

CONT. F. RAILW. A., AC-3, 18.5KW/400V,
1NO+1NC, . DC 72 V, 0,7...1,25*US,
W. VARISTOR INTEGRATED, 3-POLE SIZE S0,
SPRING-LOADED TERMINAL

General technical data:

product brand name		SIRIUS
Size of the contactor		S0
Product extension		
• auxiliary switch		Yes
• function module for communication		No
Protection class IP / on the front		IP20
Protection against electrical shock		finger-safe
Degree of pollution		3
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature		
• during storage	°C	-55 ... +80
• during operating	°C	-40 ... +70
Shock resistance		
• at rectangular impulse		
• at DC		10g / 5 ms, 7,5g / 10 ms
• at sine pulse		
• at DC		15g / 5 ms, 10g / 10 ms
Impulse voltage resistance / rated value	kV	6
Insulation voltage / rated value	V	690

Maximum permissible voltage for protective separation / between coil and main contacts / in accordance with EN 60947-1	V	400
Mechanical operating cycles as operating time		
• of the contactor / typical		10,000,000
• of the contactor with added auxiliary switch block / typical		10,000,000
• of the contactor with added electronics-compatible auxiliary switch block / typical		5,000,000
Main circuit:		
Number of NC contacts / for main contacts		0
Number of NO contacts / for main contacts		3
Connectable conductor cross-section / in main circuit		
• at AC-1		
• at 40 °C / minimum permissible	mm ²	10
• at 60 °C / minimum permissible	mm ²	10
Operating current		
• at AC-1 / up to 690 V		
• at 40 °C ambient temperature / rated value	A	50
• at 60 °C ambient temperature / rated value	A	42
• at AC-2 / at 400 V / rated value	A	38
• at AC-3		
• at 400 V / rated value	A	38
• at 500 V / rated value	A	32
• at 690 V / rated value	A	21
• at AC-4 / at 400 V / rated value	A	22
Operational current / for ≥ 200000 operating cycles / at AC-4		
• at 400 V / rated value	A	12
• at 690 V / rated value	A	12
Operating current		
• with 1 current path / at DC-1		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	4.5
• at 220 V / rated value	A	1
• at 440 V / rated value	A	0.4
• at 600 V / rated value	A	0.25
• with 2 current paths in series / at DC-1		
• at 24 V / rated value	A	35
• at 110 V / rated value	A	35
• at 220 V / rated value	A	5
• at 440 V / rated value	A	1
• at 600 V / rated value	A	0.8

<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> A 35 A 35 A 35 A 2.9 A 1.4
Operating current	
<ul style="list-style-type: none"> • with 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 • at 220 V / rated value • at 440 V / rated value • at 600 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 • at 220 V / rated value • at 440 V / rated value • at 600 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 	<ul style="list-style-type: none"> A 20 A 2.5 A 1 A 0.09 A 0.06 A 35 A 15 A 3 A 0.27 A 0.16 A 35 A 35 A 10 A 0.6 A 0.6
Operating performance	
<ul style="list-style-type: none"> • at AC-1 / at 230 V / rated value • at AC-1 / at 400 V / rated value • at AC-1 / at 690 V / rated value • at AC-2 <ul style="list-style-type: none"> • at 400 V / rated value • at AC-3 <ul style="list-style-type: none"> • at 230 V / rated value • at 400 V / rated value • at 690 V / rated value • at AC-4 <ul style="list-style-type: none"> • at 400 V / rated value 	<ul style="list-style-type: none"> kW 16 kW 28 kW 48 kW 18.5 kW 11 kW 18.5 kW 18.5 kW 11
Operating performance / for ≥ 200000 operating cycles / at AC-4	
<ul style="list-style-type: none"> • at 400 V / rated value • at 690 V / rated value 	<ul style="list-style-type: none"> kW 6 kW 10.3

Thermal short-time current / restricted to 10 s	A	304
Active power loss / at AC-3 / at 400 V / with rated Operating current value / per conductor	W	3.8
Off-load operating frequency • at DC	1/h	1,500
Frequency of operation • with AC-1 / maximum	1/h	1,000
• with AC-2 / maximum	1/h	750
• with AC-3 / maximum	1/h	750
• with AC-4 / maximum	1/h	250

Control circuit/ Control:

Design of the surge suppressor		with varistor
Voltage type / of control feed voltage		DC
Control supply voltage • for DC / rated value	V	72
Operating range factor control supply voltage rated value / of the magnet coil • for DC		0.7 ... 1.25
Pull-in power / of the solenoid / for DC	W	13.2
Holding power / of the solenoid / for DC	W	1.56
Closing delay • at DC	ms	50 ... 170
Opening delay • at DC	ms	15 ... 17.5
Arcing time	ms	10 ... 10
Residual current / of electronics / for control with signal <0> • at 230 V / with AC / maximum permissible	mA	7
• at 24 V / with DC / maximum permissible	mA	16

Auxiliary circuit:

Contact reliability / of the auxiliary contacts		1 faulty switching per 100 million (17 V, 1 mA)
Number of NC contacts / for auxiliary contacts / instantaneous switching		1
Number of NO contacts / for auxiliary contacts / instantaneous switching		1
Operating current • at AC-12 / maximum	A	10
• at AC-15		
• at 230 V / rated value	A	10
• at 400 V / rated value	A	3
• at 500 V / rated value	A	2

• at 690 V / rated value	A	1
Operating current / at DC-12		
• at 24 V / rated value	A	10
• at 48 V / rated value	A	6
• at 60 V / rated value	A	6
• at 110 V / rated value	A	3
• at 125 V / rated value	A	2
• at 220 V / rated value	A	1
• at 440 V / rated value	A	0.3
• at 600 V / rated value	A	0.15
Operating current / at DC-13		
• at 24 V / rated value	A	10
• at 48 V / rated value	A	2
• at 60 V / rated value	A	2
• at 110 V / rated value	A	1
• at 125 V / rated value	A	0.9
• at 220 V / rated value	A	0.3
• at 440 V / rated value	A	0.14
• at 600 V / rated value	A	0.1

UL/CSA ratings:

yielded mechanical performance [hp]		
• for single-phase squirrel cage motors		
• at 110/120 V / rated value	hp	3
• at 230 V / rated value	hp	5
• for three-phase squirrel cage motors		
• at 200/208 V / rated value	hp	10
• at 220/230 V / rated value	hp	10
• at 460/480 V / rated value	hp	25
• at 575/600 V / rated value	hp	25
Full-load current (FLA) / for 3-phase motor		
• at 480 V / rated value	A	34
• at 600 V / rated value	A	27
Contact rating designation / for auxiliary contacts / according to UL		A600 / Q600

Short-circuit:

Design of the fuse link	
• for short-circuit protection of the auxiliary switch / required	fuse gL/gG: 10 A
• for short-circuit protection of the main circuit	
• with type of assignment 1 / required	gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 100 A

- at type of coordination 2 / required

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:
35A

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		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
Mounting type / series installation		Yes
Width	mm	45
Height	mm	102
Depth	mm	107
Distance, to be maintained, to the ranks assembly / sideways	mm	0

Connections/ terminals:

Design of the electrical connection		
<ul style="list-style-type: none"> • for main current circuit 		spring-loaded terminals
<ul style="list-style-type: none"> • for auxiliary and control current circuit 		spring-loaded terminals
<ul style="list-style-type: none"> • for main contacts / finely stranded / with conductor end processing 		2x (1 ... 6 mm ²)
<ul style="list-style-type: none"> • for main contacts / finely stranded / without conductor final cutting 		2x (1 ... 6 mm ²)
<ul style="list-style-type: none"> • for AWG conductors / for main contacts 		2x (18 ... 8)
<ul style="list-style-type: none"> • for auxiliary contacts / finely stranded / with conductor end processing 		2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> • for auxiliary contacts / finely stranded / without conductor final cutting 		2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> • for AWG conductors / for auxiliary contacts 		2x (20 ... 14)

Safety related data:

B10 value / with high demand rate		
<ul style="list-style-type: none"> • according to SN 31920 		1,000,000
T1 value / for proof test interval or service life		
<ul style="list-style-type: none"> • according to IEC 61508 	a	20
Proportion of dangerous failures		
<ul style="list-style-type: none"> • with low demand rate / according to SN 31920 	%	40
<ul style="list-style-type: none"> • with high demand rate / according to SN 31920 	%	73
Failure rate [FIT] / with low demand rate		
<ul style="list-style-type: none"> • according to SN 31920 	FIT	100
Product function		
<ul style="list-style-type: none"> • mirror contact to IEC 60947-4-1 		Yes
<ul style="list-style-type: none"> • positively driven operation to IEC 60947-5-1 		No

Certificates/ approvals:

General Product Approval



Test Certificates

[Special Test Certificate](#)

Shipping Approval



Shipping Approval

other



[Environmental Confirmations](#)

Further information:

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

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

Industry Mall (Online ordering system)

<http://mall.industry.siemens.com/>

Cax online generator

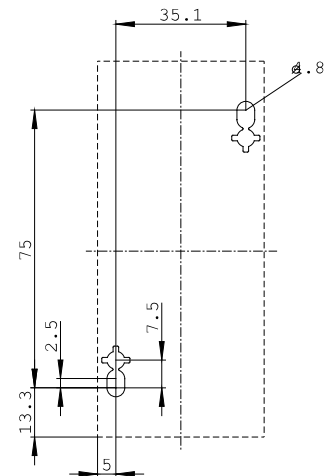
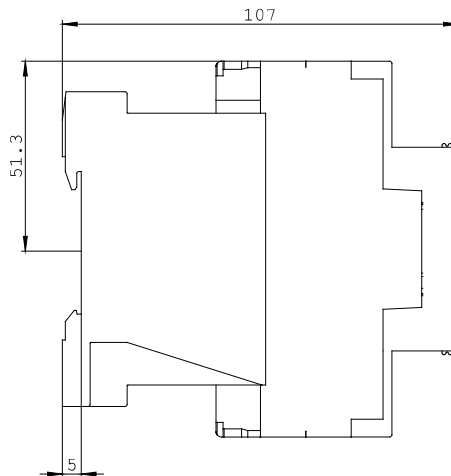
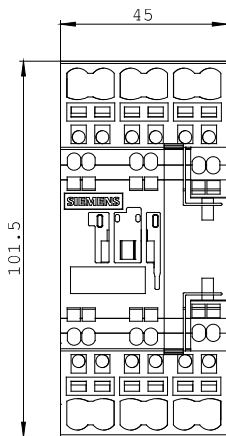
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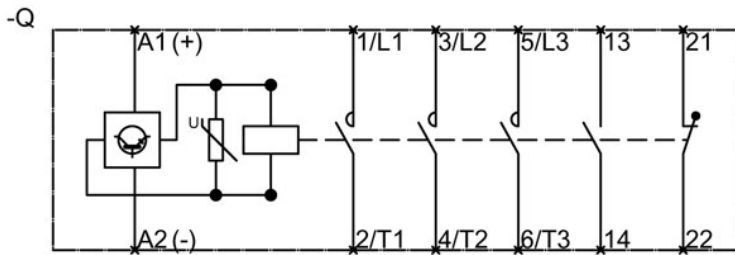
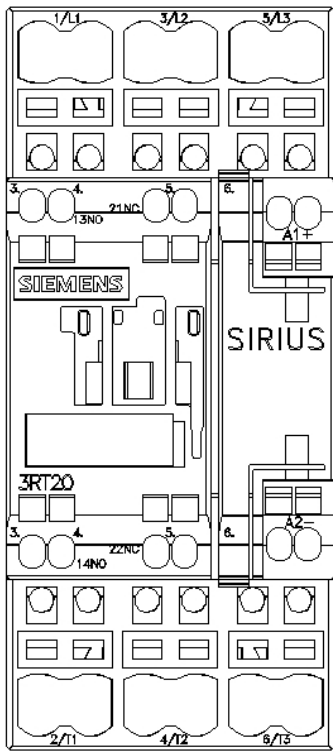
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WWW/view/en/3RT2028-2XJ40-0LA2/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2028-2XJ40-0LA2





last change:

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