SIEMENS

Data sheet 3RT2544-1AF00

power contactor, AC-3, 65 A, 30 kW / 400 V, 4-pole, 110 V AC, 50 Hz, main contacts: 2 NO + 2 NC, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S3

product brand name	SIRIUS
product designation	contactor
product type designation	3RT25
General technical data	
size of contactor	S3
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 per pole	3.5 W
● without load current share typical	7.3 W
type of calculation of power loss depending on pole	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	690 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	6.7 g / 5 ms, 4.0 g / 10 ms
shock resistance with sine pulse	
● at AC	10.6 g / 5 ms, 6.3 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 (Date)	09/01/2017
Weight	2.023 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	2
number of NC contacts for main contacts	2
operational current	
● at AC-1 up to 690 V	
— at ambient temperature 40 °C rated value	100 A
— at ambient temperature 60 °C rated value	90 A
● at AC-2 at AC-3 at 400 V	
— per NO contact rated value	65 A
— per NC contact rated value	65 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	100 A
— at 110 V rated value	9 A
— at 220 V rated value	2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.4 A
● **with 2 current paths in series at DC-1**	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	10 A
— at 440 V rated value	1.8 A
● **at 1 current path at DC-3 at DC-5**	
— at 24 V per NC contact rated value	40 A
— at 24 V per NO contact rated value	40 A
— at 110 V per NC contact rated value	2.5 A
— at 110 V per NO contact rated value	2.5 A
— at 220 V per NC contact rated value	1 A
— at 220 V per NO contact rated value	1 A
— at 440 V per NC contact rated value	0.15 A
— at 440 V per NO contact rated value	0.15 A
● **with 2 current paths in series at DC-3 at DC-5**	
— at 24 V per NC contact rated value	100 A
— at 24 V per NO contact rated value	100 A
— at 110 V per NC contact rated value	100 A
— at 110 V per NO contact rated value	100 A
— at 220 V per NC contact rated value	7 A
— at 220 V per NO contact rated value	7 A
— at 440 V per NC contact rated value	0.42 A
— at 440 V per NO contact rated value	0.42 A
operating power at AC-2 at AC-3	
● at 230 V per NC contact rated value	18.5 kW
● at 230 V per NO contact rated value	18.5 kW
● at 400 V per NC contact rated value	30 kW
● at 400 V per NO contact rated value	30 kW
short-time withstand current in cold operating state up to 40 °C	
● limited to 1 s switching at zero current maximum	880 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 5 s switching at zero current maximum	880 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 10 s switching at zero current maximum	691 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 30 s switching at zero current maximum	437 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 60 s switching at zero current maximum	344 A; Use minimum cross-section acc. to AC-1 rated value
power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor	3.5 W
power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor	3.5 W
no-load switching frequency	
● at AC	5 000 1/h
operating frequency	
● at AC-1 maximum	900 1/h

Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
● at 50 Hz rated value	110 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	296 VA
● at 50 Hz	296 VA
inductive power factor with closing power of the coil	0.61
● at 50 Hz	0.61
apparent holding power of magnet coil at AC	19 VA
● at 50 Hz	19 VA
inductive power factor with the holding power of the coil	
● at 50 Hz	0.38
closing delay	
● at AC	13 ... 50 ms
opening delay	
● at AC	11 ... 21 ms
arcing time	10 ... 20 ms
control version of the switch operating mechanism	AC
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
● at 230 V rated value	6 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 60 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	
yielded mechanical performance [hp]	
● for 3-phase AC motor at 460/480 V rated value	25 hp
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: 250 A (690 V, 100 kA)
— with type of assignment 2 required	gR: 250 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	140 mm
width	70 mm
depth	152 mm
required spacing	
● with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
● for grounded parts	
— forwards	0 mm
— backwards	0 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
● for live parts	
— forwards	0 mm
— backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 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 (2.5 ... 16 mm²)
● stranded	2x (6 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²)
● solid or stranded	2x (2.5 ... 16 mm²); [2x (6 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²)]
● finely stranded with core end processing	2x (2.5 ... 35 mm²), 1x (2.5 ... 50 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	10 ... 2
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
Approvals Certificates	
General Product Approval	

KC

EMV	Test Certificates	Marine / Shipping

RCM

Type Test Certific-ates/Test Report

Special Test Certific-ate

ABS

DNV

LRS

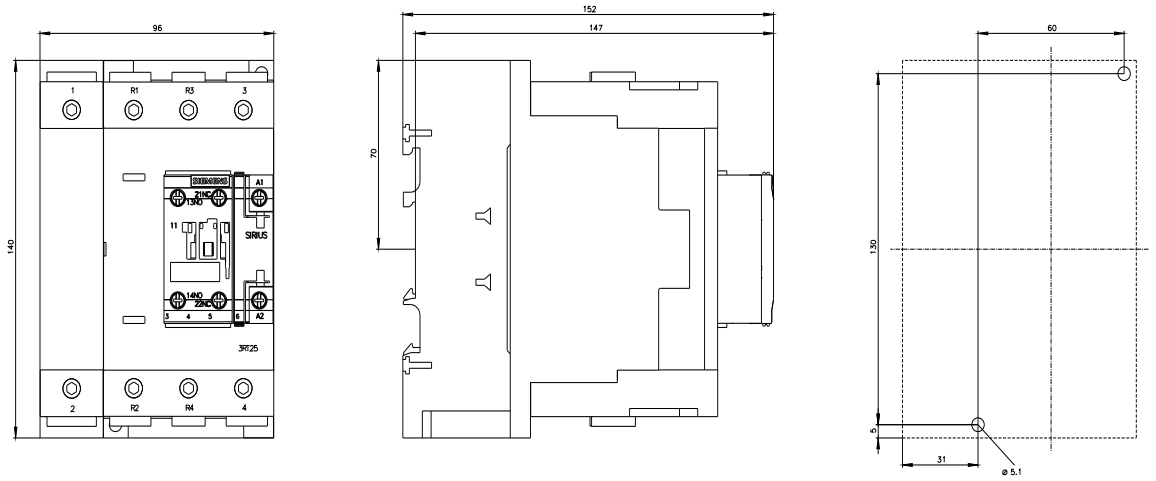
Marine / Shipping	other	Railway	Dangerous goods
PRS RINA RMRS	Confirmation	Special Test Certific-ate	Transport Information

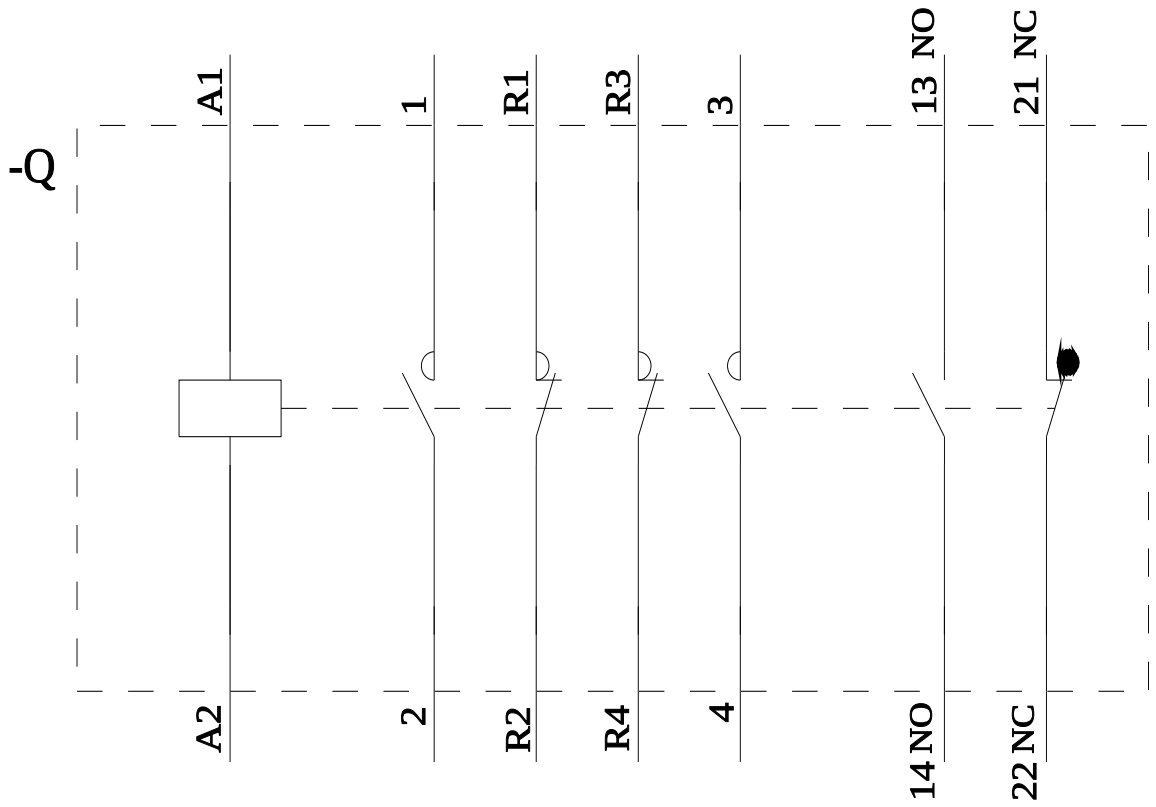
Environment

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=3RT2544-1AF00
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2544-1AF00
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2544-1AF00
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2544-1AF00&lang=en
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RT2544-1AF00/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2544-1AF00&objecttype=14&gridview=view1





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