3RT2015-1AK64-3MA0

Data sheet



power contactor, AC-3e/AC-3, 7 A, 3 kW / 400 V, 3-pole, 110 V AC, 50 Hz / 120 V, 60 Hz, auxiliary contacts: 2 NO + 2 NC, screw terminal, size: S00, captive auxiliary switch

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	No
power loss [W] for rated value of the current	
 at AC in hot operating state 	0.6 W
 at AC in hot operating state per pole 	0.2 W
 without load current share typical 	4.4 W
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	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 (operating 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 according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
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	3

3
690 V
690 V
18 A
18 A
40.4
16 A
7 A
6 A
4.9 A
7.071
7 A
6 A
4.9 A
6.5 A
15.8 A
5.8 A
4 A
4 A
3.8 A
3.6 A
2.7 A
2.7 A
2.5 A
2.4 A
2.5 mm ²
0.0.4
2.6 A
1.8 A
1.8 A
1.8 A 15 A
1.8 A 15 A 15 A
1.8 A 15 A 15 A 1.5 A
1.8 A 15 A 15 A 1.5 A 0.6 A
1.8 A 15 A 1.5 A 0.6 A 0.42 A
1.8 A 15 A 1.5 A 0.6 A 0.42 A
1.8 A 15 A 15 A 1.5 A 0.6 A 0.42 A 0.42 A
1.8 A 15 A 15 A 1.5 A 0.6 A 0.42 A 0.42 A
1.8 A 15 A 1.5 A 1.5 A 0.6 A 0.42 A 0.42 A
1.8 A 15 A 1.5 A 1.5 A 0.6 A 0.42 A 0.42 A 15 A 15 A 15 A 15 A
1.8 A 15 A 1.5 A 1.5 A 0.6 A 0.42 A 0.42 A 15 A 15 A 15 A 15 A 15 A 16 A
1.8 A 15 A 1.5 A 1.5 A 0.6 A 0.42 A 0.42 A 15 A 15 A 15 A 15 A
1.8 A 15 A 1.5 A 1.5 A 0.6 A 0.42 A 1.5 A
1.8 A 15 A 15 A 1.5 A 0.6 A 0.42 A 0.42 A 15 A 15 A 15 A 1.5 A 1.5 A 1.5 A
1.8 A 15 A 1.5 A 1.5 A 0.6 A 0.42 A 0.42 A 15 A 15 A 15 A 1.2 A 0.6 A 0.5 A
1.8 A 15 A 15 A 1.5 A 0.6 A 0.42 A 0.42 A 15 A 15 A 15 A 1.2 A 0.6 A 0.5 A
1.8 A 15 A 1.5 A 1.5 A 0.6 A 0.42 A 0.42 A 15 A 15 A 15 A 1.5 A 1.5 A 1.5 A 1.5 A 1.5 A
1.8 A 15 A 15 A 1.5 A 0.6 A 0.42 A 0.42 A 15 A 15 A 15 A 1.2 A 0.6 A 0.5 A

— at 24 V rated value	15 A
— at 60 V rated value	0.35 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 60 V rated value	3.5 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 60 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-2 at 400 V rated value	3 kW
• 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
• at AC-3e	
— 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 kVA
• up to 400 V for current peak value n=20 rated value	2.7 kVA
• up to 500 V for current peak value n=20 rated value	3.3 kVA
• up to 690 V for current peak value n=20 rated value	4.3 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	1 kVA
 up to 400 V for current peak value n=30 rated value 	1.8 kVA
• up to 500 V for current peak value n=30 rated value	2.2 kVA
• up to 690 V for current peak value n=30 rated value	2.9 kVA
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
Iimited 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-3e 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	110 V
at 60 Hz rated value	120 V
operating range factor control supply voltage rated value of	
magnet coil at AC	

● at 50 Hz	0.8 1.1
• at 60 Hz	0.8 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	26.4 VA
● at 60 Hz	26.4 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.81
• at 60 Hz	0.81
apparent holding power of magnet coil at AC	
• at 50 Hz	4.4 VA
• at 60 Hz	4.4 VA
inductive power factor with the holding power of the coil	0.04
at 50 Hzat 60 Hz	0.24
closing delay	0.24
• at AC	9 35 ms
opening delay	3 33 IIIS
• at AC	4 15 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	2
contact number of NO contacts for auxiliary contacts instantaneous	2
contact	
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 at 500 V rated value	3 A
at 500 V rated value at 600 V rated value	2 A
at 690 V rated value	1A
operational current at DC-12 • at 24 V rated value	10 A
at 48 V rated value at 48 V rated value	6 A
at 46 V rated value at 60 V rated value	6 A
at 100 V rated value at 110 V rated value	3 A
at 175 V rated value 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	6 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)
nstallation/ 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 DIN rail according to DIN EN 60715
side-by-side mounting	Yes
height	58 mm
width	45 mm
depth	117 mm
required spacing	117 111111
with side-by-side mounting forwards	10 mm
— 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	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)
connectable conductor cross-section for main contacts	
• solid	0.5 4 mm²
• stranded	0.5 4 mm²
 finely stranded with 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 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)
for AWG cables for auxiliary contacts	2x (20 1.6), 2x (18 14), 2x 12
AWG number as coded connectable conductor cross	ΣΑ (ΔΟ 10), ΣΑ (10 17), ΣΑ 12
section	00 40
• for main contacts	20 12
for auxiliary contacts	20 12
Safety related data	
and the state of the state of	
product function	
mirror contact according to IEC 60947-4-1	Yes

B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
 with high demand rate according to SN 31920 	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC 61508	20 a
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
suitability for use	
 safety-related switching OFF 	Yes
2-4:5:-41	

Certificates/ approvals

General Product Approval





Confirmation



<u>KC</u>



EMC

Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates



Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping

other

Railway

Environment



Confirmation



Confirmation

Vibration and Shock

Environmental Confirmations

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RT2015-1AK64-3MA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-1AK64-3MA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1AK64-3MA0

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

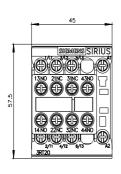
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-1AK64-3MA0&lang=en

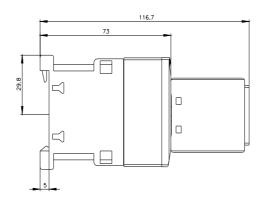
Characteristic: Tripping characteristics, I2t, Let-through current

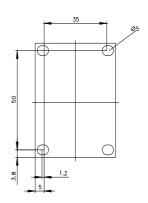
https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1AK64-3MA0/char

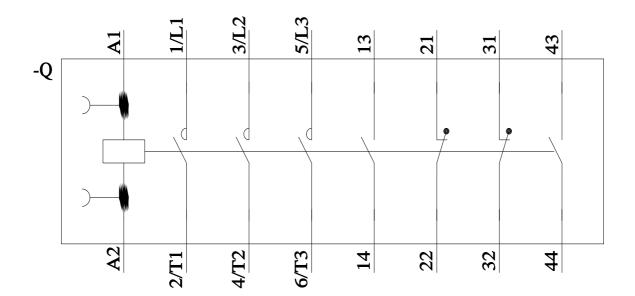
Further characteristics (e.g. electrical endurance, switching frequency)

 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RT2015-1AK64-3MA0\&objecttype=14\&gridview=view1}$









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