SIEMENS

Data sheet 3RT2015-1AN61



Power contactor, AC-3 7 A, 3 kW / 400 V 1 NO, 200 V AC, 50 Hz 200-220 V, 60 Hz, 3-pole, Size S00, screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
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	1.2 W
• per pole	0.4 W
power loss [W] for rated value of the current without load current share typical	4.8 W
surge voltage resistance	
 of main circuit rated value 	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at AC	10,5g / 5 ms, 6,6g / 10 ms
mechanical service life (switching cycles)	
 of contactor typical 	30 000 000
 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 acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.10.2009 00:00:00
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature during operation	-25 +60 °C
ambient temperature during storage	-55 +80 °C
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage at AC-3 rated value maximum	690 V

operational current	
 at AC-1 at 400 V at ambient temperature 40 °C 	18 A
rated value	
• at AC-1	40.4
 — up to 690 V at ambient temperature 40 °C rated value 	18 A
— up to 690 V at ambient temperature 60 °C	16 A
rated value	
• at AC-3	
— at 400 V rated value	7 A
— at 500 V rated value	6 A
— at 690 V rated value	4.9 A
 at AC-4 at 400 V rated value 	6.5 A
 at AC-5a up to 690 V rated value 	15.8 A
 at AC-5b up to 400 V rated value 	5.8 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	4 A
 up to 400 V for current peak value n=20 rated value 	4 A
— up to 500 V for current peak value n=20 rated value	3.8 A
— up to 690 V for current peak value n=20 rated value	3.6 A
• at AC-6a	2.7 A
— up to 230 V for current peak value n=30 rated value	
— up to 400 V for current peak value n=30 rated value	2.7 A
— up to 500 V for current peak value n=30 rated value	2.5 A
— up to 690 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1	2.4 A
rated value	2.5 mm ²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	2.6 A
at 690 V rated value	1.8 A
operational current	
 at 1 current path at DC-1 	
— at 24 V rated value	15 A
— at 110 V rated value	1.5 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.42 A
— at 600 V rated value	0.42 A
with 2 current paths in series at DC-1	45.4
— at 24 V rated value	15 A
— at 110 V rated value	8.4 A
— at 220 V rated value	1.2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.5 A
 with 3 current paths in series at DC-1 at 24 V rated value 	15 A
— at 110 V rated value	15 A
— at 220 V rated value	15 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.7 A
operational current	0.77
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	15 A

— at 110 V rated value	0.1 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	15 A
— at 110 V rated value	0.25 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	15 A
— at 110 V rated value	15 A
— at 220 V rated value	1.2 A
— at 440 V rated value	0.14 A
— at 600 V rated value	0.14 A
operating power	
• at AC-3	
— at 230 V rated value	1.5 kW
— at 400 V rated value	3 kW
— at 500 V rated value	3 kW
— at 690 V rated value	4 kW
operating power for approx. 200000 operating cycles at AC-4	
 at 400 V rated value 	1.15 kW
• at 690 V rated value	1.15 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	1.5 kV·A
• up to 400 V for current peak value n=20 rated value	2.7 kV·A
• up to 500 V for current peak value n=20 rated value	3.3 kV·A
• up to 690 V for current peak value n=20 rated value	4.3 kV·A
operating apparent power at AC-6a	
 up to 230 V for current peak value n=30 rated value 	1 kV·A
 up to 400 V for current peak value n=30 rated value 	1.8 kV·A
 up to 500 V for current peak value n=30 rated value 	2.2 kV·A
 up to 690 V for current peak value n=30 rated value 	2.9 kV·A
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	120 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	86 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	67 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	52 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	43 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	10 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
at 50 Hz rated value	
	200 V
at 60 Hz rated value	200 V 220 V
at 60 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC	
operating range factor control supply voltage rated	
operating range factor control supply voltage rated value of magnet coil at AC	220 V
operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz	220 V 0.8 1.1
operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz	220 V 0.8 1.1
operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz apparent pick-up power of magnet coil at AC	0.8 1.1 0.85 1.1
operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz apparent pick-up power of magnet coil at AC • at 50 Hz	220 V 0.8 1.1 0.85 1.1 26.4 V·A
operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz	220 V 0.8 1.1 0.85 1.1 26.4 V·A
operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil	220 V 0.8 1.1 0.85 1.1 26.4 V·A 31.7 V·A

apparent holding power of magnet coil at AC	
● at 50 Hz	4.4 V·A
• at 60 Hz	4.8 V·A
inductive power factor with the holding power of the coil	
● at 50 Hz	0.24
● at 60 Hz	0.25
closing delay	
• at AC	9 35 ms
opening delay	
• at AC	3.5 14 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
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	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	4.8 A
at 600 V rated value	6.1 A
yielded mechanical performance [hp]	
 for single-phase AC motor 	
 at 110/120 V rated value 	0.25 hp
— at 230 V rated value	0.75 hp
• for 3-phase AC motor	
 at 200/208 V rated value 	1.5 hp
 at 220/230 V rated value 	2 hp
 at 460/480 V rated value 	3 hp
— at 575/600 V rated value	5 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the fuse link	
• for short-circuit protection of the main circuit	
 — with type of coordination 1 required 	gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)
— with type of assignment 2 required	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)

 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 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	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
side-by-side mounting	Yes
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	TO HILL
— forwards	10 mm
	10 mm
— upwards — 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	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)
at AWG cables for main contacts	2x (20 16), 2x (18 14), 2x 12
connectable conductor cross-section for main contacts	
• solid	0.5 4 mm ²
• stranded	0.5 4 mm ²
finely stranded with core end processing	0.5 2.5 mm²
connectable conductor cross-section for auxiliary contacts	
 solid or stranded 	0.5 4 mm ²
finely stranded with core end processing	0.5 2.5 mm²
type of connectable conductor cross-sections	
 for auxiliary contacts 	
— 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)
at 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	
B10 value with high demand rate acc. to SN 31920	1 000 000
2.5 7aia5 mai nigh aomana iato aoo. to on o 1020	. 000 000

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proportion of dangerous failures	
 with low demand rate acc. to SN 31920 	40 %
 with high demand rate acc. to SN 31920 	73 %
failure rate [FIT] with low demand rate acc. to SN 31920	100 FIT
product function	
mirror contact acc. to IEC 60947-4-1	Yes; with 3RH29
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
suitability for use safety-related switching OFF	Yes

Certificates/ approvals

General Product Approval

EMC













Declaration of Conformity

Test Certificates

Marine / Shipping

Miscellaneous



Type Test **Certificates/Test** Report

Special Test Certificate





Marine / Shipping











Confirmation

other

other



Confirmation

Further information

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=3RT2015-1AN61

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-1AN61

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

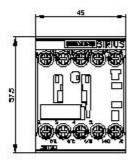
https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1AN61

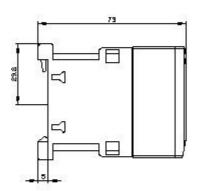
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-1AN61&lang=en

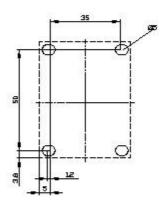
Characteristic: Tripping characteristics, I2t, Let-through current

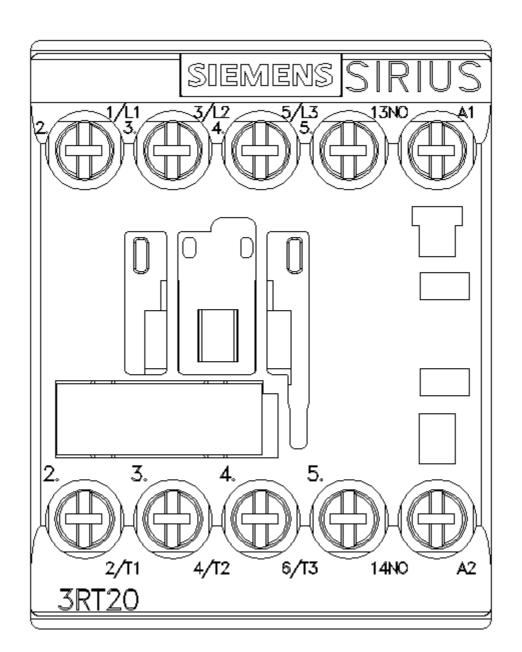
https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1AN61/char

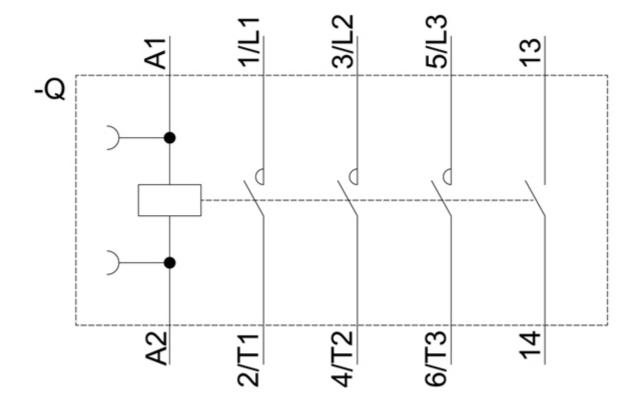
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2015-1AN61&objecttype=14&gridview=view1











last modified: 1/18/2021 ☑