

Power contactor, AC-3 7 A, 3 kW / 400 V 1 NO, 24 V AC, 50 / 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	<ul style="list-style-type: none"> • function module for communication No • Auxiliary switch Yes
Surge voltage resistance	<ul style="list-style-type: none"> • of main circuit rated value 6 kV • of auxiliary circuit rated value 6 kV
maximum permissible voltage for safe isolation	<ul style="list-style-type: none"> • between coil and main contacts acc. to EN 60947-1 400 V
Protection class IP	<ul style="list-style-type: none"> • on the front IP20 • of the terminal IP20
Shock resistance at rectangular impulse	<ul style="list-style-type: none"> • at AC 6,7g / 5 ms, 4,2g / 10 ms

Shock resistance with sine pulse	
<ul style="list-style-type: none"> • at AC 	10,5g / 5 ms, 6,6g / 10 ms
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of contactor typical 	30 000 000
<ul style="list-style-type: none"> • of the contactor with added electronics-compatible auxiliary switch block typical 	5 000 000
<ul style="list-style-type: none"> • of the contactor with added auxiliary switch block typical 	10 000 000
Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	K

Ambient conditions

Installation altitude at height above sea level	
<ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
Operating current	
<ul style="list-style-type: none"> • at AC-1 at 400 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value 	18 A
<ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value 	18 A
<ul style="list-style-type: none"> — up to 690 V at ambient temperature 60 °C rated value 	16 A
<ul style="list-style-type: none"> • at AC-2 at 400 V rated value 	7 A
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	7 A
<ul style="list-style-type: none"> — at 500 V rated value 	6 A
<ul style="list-style-type: none"> — at 690 V rated value 	4.9 A
Connectable conductor cross-section in main circuit at AC-1	
<ul style="list-style-type: none"> • at 60 °C minimum permissible 	2.5 mm ²
<ul style="list-style-type: none"> • at 40 °C minimum permissible 	2.5 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> • at 400 V rated value 	2.6 A
<ul style="list-style-type: none"> • at 690 V rated value 	1.8 A

Operating current	
<ul style="list-style-type: none"> • at 1 current path at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value 	15 A 1.5 A 0.6 A 0.42 A 0.42 A 15 A 8.4 A 1.2 A 0.6 A 0.5 A 15 A 15 A 15 A 0.9 A 0.7 A
Operating current	
<ul style="list-style-type: none"> • at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value 	15 A 0.1 A 15 A 0.25 A 15 A 15 A 1.2 A 0.14 A 0.14 A
Operating power	
<ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — at 230 V rated value — at 230 V at 60 °C rated value — at 400 V rated value — at 400 V at 60 °C rated value — at 690 V rated value — at 690 V at 60 °C rated value • at AC-2 at 400 V rated value 	6.3 kW 6 kW 11 kW 10.5 kW 19 kW 18 kW 3 kW

<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value 	1.5 kW 3 kW 3 kW 4 kW
Operating power for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> • at 400 V rated value • at 690 V rated value 	1.15 kW 1.15 kW
Thermal short-time current limited to 10 s	56 A
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	0.4 W
No-load switching frequency	
<ul style="list-style-type: none"> • at AC 	10 000 1/h
Operating frequency	
<ul style="list-style-type: none"> • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum 	1 000 1/h 750 1/h 750 1/h 250 1/h

Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	24 V 24 V
Operating range factor control supply voltage rated value of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.8 ... 1.1 0.85 ... 1.1
Apparent pick-up power of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	27 V·A 24.3 V·A
Inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.8 0.75
Apparent holding power of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	4.2 V·A 3.3 V·A
Inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.25 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
Operating current at AC-12 maximum	10 A
Operating 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
Operating 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
Operating 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 three-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 three-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 <ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required 	gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 35 A gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 20 A fuse gG: 10 A
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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
Mounting type <ul style="list-style-type: none"> • Side-by-side mounting 	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes
Height	58 mm
Width	45 mm
Depth	73 mm
Required spacing <ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — at the side • for live parts <ul style="list-style-type: none"> — at the side 	6 mm 6 mm

Connections/Terminals

Type of electrical connection <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit 	screw-type terminals screw-type terminals
Type of connectable conductor cross-sections <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts 	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12
Type of connectable conductor cross-sections <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts 	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12

Safety related data

B10 value	
<ul style="list-style-type: none"> with high demand rate acc. to SN 31920 	1 000 000
Proportion of dangerous failures	
<ul style="list-style-type: none"> with low demand rate acc. to SN 31920 with high demand rate acc. to SN 31920 	40 % 73 %
Failure rate [FIT]	
<ul style="list-style-type: none"> with low demand rate acc. to SN 31920 	100 FIT
Product function	
<ul style="list-style-type: none"> 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 against electrical shock	finger-safe

Certificates/approvals

General Product Approval	Functional Safety/Safety of Machinery
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[Type Examination](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other
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[Confirmation](#)

other



Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2015-1AB01>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-1AB01>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1AB01>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-1AB01&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1AB01/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2015-1AB01&objecttype=14&gridview=view1>





