



CONTACTOR, AC-3, 4KW/400V, 1NO+1NC,
AC110V 50HZ, 3-POLE,
SZ S0 SCREW TERMINAL

General technical data:

Product brand name		SIRIUS
Product designation		3RT2 contactor
Size of the contactor		S0
Protection class IP / frontal/front side		IP20
Degree of pollution		3
Altitude of installation site / at a height over sea level / maximum	m	2,000
Ambient temperature		
• during storage	°C	-55 ... 80
• during the operating phase	°C	-25 ... 60
• during transport	°C	-55 ... 80
Resistance against shock		12.5g / 5 ms and 7.8g / 10 ms
Impulse voltage resistance / rated value	kV	6
Insulation voltage / rated value	V	690
Resistive loss		
• per conductor / typical	W	0.4
Apparent loss power / of the magnet coil / at AC / typical	V·A	8.5
Item designation		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		K

<ul style="list-style-type: none"> • according to DIN EN 61346-2 		Q
Mechanical operating cycles as operating time		
<ul style="list-style-type: none"> • of the contactor / typical 		10,000,000
<ul style="list-style-type: none"> • of the contactor with added auxiliary switch block / typical 		10,000,000
<ul style="list-style-type: none"> • of the contactor with added electronics-compatible auxiliary switch block / typical 		10,000,000
Main circuit:		
Number of poles / for main current circuit		3
Number of NC contacts / for main contacts		0
Number of NO contacts / for main contacts		3
Operating voltage / at 3 AC / rated value		
<ul style="list-style-type: none"> • maximum 	V	690
Operating current / at AC-1 / at 400 V		
<ul style="list-style-type: none"> • at 40 °C ambient temperature / rated value 	A	40
<ul style="list-style-type: none"> • at 60 °C ambient temperature / rated value 	A	35
Operating current		
<ul style="list-style-type: none"> • at AC-2 / at 400 V / rated value 	A	9
<ul style="list-style-type: none"> • at AC-3 / at 400 V / rated value 	A	9
<ul style="list-style-type: none"> • at AC-4 / at 400 V / rated value 	A	8.5
<ul style="list-style-type: none"> • with 1 current path / at DC-1 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value 	A	35
<ul style="list-style-type: none"> • 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 	A	35
<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 	A	35
<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 	A	20
<ul style="list-style-type: none"> • 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 	A	2.5
<ul style="list-style-type: none"> • 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 	A	35
<ul style="list-style-type: none"> • 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 	A	15
<ul style="list-style-type: none"> • 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 	A	35
<ul style="list-style-type: none"> • 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 	A	35
Service power		
<ul style="list-style-type: none"> • at AC-2 / at 400 V / rated value 	kW	4

<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value • at AC-4 / at 400 V / rated value 	kW	4
	kW	4.5
	kW	5.5
	kW	4
Operating reactive power / at AC-6b		
<ul style="list-style-type: none"> • at 230 V / rated value • at 400 V / rated value • at 690 V / rated value 	var	0
	var	0
	var	0
Off-load operating frequency	1/h	5,000
Switching frequency		
<ul style="list-style-type: none"> • at AC-1 / according to IEC 60947-6-2 / maximum • at AC-2 / according to IEC 60947-6-2 / maximum • at AC-3 / according to IEC 60947-6-2 / maximum • at AC-4 / according to IEC 60947-6-2 / maximum 	1/h	1,000
	1/h	1,000
	1/h	1,000
	1/h	300

Control circuit:

Design of activation of the operating mechanism		conventional
Type of voltage / of the controlled supply voltage		AC
control supply voltage frequency		
<ul style="list-style-type: none"> • 1 / rated value 	Hz	50
Control supply voltage / 1		
<ul style="list-style-type: none"> • at 50 Hz / for AC • rated value 	V	110
Operating range factor control supply voltage rated value / of solenoid		
<ul style="list-style-type: none"> • at 50 Hz / for AC • at 60 Hz / for AC 		0.8 ... 1.1
		0.8 ... 1.1
Apparent pull-in power / of the solenoid / for AC	V·A	65
Apparent holding power / of the solenoid / for AC	V·A	8.5
Power factor inductive		
<ul style="list-style-type: none"> • at pull-in power of the coil • at holding power of the coil 		0.82
		0.25

Auxiliary circuit:

Product extension / auxiliary switch		Yes
Contact reliability / of the auxiliary contacts		1 faulty switching per 100 million (17 V, 1 mA)
Number of NC contacts / for auxiliary contacts		
<ul style="list-style-type: none"> • instantaneous switching • lagging switching 		1
		0
Number of NO contacts / for auxiliary contacts		

• instantaneous switching		1
• leading switching		0
Operating current / of the auxiliary contacts		
• at AC-12 / maximum	A	10
• at AC-15		
• at 230 V	A	10
• at 400 V	A	3
• at DC-12		
• at 48 V	A	6
• at 60 V	A	6
• at 110 V	A	3
• at 220 V	A	1
• at DC-13		
• at 24 V	A	6
• at 48 V	A	2
• at 60 V	A	2
• at 110 V	A	1
• at 220 V	A	0.3

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		
• at type of coordination 1 / required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A
• at type of coordination 2 / required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25A

Installation/mounting/dimensions:

built in orientation		vertical
Type of fixing/fixation		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
Type of fixing/fixation / Series installation		Yes
Width	mm	45
Height	mm	85
Depth	mm	92
distance, to be maintained, to the ranks assembly		
• forwards	mm	0
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sideways	mm	0

distance, to be maintained, to earthed part		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sideways	mm	6
distance, to be maintained, conductive elements		
• forwards	mm	6
• backwards	mm	6
• upwards	mm	6
• downwards	mm	10
• sideways	mm	6

Connections:

design of the electrical connection		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
Type of the connectable conductor cross-section		
• for main contacts		
• unifilar		2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²)
• stranded wire		2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²)
• stranded wire		
• with conductor end processing		2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ²
• at AWG-conductors / for main contacts		2x (16 ... 12), 2x (14 ... 8)
• for auxiliary contact		
• solid		2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• stranded wire		
• with wire end processing		2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• for AWG conductors / for auxiliary contacts		2x (20 ... 16), 2x (18 ... 14)

Certificates/approvals:

verification of suitability		CE / UL / CSA / CCC
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Safety:

B10 value / with high demand rate		
• according to SN 31920		1,000,000
T1 value / for proof test interval or service life		
• according to IEC 61508	a	20
Proportion of dangerous failures		
• with low demand rate / according to SN 31920	%	75
• with high demand rate / according to SN 31920	%	75

Failure rate (FIT value) / with low demand rate

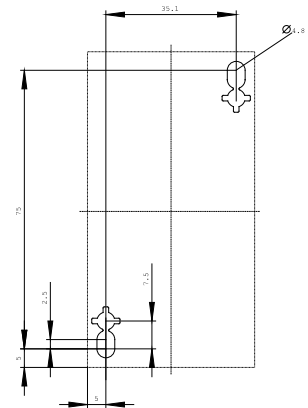
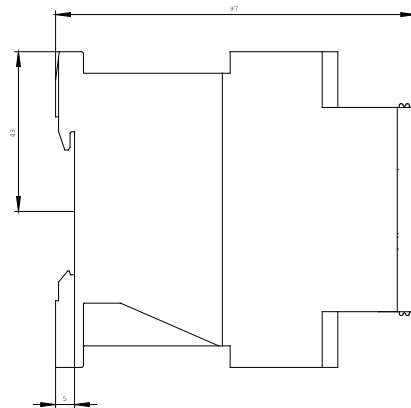
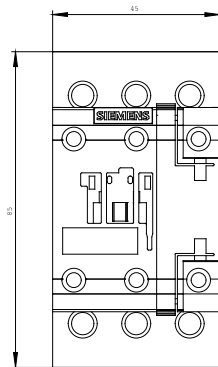
- according to SN 31920

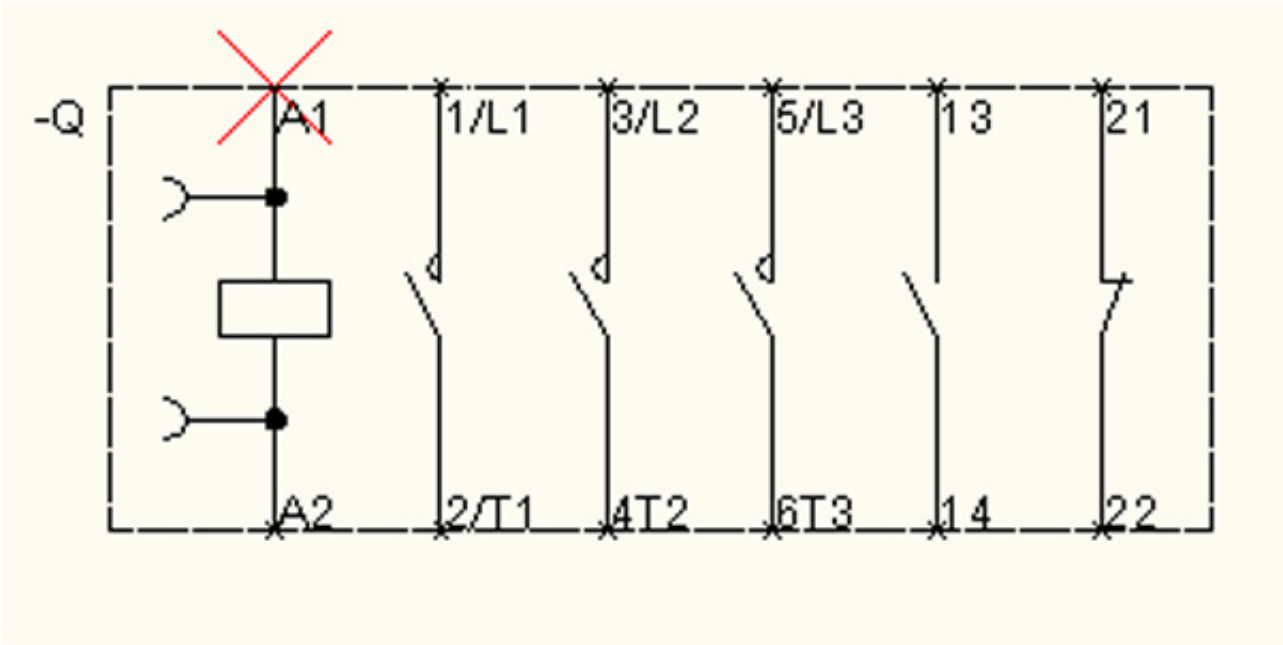
FIT

50

Protection against electrical shock

finger-safe

Further information:**Information- and Downloadcenter (Catalogs, Brochures,...)**<http://www.siemens.com/industrial-controls/catalogs>**Global Industry Mall (Online ordering system)**<http://www.siemens.com/industrial-controls/mall>**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**<http://support.automation.siemens.com/WW/view/en/3RT2023-1AF00/all>**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2023-1AF00



last change:

May 8, 2010