SIEMENS

Data sheet 3RA6400-1CB42

SIRIUS, COMPACT STARTER, DIRECT STARTER . 690 V, 24 V DC, 1 ... 4 A, IP20, CONN. MAIN CIRCUIT: SCREW TERMINAL, CONN. CONTROL CIRCUIT: SCREW TERMINAL

product brand name		SIRIUS
Product designation		compact starter
Design of the product		direct starter

General technical data:		
Product function		
• **Control circuit interface to parallel wiring**		No
Insulation voltage		
• Rated value	V	690
Degree of pollution		3
Shock resistance		a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes
Vibration resistance		f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s²; 10 cycles
Surge voltage resistance Rated value	V	6 000
Mechanical service life (switching cycles)		
• of the main contacts typical		10 000 000
• of the auxiliary contacts typical		10 000 000
• of the signaling contacts typical		10 000 000
Electrical endurance (switching cycles) of the auxiliary contacts		
• at DC-13 at 6 A at 24 V typical		100 000
• at AC-15 at 6 A at 230 V typical		500 000
Type of assignment		continous operation according to IEC 60947-6-2
Protection class IP		IP20
Equipment marking		
• acc. to DIN EN 61346-2		Q

Main circuit:		
Number of poles for main current circuit		3
Adjustable response value current of the current-dependent overload release	A	1 ... 4
Formula for making capacity limit current		12 x Ie
Formula for interruption capacity limit current		10 x Ie
Mechanical power output for 4-pole AC motor		
• at 400 V Rated value	kW	1.5
• at 500 V Rated value	kW	2.2
• at 690 V Rated value	kW	3
Operating voltage		
• at AC-3 Rated value maximum	V	690
Operating current		
• with AC at 400 V Rated value	A	4
• at AC-43		
— at 400 V Rated value	A	3.6
— at 500 V Rated value	A	3.9
— at 690 V Rated value	A	3.8
Operating power		
• at AC-3		
— at 400 V Rated value	W	1 500
• at AC-43		
— at 400 V Rated value	W	1 500
— at 500 V Rated value	W	2 200
— at 690 V Rated value	W	3 000
Operating frequency		
• at AC-41 acc. to IEC 60947-6-2 maximum	1/h	750
• at AC-43 acc. to IEC 60947-6-2 maximum	1/h	250
No-load switching frequency	1/h	3 600

Control circuit/ Control:		
Type of voltage		AC
Holding power		
• for DC maximum	W	2.9

Auxiliary circuit:		
Number of NC contacts		
• for auxiliary contacts		0
Number of NO contacts		
• for auxiliary contacts		0
• of the instantaneous short-circuit release for signaling contact		0
Number of CO contacts		

• of the current-dependent overload release for signaling contact		0
Product expansion Auxiliary switch		Yes
Operating current of the auxiliary contacts at AC-12 maximum	A	10
Operating current of the auxiliary contacts at DC-13		
• at 250 V	A	0.27

Protective and monitoring functions:		
Trip class		CLASS 10 and 20 adjustable
OFF-delay time	ms	50
Operational short-circuit current breaking capacity (Ics)		
• at 400 V	kA	53
• at 500 V Rated value	kA	3
• at 690 V Rated value	kA	3

UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	A	4
• at 600 V Rated value	A	4
yielded mechanical performance [hp]		
• for three-phase AC motor at 200/208 V Rated value	metric hp	0.75
• for three-phase AC motor at 220/230 V Rated value	metric hp	0.75
• for three-phase AC motor at 460/480 V Rated value	metric hp	2
• for three-phase AC motor at 575/600 V Rated value	metric hp	3

Short-circuit:		
Product function Short circuit protection		Yes
Design of short-circuit protection		electromagnetic
Design of the fuse link		
• for short-circuit protection of the auxiliary switch required		fuse gL/gG: 10 A

Installation/ mounting/ dimensions:		
mounting position		any
• recommended		vertical, on horizontal standard mounting rail
Mounting type		screw and snap-on mounting
Height	mm	170
Width	mm	45
Depth	mm	165

Connections/ Terminals:

Type of electrical connection		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
Product function		
• removable terminal for main circuit		Yes
• removable terminal for auxiliary and control circuit		Yes
Type of connectable conductor cross-section		
• for main contacts		
— solid		2x (1.5 ... 6 mm²), 1x 10 mm²
— finely stranded with core end processing		2x (1.5 ... 6 mm²)
• for AWG conductors for main contacts		2x (16 ... 10), 1x 8
• for auxiliary contacts		
— solid		0.5 ... 4 mm², 2x (0.5 ... 2.5 mm²)
— finely stranded with core end processing		0.5 ... 2.5 mm², 2x (0.5 ... 1.5 mm²)
• for AWG conductors for auxiliary contacts		2x (20 ... 14)
Safety related data:		
B10 value with high demand rate acc. to SN 31920		3 000 000
Proportion of dangerous failures		
• with high demand rate acc. to SN 31920	%	50
Protection against electrical shock		finger-safe
Communication/ Protocol:		
Product function Bus communication		Yes
Protocol is supported		
• IO-Link protocol		Yes
Product function Control circuit interface with IO link		Yes
IO-Link transfer rate		COM2 (38,4 kBaud)
Point-to-point cycle time between master and IO-Link device minimum	ms	2.5
Type of voltage supply via input/output link master		No
Amount of data		
• of the address area of the inputs with cyclical transfer total	byte	2
• of the address area of the outputs with cyclical transfer total	byte	2
Ambient conditions:		
Installation altitude at height above sea level maximum	m	2 000
Ambient temperature		
• during operation	°C	-20 ... +60
• during storage	°C	-55 ... +80
• during transport	°C	-55 ... +80

Relative humidity during operation	%	10 ... 90

Electromagnetic compatibility:		
Conducted interference due to burst acc. to IEC 61000-4-4		4 kV main circuits, 2 kV auxiliary circuits, 2 kV IO-Link, 2 kV limit switches, 2 kV line hand-held device
Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5		4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5		2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
Conducted interference due to high-frequency radiation acc. to IEC 61000-4-6		0.15-80Mhz at 10V
Field-bound parasitic coupling acc. to IEC 61000-4-3		80 ... 3000 MHz at 10V/m
Electrostatic discharge acc. to IEC 61000-4-2		8 kV

Supply voltage:		
Supply voltage required Auxiliary voltage		Yes

Display:		
Display version		
• as status display of the input/output link device		green/red dual LED

Certificates/ approvals:

General Product Approval				EMC	Functional Safety/Safety of Machinery
CCC	CSA	UL	EAC	C-TICK	VDE

Test Certificates	Shipping Approval				
Type Test Certificates/Test Report	BUREAU VERITAS	LRS	PRS	RINA	RMRS

other		
Environmental Confirmations	Declaration of Conformity	other

Further information

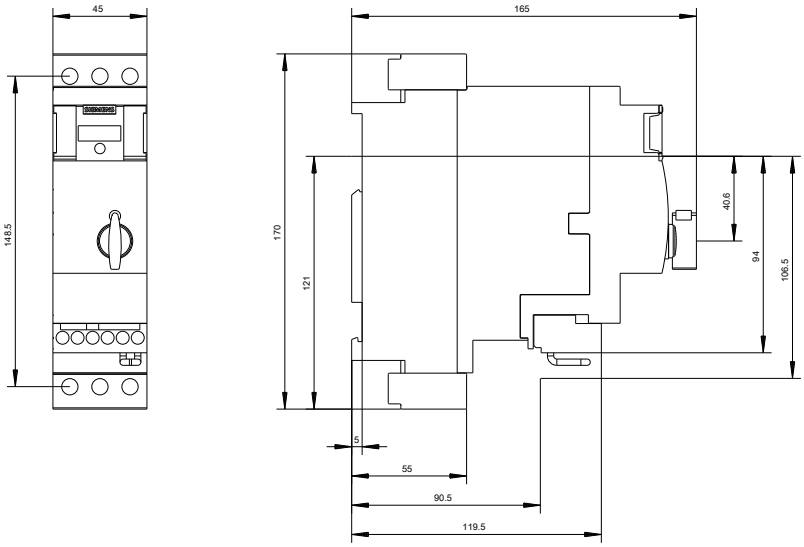
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

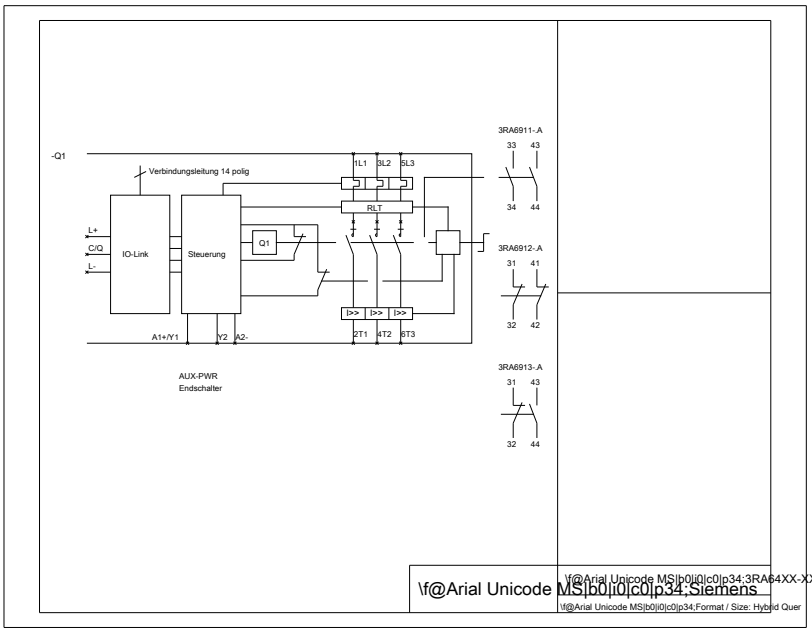
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA64001CB42

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RA64001CB42/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA64001CB42&lang=en





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