SIEMENS

Data sheet 3RT2536-1NB30



power contactor, AC-3, 41 A, 22 kW / 400 V, 4-pole, 20-33 V AC/DC, 50/60 Hz, with integrated varistor, main contacts: 2 NO + 2 NC, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S2

product brand name	SIRIUS
product designation	contactor
product type designation	3RT25
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 per pole 	4 W
 without load current share typical 	2.4 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 auxiliary 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
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
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 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)	10/01/2014
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-40 +70 °C
during storage	-55 +80 °C
relative humidity minimum	10 %

relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
lain 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	70 A
— at ambient temperature 60 °C rated value	60 A
• at AC-2 at AC-3 at 400 V	
— per NO contact rated value	41 A
— per NC contact rated value	41 A
minimum cross-section in main circuit at maximum AC-1 rated value	25 mm²
operational current	
at 1 current path at DC-1	
— at 24 V rated value	60 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 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
• at 1 current path at DC-3 at DC-5	
— at 24 V per NC contact rated value	35 A
— at 24 V per NO contact rated value	35 A
 at 110 V per NC contact rated value 	1.25 A
 at 110 V per NO contact rated value 	2.5 A
— at 220 V per NC contact rated value	0.5 A
— at 220 V per NO contact rated value	1 A
— at 440 V per NC contact rated value	0.045 A
— at 440 V per NO contact rated value	0.1 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V per NC contact rated value	55 A
— at 24 V per NO contact rated value	55 A
 at 110 V per NC contact rated value 	12.5 A
 at 110 V per NO contact rated value 	25 A
 at 220 V per NC contact rated value 	2.5 A
— at 220 V per NO contact rated value	5 A
— at 440 V per NC contact rated value	0.135 A
— at 440 V per NO contact rated value	0.27 A
operating power at AC-2 at AC-3	
• at 230 V per NC contact rated value	15 kW
• at 230 V per NO contact rated value	15 kW
• at 400 V per NC contact rated value	22 kW
at 400 V per NO contact 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 	546 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	443 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	334 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	241 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 60 s switching at zero current maximum	196 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	4 W
operational current per conductor power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor	4 W
no-load switching frequency	
• at AC	500 1/h

• at DC	500 1/h
	000 1/11
operating frequency	350 1/h
at AC-1 maximum Control circuit/ Control	000 1/11
Control circuit/ Control	AOIDO
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
at 50 Hz rated value	20 33 V
at 60 Hz rated value	20 33 V
control supply voltage at DC rated value	
•	20 33 V
operating range factor control supply voltage rated value of	
magnet coil at DC	0.0
• 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	12 A
duration of inrush current peak	30 µs
locked-rotor current mean value	6.5 A
	12 A
locked-rotor current peak	
duration of locked-rotor current	230 ms
holding current mean value	105 mA
apparent pick-up power of magnet coil at AC	110 VA
• at 50 Hz	110 VA
• at 60 Hz	110 VA
inductive power factor with closing power of the coil	0.95
• at 50 Hz	0.95
• at 60 Hz	0.95
apparent holding power of magnet coil at AC	2.5 VA
● at 50 Hz	2.5 VA
● at 60 Hz	2.5 VA
inductive power factor with the holding power of the coil	0.95
● at 50 Hz	0.95
● at 60 Hz	0.95
closing power of magnet coil at DC	70 W
holding power of magnet coil at DC	1.5 W
closing delay	
• at AC	30 110 ms
• at DC	30 110 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	UC
residual current of the electronics for control with signal	
<0>	
 at AC at 230 V maximum permissible 	20 A
at DC at 24 V maximum permissible	20 A
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-12 maximum	
at 230 V rated value	6 A
at 400 V rated value at 500 V rated value	3 A
at 500 V rated value at 600 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	7.000 / 1 000
design of the fuse link	
for short-circuit protection of the main circuit	~C. 100 A (000 \ / 100 kA)
— with type of coordination 1 required	gG: 160 A (690 V, 100 kA)
— with type of assignment 2 required	gG: 80 A (690 V, 100 kA)
for short-circuit protection of the auxiliary switch required	fuse gG: 10 A
Installation/ mounting/ dimensions	4400
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
height	114 mm
width	75 mm
depth	130 mm
required spacing	
with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— unwards	0 mm
— upwards — downwards	0 mm
— downwards	0 mm
downwardsat the side	
downwardsat the sidefor grounded parts	0 mm 0 mm
— downwards— at the side• for grounded parts— forwards	0 mm 0 mm
 downwards at the side for grounded parts forwards backwards 	0 mm 0 mm 0 mm
 downwards at the side for grounded parts forwards backwards upwards 	0 mm 0 mm 0 mm 0 mm 50 mm
 downwards at the side for grounded parts forwards backwards upwards at the side 	0 mm 0 mm 0 mm 0 mm 50 mm
 downwards at the side for grounded parts forwards backwards upwards at the side downwards 	0 mm 0 mm 0 mm 0 mm 50 mm
 downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts 	0 mm 0 mm 0 mm 0 mm 50 mm 10 mm
 downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts forwards 	0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm
 downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts forwards backwards 	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm
 downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts forwards backwards upwards 	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 50 mm
 downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts forwards backwards upwards downwards 	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 50 mm
 downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts forwards backwards upwards at the side downwards 	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 50 mm
- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - backwards - upwards - torwards - torwards - at the side - downwards - at the side - downwards - downwards - at the side	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 50 mm
- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - at the side - downwards - forwards - forwards - backwards - upwards - at the side Connections/ Terminals type of electrical connection	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 50 mm 10 mm 50 mm 10 mm
- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - at the side Connections/ Terminals type of electrical connection • for main current circuit	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 0 mm 10 mm 50 mm 10 mm 50 mm
- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - at the side - downwards - forwards - forwards - backwards - upwards - at the side Connections/ Terminals type of electrical connection	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 50 mm 10 mm 50 mm 10 mm
- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - at the side Connections/ Terminals type of electrical connection • for main current circuit	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 0 mm 10 mm 50 mm 10 mm 50 mm
- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - backwards - upwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - backwards - upwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts	0 mm 0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 50 mm 10 mm 50 mm
- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - backwards - upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil	0 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 50 mm 10 mm 50 mm 0 mm 50 mm 50 mm 50 mm 50 mm 50 mm 50 mm

 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)	
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	
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		

General Product Ap-

<u>KC</u>

proval

Confirmation

EMV

Functional Saftey

Test Certificates

Marine / Shipping





Type Examination Certificate

Type Test Certificates/Test Report

Special Test Certific-<u>ate</u>



Marine / Shipping











Confirmation

other

Railway

Dangerous goods

Environment

Special Test Certificate

Transport Information

Environmental Confirmations

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

Industry Mall (Online ordering system)

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2536-1NB30

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

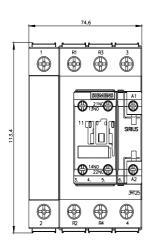
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

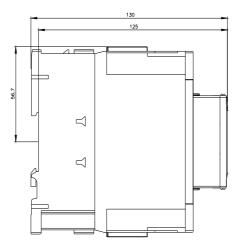
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2536-1NB30&lang=en

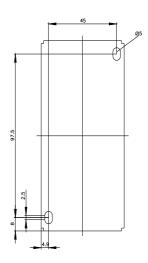
Characteristic: Tripping characteristics, I2t, Let-through current

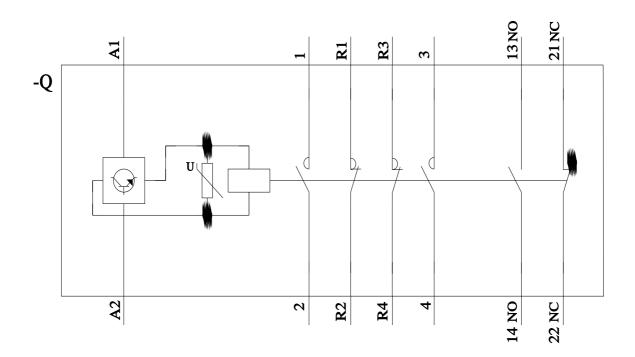
https://support.industry.siemens.com/cs/ww/en/ps/3RT2536-1NB30/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2536-1NB30&objecttype=14&gridview=view1









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