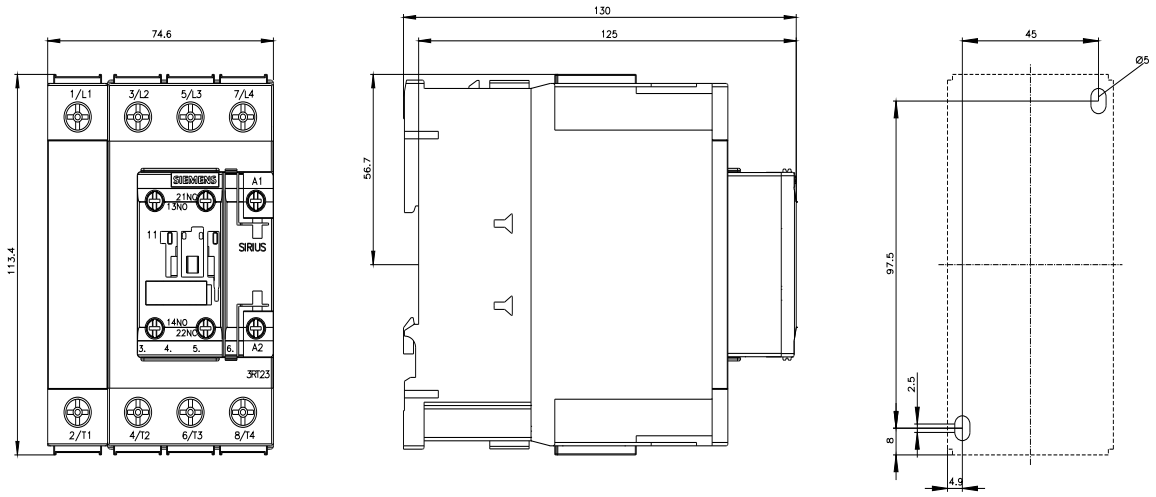
Marine / Shipping			other	Railway	Environment
PRS	RINA	RMRS	Confirmation	Special Test Certific-ate	EPD

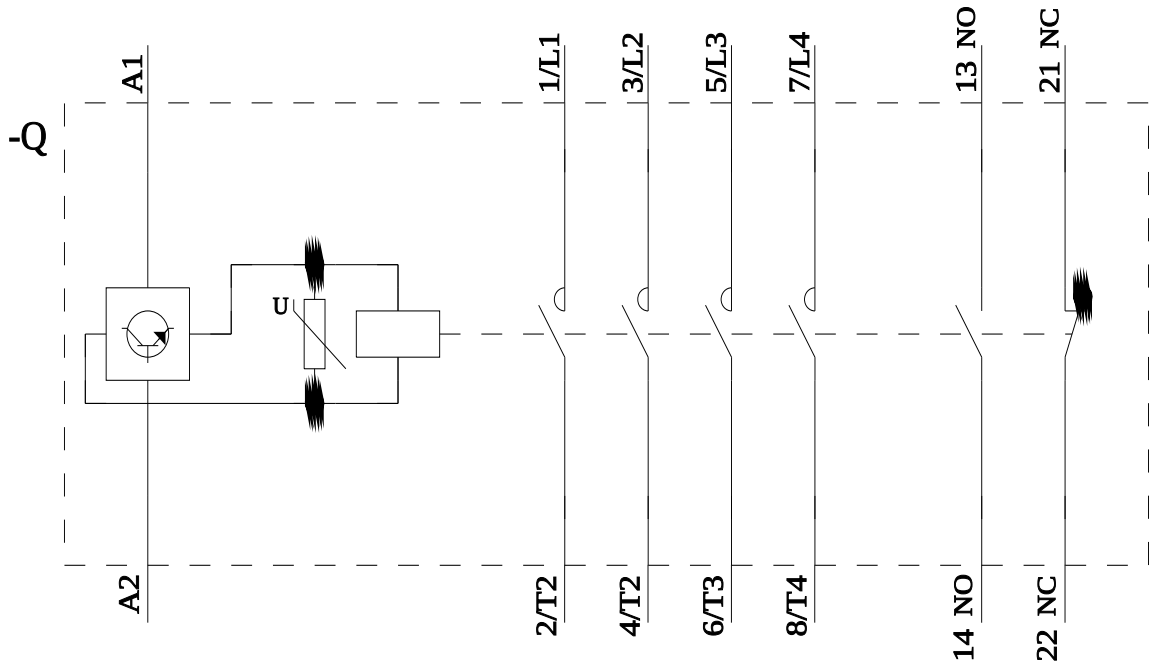
Environment

Environmental Con-firmations

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=3RT2337-1NP30
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2337-1NP30
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2337-1NP30
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2337-1NP30&lang=en
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RT2337-1NP30/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2337-1NP30&objecttype=14&gridview=view1





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