3RT2017-2KF42-1LA0

Data sheet



traction contactor, AC-3 12 A, $5.5\,kW$ / 400 V 110 V DC, 0.7-1.25*US with integrated suppressor diode 3-pole, size S00 spring-type terminal suitable for PLC outputs for upright mounting position not expandable with auxiliary switch

product brand name	SIRIUS
product designation	Contactor
design of the product	With extended operating range
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 	3.6 W
 at AC in hot operating state per pole 	1.2 W
 without load current share typical 	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 safe isolation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	7.3g / 5 ms, 4.7g / 10 ms
shock resistance with sine pulse	
• at DC	11,4g / 5 ms, 7,3g / 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 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 	-40 +70 °C
during storage	-55 +80 °C
relative humidity minimum	10 %

maximum	
lain 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
at AC-3e rated value maximum	690 V
operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	22 A
• at AC-1	20.4
— up to 690 V at ambient temperature 40 °C rated value	22 A
 up to 690 V at ambient temperature 60 °C rated value 	20 A
at AC-2 at 400 V rated valueat AC-3	12 A
— at 400 V rated value	12 A
— at 500 V rated value	9.2 A
— at 690 V rated value	6.7 A
• at AC-3e	
— at 400 V rated value	12 A
— at 500 V rated value	9.2 A
— at 690 V rated value	6.7 A
at AC-4 at 400 V rated value	8.5 A
minimum cross-section in main circuit	
at maximum AC-1 rated value	4 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	4.1 A
at 690 V rated value	3.3 A
operating power	
at AC-2 at 400 V rated value	5.5 kW
• at AC-3	
— at 230 V rated value	3 kW
— at 400 V rated value	5.5 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	5.5 kW
• at AC-3e	
— at 230 V rated value	3 kW
— at 400 V rated value	5.5 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	5.5 kW
operating power for approx. 200000 operating cycles at AC-4	
at 400 V rated value	2 kW
at 690 V rated value	2.5 kW
short-time withstand current in cold operating state up to 40 °C	
limited to 1 s switching at zero current maximum	200 A; Use minimum cross-section acc. to AC-1 rated value
limited to 5 s switching at zero current maximum	123 A; Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum	96 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 30 s switching at zero current maximum	74 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	61 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency • at DC	1 500 1/h
operating frequency	
at AC-2 at AC-3e maximum	750 1/h
• at AC-4 maximum	250 1/h
control circuit/ Control	

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type of voltage	DC
type of voltage of the control supply voltage	DC
control supply voltage at DC	
rated value	110 V
operating range factor control supply voltage rated value of magnet coil at DC	
initial value	0.7
• full-scale value	1.25
design of the surge suppressor	suppressor diode
closing power of magnet coil at DC	13 W
holding power of magnet coil at DC	4 W
closing delay	
• at DC	25 130 ms
opening delay	
• at DC	7 20 ms
arcing time	10 15 ms
control version of the switch operating mechanism	E1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	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
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	11 A
at 600 V rated value	11 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	0.5 hp
— at 230 V rated value	2 hp
• for 3-phase AC motor	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	7.5 hp
— at 575/600 V rated value	10 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
product function short circuit protection	No
design of the fuse link	
for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 50A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)
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— 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	standing, on horizontal 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	70 mm		
width	45 mm		
depth	121 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			
— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²		
— solid or stranded	2x (0,5 4 mm²)		
finely stranded with core end processing	2x (0.5 4 mm²) 2x (0.5 2.5 mm²)		
finely stranded without core end processing	2x (0.5 2.5 mm²)		
at AWG cables for main contacts	2x (20 12)		
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 according to IEC 60947-4-1	Yes		
 positively driven operation according to IEC 60947- 	No		
5-1			
B10 value with high demand rate according to SN 31920	1 000 000		
proportion of dangerous failures	40.07		
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	100 FIT		

20 y	
IP20	
finger-safe, for vertical contact from the front	
No	

General Product Approval



Confirmation





<u>KC</u>



EMC Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping other Railway Dangerous Good



Confirmation



Special Test Certificate

<u>Transport Information</u>

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=3RT2017-2KF42-1LA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-2KF42-1LA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2KF42-1LA0

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

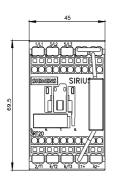
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2017-2KF42-1LA0&lang=en

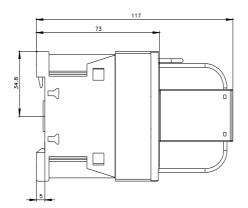
Characteristic: Tripping characteristics, I2t, Let-through current

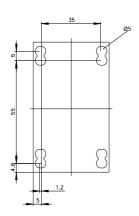
https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2KF42-1LA0/char

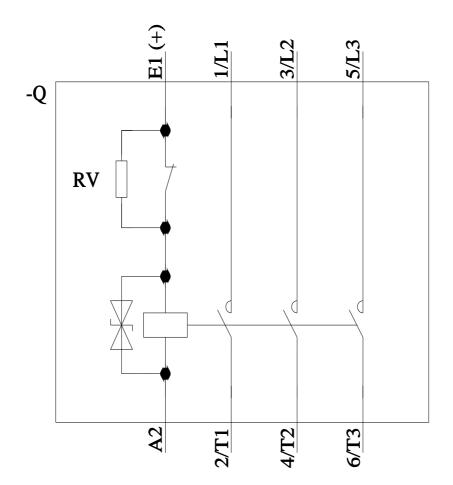
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2017-2KF42-1LA0&objecttype=14&gridview=view1









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