## **SIEMENS**

## Data sheet

## 3RA6400-2EB43



SIRIUS, COMPACT STARTER, DIRECT STARTER . 400 V, 24 V DC, 8 ... 32 A, IP20, CONN. MAIN CIRCUIT: PLUG-IN, W/O TERMINALS, CONN. CONTROL CIRCUIT: SPRING-LOADED TERMINAL

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

General technical data:		
Product function		
<ul> <li>Control circuit interface to parallel wiring</li> </ul>		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)		
<ul> <li>of the main contacts typical</li> </ul>		10 000 000
<ul> <li>of the auxiliary contacts typical</li> </ul>		10 000 000
<ul> <li>of the signaling contacts typical</li> </ul>		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	А	8 32
Formula for making capacity limit current		12 x le
Formula for interruption capacity limit current		10 x le
Mechanical power output for 4-pole AC motor		
• at 400 V Rated value	kW	15
• at 500 V Rated value	kW	11
• at 690 V Rated value	kW	11
Operating voltage		
<ul> <li>at AC-3 Rated value maximum</li> </ul>	V	400
Operating current	-	
<ul> <li>with AC at 400 V Rated value</li> </ul>	А	32
• at AC-43		
— at 400 V Rated value	А	29
— at 500 V Rated value	А	17.6
— at 690 V Rated value	А	12.8
Operating power	-	
• at AC-3		
— at 400 V Rated value	kW	15
• at AC-43		
— at 400 V Rated value	W	15 000
— at 500 V Rated value	W	11 000
— at 690 V Rated value	W	11 000
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	3.4
Auxiliary circuit:		
Number of NC contacts		
<ul> <li>for auxiliary contacts</li> </ul>		0
Number of NO contacts		
<ul> <li>for auxiliary contacts</li> </ul>		0
<ul> <li>of the instantaneous short-circuit release for signaling contact</li> </ul>		0
Number of CO contacts		

<ul> <li>of the current-dependent overload release for signaling contact</li> </ul>		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	А	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	1		
• at 690 V Rated value	kA	1		

UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	А	32
yielded mechanical performance [hp]		
<ul> <li>for three-phase AC motor at 200/208 V Rated value</li> </ul>	metric hp	7.5
<ul> <li>for three-phase AC motor at 220/230 V Rated value</li> </ul>	metric hp	10
<ul> <li>for three-phase AC motor at 460/480 V Rated value</li> </ul>	metric hp	20

Short-circuit:	
Product function Short circuit protection	Yes
Design of short-circuit protection	electromagnetic
Design of the fuse link	
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	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	191		
Width	mm	45		
Depth	mm	165		

Connections/ Terminals:	
Type of electrical connection	
<ul> <li>for main current circuit</li> </ul>	plug-in without terminals
<ul> <li>for auxiliary and control current circuit</li> </ul>	spring-loaded terminals

Product function	-	
<ul> <li>removable terminal for main circuit</li> </ul>		Yes
<ul> <li>removable terminal for auxiliary and control circuit</li> </ul>		Yes
Type of connectable conductor cross-section		
● for main contacts		
— solid		2x (2.5 6 mm²), 1x 10 mm²
<ul> <li>finely stranded with core end processing</li> </ul>		2x (2.5 6 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>		2x (2.5 6 mm²)
<ul> <li>for AWG conductors for main contacts</li> </ul>		2x (14 10), 1x 8
<ul> <li>for auxiliary contacts</li> </ul>		
— solid		2x (0.25 1.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>		2x (0.25 1.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>		2x (0.25 1.5 mm²)
<ul> <li>for AWG conductors for auxiliary contacts</li> </ul>		2x (24 16)
Safety related data:	_	
B10 value with high demand rate acc. to SN 31920	_	2 000 000
Proportion of dangerous failures	-	
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	%	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	-	Yes COM2 (38,4 kBaud)
IO-Link transfer rate Point-to-point cycle time between master and IO-Link device minimum	ms	
Point-to-point cycle time between master and IO-Link	ms	COM2 (38,4 kBaud)
Point-to-point cycle time between master and IO-Link device minimum	ms	COM2 (38,4 kBaud) 2.5
Point-to-point cycle time between master and IO-Link device minimum Type of voltage supply via input/output link master	ms byte	COM2 (38,4 kBaud) 2.5
Point-to-point cycle time between master and IO-Link device minimumType of voltage supply via input/output link masterAmount of data• of the address area of the inputs with cyclical		COM2 (38,4 kBaud) 2.5 No
Point-to-point cycle time between master and IO-Link device minimum         Type of voltage supply via input/output link master         Amount of data         • of the address area of the inputs with cyclical transfer total         • of the address area of the outputs with cyclical	byte	COM2 (38,4 kBaud) 2.5 No 2
<ul> <li>Point-to-point cycle time between master and IO-Link device minimum</li> <li>Type of voltage supply via input/output link master</li> <li>Amount of data <ul> <li>of the address area of the inputs with cyclical transfer total</li> <li>of the address area of the outputs with cyclical transfer total</li> </ul> </li> </ul>	byte	COM2 (38,4 kBaud) 2.5 No 2
<ul> <li>Point-to-point cycle time between master and IO-Link device minimum</li> <li>Type of voltage supply via input/output link master</li> <li>Amount of data <ul> <li>of the address area of the inputs with cyclical transfer total</li> <li>of the address area of the outputs with cyclical transfer total</li> </ul> </li> <li>Ambient conditions:</li> </ul>	byte byte	COM2 (38,4 kBaud) 2.5 No 2 2
Point-to-point cycle time between master and IO-Link device minimum         Type of voltage supply via input/output link master         Amount of data         • of the address area of the inputs with cyclical transfer total         • of the address area of the outputs with cyclical transfer total         • of the address area of the outputs with cyclical transfer total         Installation altitude at height above sea level	byte byte	COM2 (38,4 kBaud) 2.5 No 2 2
Point-to-point cycle time between master and IO-Link device minimum         Type of voltage supply via input/output link master         Amount of data         • of the address area of the inputs with cyclical transfer total         • of the address area of the outputs with cyclical transfer total         • of the address area of the outputs with cyclical transfer total         Installation altitude at height above sea level maximum	byte byte	COM2 (38,4 kBaud) 2.5 No 2 2

• during transport	°C	-55 +80				
Relative humidity during operation	%	10 90				
Electromagnetic compatibility:	_					
Conducted interference due to burst acc. to IEC		4 kV main c	ircuits 2 kV auxili	ary circuits, 2 kV IO-		
61000-4-4		Link, 2 kV limit switches, 2 kV line hand-held device				
Conducted interference due to conductor-earth surge	4 kV main circuits, 0.5 kV auxiliary voltage with					
acc. to IEC 61000-4-5	upstream overvoltage protection					
Conducted interference due to conductor-conductor	-	2 kV main c	ircuits, 0.5 kV aux	iliary voltage with		
surge acc. to IEC 61000-4-5		upstream ov	vervoltage protecti	on		
Conducted interference due to high-frequency		0.15-80Mhz	: at 10V			
radiation acc. to IEC 61000-4-6	_					
Field-bound parasitic coupling acc. to IEC 61000-4-3	_		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						
<ul> <li>as status display of the input/output link device</li> </ul>	green/red dual LED					
		-				
Certificates/ approvals:						
General Product Approval			EMC	Functional		
				Safety/Safety		
				of Machinery		
	ГІ	76				
		11		(D.E)		
CCC CSA UL			C-TICK	VDE		
Toot Chipping Approval						
Test Shipping Approval Certificates						
Type Test						
Certificates/Test		and a start				
Report Register	TOPIC ST		861			
VERITAS LRS	Р	RS	RINA	RMRS		
other						
Declaration of Environmental other						
Conformity Confirmations						

Further information

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

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

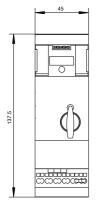
Industry Mall (Online ordering system) http://www.siemens.com/industrymall

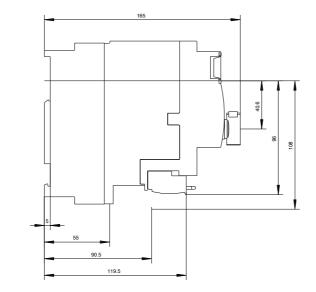
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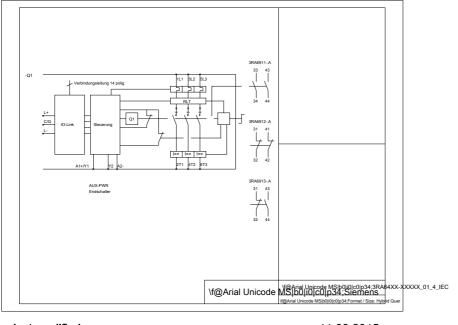
http://support.automation.siemens.com/WW/CAX order/default.aspx?lang=en&mlfb=3RA64002EB43

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RA64002EB43/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=3RA64002EB43&lang=en







last modified:

11.03.2015