SIEMENS

Data sheet 3RT2015-2AF02



Power contactor, AC-3 7 A, 3 kW / 400 V 1 NC, 110 V AC, 50 / 60 Hz 3-pole, Size S00 Spring-type 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	4.2 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
 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 rated value at AC-1 	18 A
— up to 690 V at ambient temperature 40 °C rated value	18 A
— up to 690 V at ambient temperature 60 °C rated value	16 A
• 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 valueat AC-6a	3.6 A
 up to 230 V for current peak value n=30 rated value 	2.7 A
— 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	2.4 A
minimum cross-section in main circuit at maximum AC-1 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	45 A
— at 24 V rated value — at 110 V rated value	15 A 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 	
— 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	
at 1 current path at DC-3 at DC-5 at 24 V rated value.	15 A
— at 24 V rated value — at 110 V rated value	15 A 0.1 A
 at 110 v rated value with 2 current paths in series at DC-3 at DC-5 	V.1 A
— at 24 V rated value	15 A

	— at 110 V rated value	0.25 A
= at 10 V rated value	 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
operating power at ACQ2 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 500 V rated value — at 600 V rated value operating power for approx. 200000 operating cycles at ACQ4 et 400 V rated value — at 600 V rated value — up to 600 V for current peak value n=20 rated value — up to 600 V for current peak value n=20 rated value — up to 600 V for current peak value n=30 rated va		
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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 • at 60 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 60 Hz inductive power factor with the holding power of the		
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● at 60 Hz apparent holding power of magnet coil at AC ● at 50 Hz ● at 60 Hz • at 60 Hz inductive power factor with the holding power of the		
apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with the holding power of the		
 at 50 Hz at 60 Hz inductive power factor with the holding power of the 		0.75
• at 60 Hz inductive power factor with the holding power of the	apparent holding power of magnet coil at AC	
inductive power factor with the holding power of the	● at 50 Hz	4.2 V·A
	● at 60 Hz	3.3 V·A
	inductive power factor with the holding power of the	

a at 50 Hz	0.25
• at 50 Hz	0.25
• at 60 Hz	0.25
closing delay	0.05
• at AC	9 35 ms
opening delay	- · · ·
• at AC	7 13 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC 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
	according to Diri Liv our 13

side-by-side mounting	Yes
height	70 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	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
• for main current circuit	spring-loaded terminals
for auxiliary and control circuit	spring-loaded terminals
at contactor for auxiliary contacts	Spring-type terminals
• of magnet coil	Spring-type terminals
type of connectable conductor cross-sections	
• for main contacts	0 (0.5 4
— solid	2x (0.5 4 mm²)
— solid or stranded	2x (0,5 4 mm²)
— finely stranded with core end processing	2x (0.5 2.5 mm²)
 finely stranded without core end processing at AWG cables for main contacts 	2x (0.5 2.5 mm²) 2x (20 12)
connectable conductor cross-section for main	ZA (20 12)
contacts	
• solid	0.5 4 mm²
• stranded	0.5 4 mm²
 finely stranded with core end processing 	0.5 2.5 mm²
 finely stranded without core end processing 	0.5 2.5 mm²
connectable conductor cross-section for auxiliary contacts	
solid or stranded	0.5 4 mm²
finely stranded with core end processing	0.5 2.5 mm ²
finely stranded without core end processing	0.5 2.5 mm ²
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid or stranded	2x (0,5 4 mm²)
 finely stranded with core end processing 	2x (0.5 2.5 mm²)
finely stranded without core end processing	2x (0.5 2.5 mm²)
at AWG cables for auxiliary contacts	2x (20 12)
AWG number as coded connectable conductor cross	
section	
• for main contacts	20 12
for auxiliary contacts	20 12
Safety related data	
product function mirror contact acc. to IEC 60947-4-1	Yes
B10 value with high demand rate acc. to SN 31920	1 000 000
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

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













Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

Marine / Shipping

Type Examination Certificate



UK Declaration of Conformity Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping













other

Confirmation



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=3RT2015-2AF02

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-2AF02

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-2AF02

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

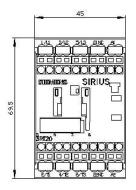
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-2AF02&lang=en

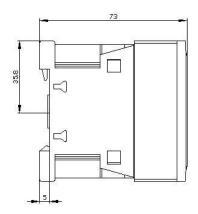
Characteristic: Tripping characteristics, I²t, Let-through current

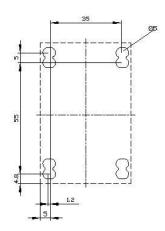
https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-2AF02/char

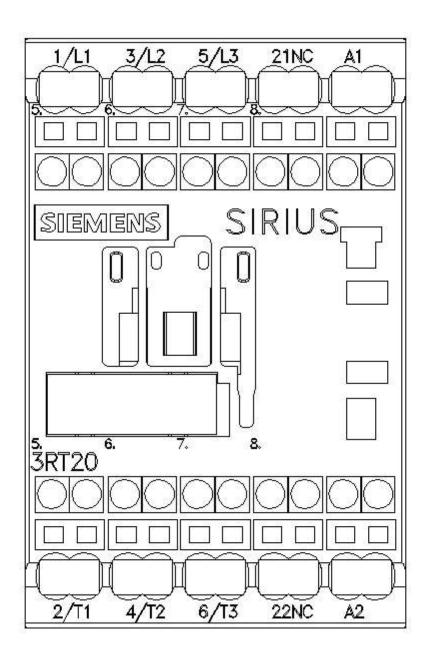
Further characteristics (e.g. electrical endurance, switching frequency)

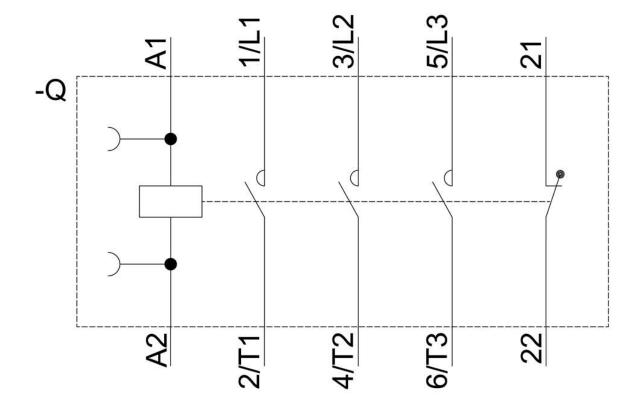
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2015-2AF02&objecttype=14&gridview=view1











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