SIEMENS

Product data sheet 3RT1046-1AL20

CONTACTOR, AC-3 45 KW/400 V,
AC 230V 50/60HZ 3-POLE, SIZE S3,
SCREW CONNECTION

General technical data:		
product brand name		SIRIUS
Size of the contactor		S3
Protection class IP / on the front		IP20
Degree of pollution		3
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature / during operating	°C	-25 … +60
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
Operating current		
• at AC-1 / at 400 V		
• at 40 °C ambient temperature / rated value	A	120
• at 60 °C ambient temperature / rated value	A	100
• at AC-3 / at 400 V / rated value	A	95

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• at AC-4 / at 400 V / rated value	A	80
• with 1 current path / at DC-1		
• at 24 V / rated value	A	100
• at 110 V / rated value	A	9
• with 2 current paths in series / at DC-1		
• at 24 V / rated value	A	100
• at 110 V / rated value	A	100
• with 3 current paths in series / at DC-1		
• at 24 V / rated value	A	100
• at 110 V / rated value	A	100
• with 1 current path / at DC-3 / at DC-5		
• at 24 V / rated value	A	40
• at 110 V / rated value	A	2.5
• with 2 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	A	100
• at 110 V / rated value	A	100
• with 3 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	A	100
• at 110 V / rated value	A	100
Service power		
• at AC-2 / at 400 V / rated value	kW	45
• at AC-3 / at 400 V / rated value	kW	45
• at AC-4 / at 400 V / rated value	W	45,000
Active power loss / per conductor / typical	W	10.8

Control circuit:		
Type of voltage / of the controlled supply voltage		AC
Control supply voltage / 1		
• at 50 Hz / for AC		
• rated value	V	230
• at 60 Hz / for AC		
• rated value	V	230
Operating range factor control supply voltage rated value / of the magnet coil		
• at 50 Hz		
• for AC		0.8 … 1.1
• at 60 Hz		
• for AC		0.8 … 1.1
Apparent pull-in power / of the solenoid / for AC	V·A	298
Apparent holding power / of the solenoid / for AC	V·A	27

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Inductive power factor / with the pull-in power of the coil		0.7
Inductive power factor / with the pull-in power of the coil		0.29

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		0
Number of NO contacts / for auxiliary contacts / instantaneous switching		0
Operating current / of the auxiliary contacts		
• at AC-12 / maximum	A	10
• at AC-15		
• at 230 V	A	6
• at 400 V	A	3
• at DC-12		
• at 60 V	A	6
• at 110 V	A	3
• at 220 V	A	1
• at DC-13		
• at 24 V	A	10
• 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		
• with type of assignment 1 / required		fuse gL/gG: 250 A
• at type of coordination 2 / required		fuse gL/gG: 160 A

Installation/mounting/dimensions:		
Type of mounting		screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail
series installation		Yes
Width	mm	70
Height	mm	146
Depth	mm	139
Distance, to be maintained, to earthed part / sidewards	mm	6

Connection type:		
Design of the electrical connection		

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• 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		
• solid		2x (2.5 ... 16 mm²)
• stranded		2x (4 ... 50 mm²)
• finely stranded		
• with conductor end processing		2x (2.5 ... 35 mm²)
• without conductor final cutting		2x (4 ... 35 mm²)
• for AWG conductors / for main contacts		2x (10 ... 1/0)
• for auxiliary contacts		
• solid		2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)
• finely stranded		
• with conductor 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), 1x 12

Certificates/approvals:

General Product Approval					Functional Safety / Safety of Machinery
CCC	CSA	GOST	KETI	UL	Type Examination

Declaration of Conformity	Test Certificates
EG-Konf.	Special Test Certificate

Shipping Approval

ABS | BUREAU VERITAS | GL | LRS | RINA | RMRS

other

Confirmation | other | Environmental Confirmations

Further information:

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

Industry Mall (Online ordering system)
http://www.siemens.com/industrial-controls/mall

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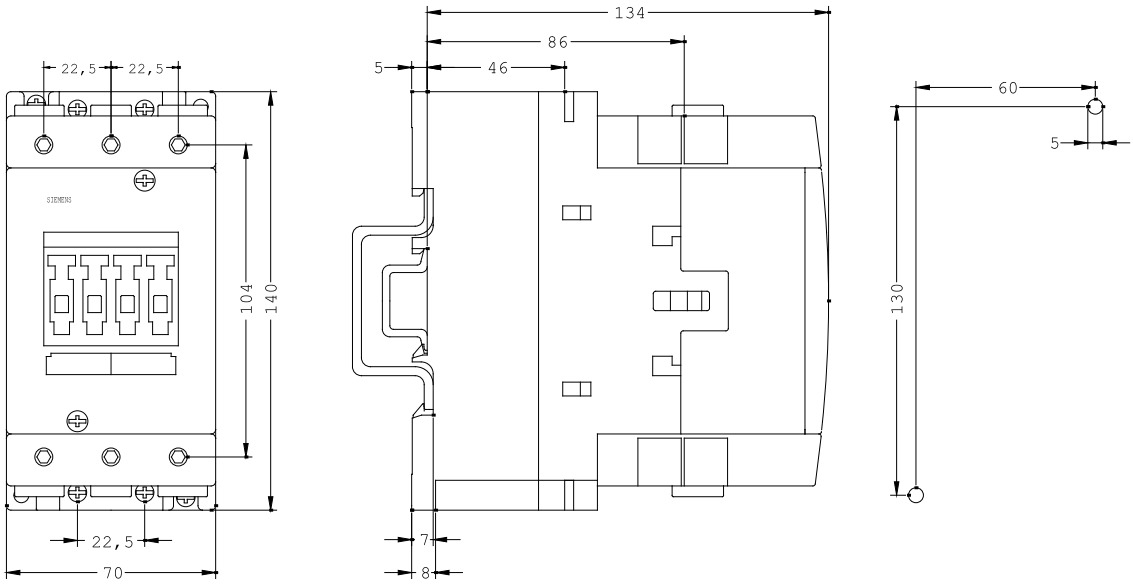
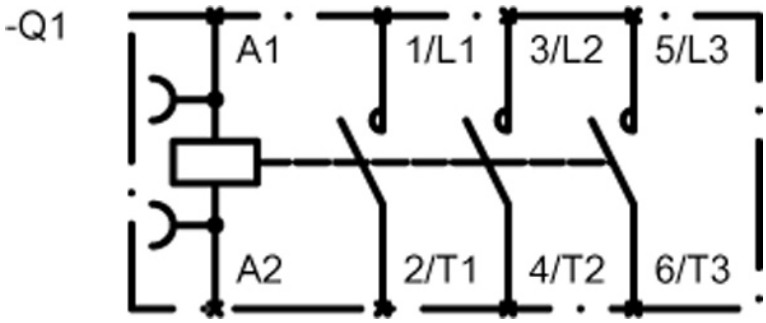
Cax online generator:
http://www.siemens.com/cax

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RT1046-1AL20/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT1046-1AL20





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