SIEMENS

Data sheet 3RT2536-1AH20



power contactor, AC-3, 41 A, 22 kW / 400 V, 4-pole, 48 V AC, 50/60 Hz, 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	6.5 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	11.8g / 5 ms, 7.4g / 10 ms
shock resistance with sine pulse	
• at AC	18.5g / 5 ms, 11.6g / 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
Weight	1.137 kg
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 %
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 	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 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
Iimited to 5 s switching at zero current maximum	443 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 10 s switching at zero current maximum	334 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 30 s switching at zero current maximum	241 A; Use minimum cross-section acc. to AC-1 rated value
Iimited 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 operational current per conductor	4 W
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	5 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
Control circuit/ Control	

type of voltage of the control supply voltage	AC
control supply voltage at AC	
at 50 Hz rated value	48 V
at 60 Hz rated value	48 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	210 VA
• at 50 Hz	210 VA
• at 60 Hz	188 VA
inductive power factor with closing power of the coil	0.69
• at 50 Hz	0.69
• at 60 Hz	0.65
apparent holding power of magnet coil at AC	17.2 VA
● at 50 Hz	17.2 VA
• at 60 Hz	16.5 VA
inductive power factor with the holding power of the coil	0.36
• at 50 Hz	0.36
• at 60 Hz	0.39
closing delay	
• at AC	10 80 ms
opening delay	
• at AC	10 18 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	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 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 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	gG: 80 A (690 V, 100 kA)
for short-circuit protection of the auxiliary switch required	fuse gG: 10 A
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 50022
height	114 mm
width	75 mm
depth	130 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	50 mm
— at the side	10 mm
— downwards	50 mm
• for live parts	
— forwards	0 mm
— backwards	0 mm
— upwards	50 mm
— downwards	50 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 (1 35 mm²), 1x (1 50 mm²)
 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	v.
mirror contact according to IEC 60947-4-1	Yes
positively driven operation according to IEC 60947-5-1	No
Electrical Safety	IDOO
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	







Confirmation



<u>KC</u>

General Product Approval

EMV

Test Certificates

Marine / Shipping





Type Test Certificates/Test Report

Special Test Certificate





Marine / Shipping

other











Confirmation

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,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2536-1AH20

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2536-1AH20}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2536-1AH20

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

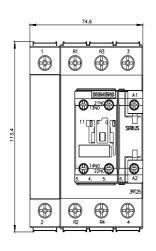
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2536-1AH20&lang=en

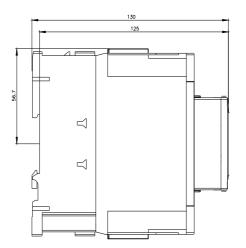
Characteristic: Tripping characteristics, I²t, Let-through current

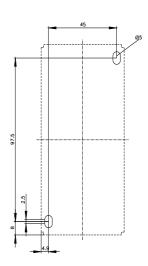
https://support.industry.siemens.com/cs/ww/en/ps/3RT2536-1AH20/char

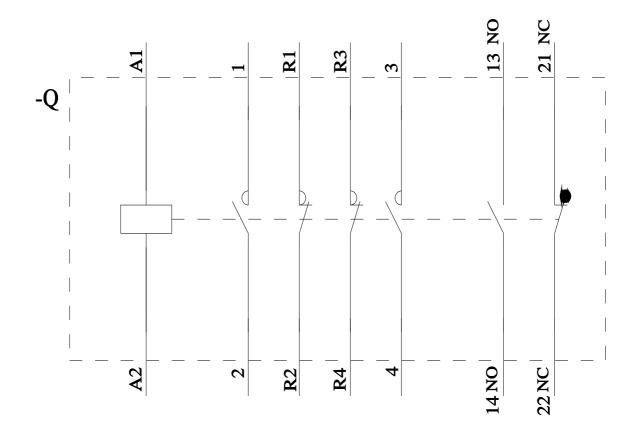
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2536-1AH20&objecttype=14&gridview=view1









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