SIEMENS

Product data sheet 3RT2036-1AH20

CONTACTOR,AC3:22KW/400V, 1NO+1NC,
48V AC 50/60HZ, 3-POLE, SIZE S2,
SCREW TERMINAL

General technical data:		
product brand name		SIRIUS
Size of contactor		S2
Product expansion		
• Auxiliary switch		Yes
• function module for communication		No
Protection class IP / on the front		IP20
Degree of pollution		3
Installation altitude / at height above sea level / maximum	m	2,000
Ambient temperature		
• during storage	°C	-55 … +80
• during operation	°C	-25 … +60
Surge voltage resistance / Rated value	kV	6
Insulation voltage / Rated value	V	690
maximum permissible voltage for safe isolation / between coil and main contacts / acc. to EN 60947-1	V	400
Mechanical service life (switching cycles)		
• 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	mm²	25
• at 60 °C / minimum permissible	mm²	25
Operating current		
• at AC-1 / up to 690 V		
• at ambient temperature 40 °C / Rated value	A	70
• at ambient temperature 60 °C / Rated value	A	60
• at AC-2 / at 400 V / Rated value	A	51
• at AC-3		
• at 400 V / Rated value	A	51
• at 500 V / Rated value	A	50
• at 690 V / Rated value	A	24
• at AC-4 / at 400 V / Rated value	A	41
Operating current / for ≥ 200000 operating cycles / at AC-4		
• at 400 V / Rated value	A	24
• at 690 V / Rated value	A	20
Operating current		
• with 1 current path / at DC-1		
• at 24 V / Rated value	A	60
• at 110 V / Rated value	A	4.5
• at 220 V / Rated value	A	2
• 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	60
• at 110 V / Rated value	A	45
• at 220 V / Rated value	A	5
• at 440 V / Rated value	A	1
• at 600 V / Rated value	A	0.8
• with 3 current paths in series / at DC-1		
• at 24 V / Rated value	A	55
• at 110 V / Rated value	A	45
• at 220 V / Rated value	A	45
• at 440 V / Rated value	A	2.9
• at 600 V / Rated value	A	1.4

Operating current		
• with 1 current path / at DC-3 / at DC-5		
• at 24 V / Rated value	A	35
• at 110 V / Rated value	A	2.5
• at 220 V / Rated value	A	2
• at 440 V / Rated value	A	0.1
• at 600 V / Rated value	A	0.06
• with 2 current paths in series / at DC-3 / at DC-5		
• at 24 V / Rated value	A	55
• at 110 V / Rated value	A	25
• at 220 V / Rated value	A	5
• at 440 V / Rated value	A	0.27
• at 600 V / Rated value	A	0.16
• with 3 current paths in series / at DC-3 / at DC-5		
• at 24 V / Rated value	A	55
• at 110 V / Rated value	A	45
• at 220 V / Rated value	A	25
• at 440 V / Rated value	A	0.6
• at 600 V / Rated value	A	0.6
Operating power		
• at AC-1 / at 230 V / Rated value	kW	26
• at AC-1 / at 400 V / Rated value	kW	46
• at AC-1 / at 690 V / Rated value	kW	79
• at AC-2		
• at 400 V / Rated value	kW	22
• at AC-3		
• at 230 V / Rated value	kW	15
• at 400 V / Rated value	kW	22
• at 500 V / Rated value	kW	30
• at 690 V / Rated value	kW	22
• at AC-4		
• at 400 V / Rated value	kW	22
Operating power / for ≥ 200000 operating cycles / at AC-4		
• at 400 V / Rated value	kW	12.6
• at 690 V / Rated value	kW	18.2
Thermal short-time current / restricted to 10 s	A	420
Active power loss / at AC-3 / at 400 V / for rated value of the operating current / per conductor	W	4
No-load switching frequency		
• with AC	1/h	5,000

Operating frequency		
• at AC-1 / maximum	1/h	1,200
• at AC-2 / maximum	1/h	600
• at AC-3 / maximum	1/h	1,000
• at AC-4 / maximum	1/h	300

Control circuit/ Control:

Type of voltage / of the control supply voltage		AC
Control supply voltage		
• with AC / at 50 Hz / Rated value	V	48
• with AC / at 60 Hz / Rated value	V	48
Operating range factor control supply voltage rated value / of the magnet coil		
• with AC / at 50 Hz		0.8 … 1.1
• with AC / at 60 Hz		0.85 … 1.1
Apparent pick-up power / of the magnet coil / with AC		
• at 50 Hz	V·A	210
• at 60 Hz	V·A	188
Apparent holding power / of the magnet coil / with AC		
• at 50 Hz	V·A	17.2
• at 60 Hz	V·A	16.5
Closing delay		
• with AC	ms	10 … 80
Opening delay		
• with AC	ms	10 … 18
Arcing time	ms	10 … 20

Auxiliary circuit:

Number of NC contacts / for auxiliary contacts / instantaneous contact		1
Number of NO contacts / for auxiliary contacts / instantaneous contact		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 AC motor		
• at 110/120 V / Rated value	hp	3
• at 230 V / Rated value	hp	10
• for three-phase AC motor		
• at 200/208 V / Rated value	hp	15
• at 220/230 V / Rated value	hp	15
• at 460/480 V / Rated value	hp	40
• at 575/600 V / Rated value	hp	50
Full-load current (FLA) / for three-phase AC motor		
• at 480 V / Rated value	A	52
• at 600 V / Rated value	A	52
Contact rating / of the auxiliary contacts / acc. to UL		A600 / P600
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 NH 3NA, DIAZED 5SB, NEOZED 5SE: 200 A
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
Width	mm	55
Height	mm	113.4
Depth	mm	130
Spacing required / with side-by-side mounting	mm	0

Connections/ terminals:

Design of the electrical connection		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
Type of connectable conductor cross-section		
• for main contacts		
• single or multi-stranded		2x (1 ... 35 mm²), 1x (1 ... 50 mm²)
• finely stranded / with core end processing		2x (1 ... 25 mm²), 1x (1 ... 35 mm²)
• for AWG conductors / for main contacts		2x (18 ... 2), 1x (18 ... 1)
Type of connectable conductor cross-section		
• for auxiliary contacts		
• single or multi-stranded		2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²)
• finely stranded / with core end processing		2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
• for AWG conductors / for auxiliary contacts		2x (20 ... 16), 2x (18 ... 14)

Safety related data:

Proportion of dangerous failures		
• with low demand rate / acc. to SN 31920	%	40
• with high demand rate / acc. to SN 31920	%	73
Product function		
• Mirror contact acc. to IEC 60947-4-1		Yes
• positively driven operation acc. to IEC 60947-5-1		No

Certificates/ approvals:

General Product Approval	other
EAC UL	Confirmation

Further information:

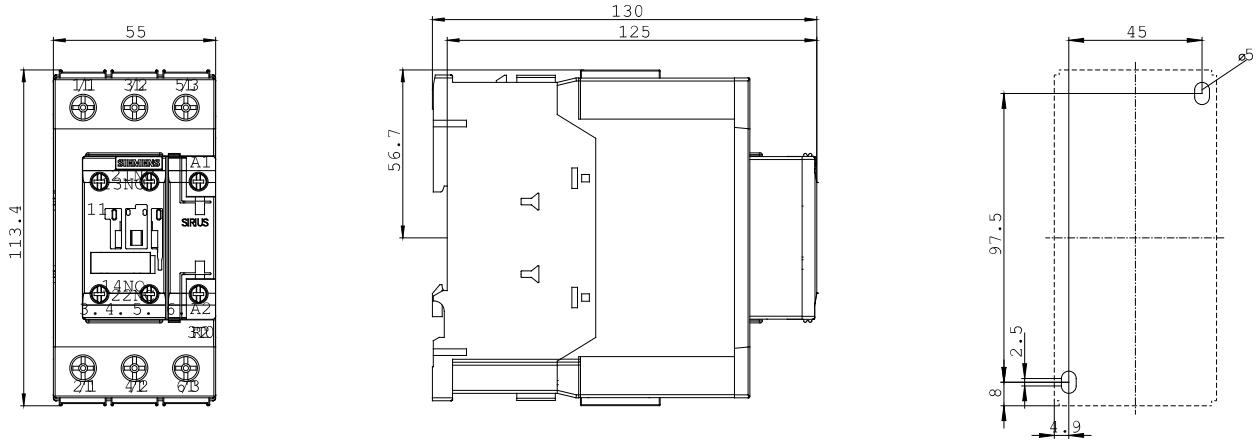
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

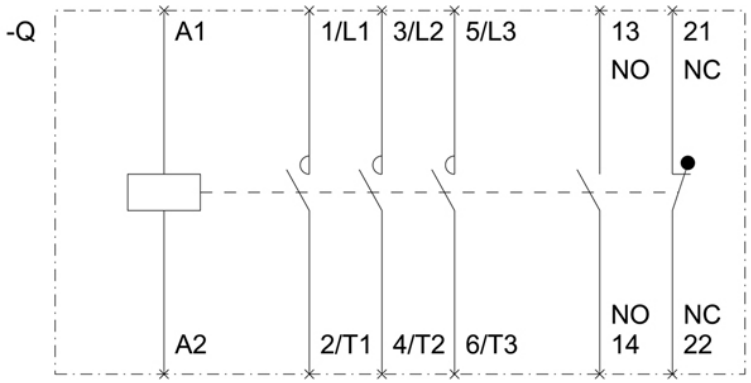
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

Cax online generator
http://www.siemens.com/cax

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RT2036-1AH20/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2036-1AH20





last change: Dec 17, 2014