## **SIEMENS**

## Data sheet

## 3RA6250-1CP33



SIRIUS, COMPACT STARTER, REVERSING STARTER 690 V, 110 ... 240 V AC/DC, 50 ... 60 HZ, 1 ... 4 A, IP20, MAIN CIRCUIT CONNECTION: PLUG-IN, W/O TERMINALS, AUXILIARY CIRCUIT CONNECTION: SCREW TERMINAL

product brand name	SIRIUS
Product designation	compact starter
Design of the product	reversing feeder

General technical data:	General technical data:			
Product function				
<ul> <li>Control circuit interface to parallel wiring</li> </ul>		Yes		
Insulation voltage	_			
Rated value	V	690		
maximum permissible voltage for safe isolation				
<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	V	250		
<ul> <li>between control and auxiliary circuit</li> </ul>	V	300		
<ul> <li>between main and auxiliary circuit</li> </ul>	V	400		
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		

Electrical endurance (switching cycles) of the		
signaling contacts		400.000
• 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-	А	1 4
dependent overload release		
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	1.5
• at 500 V Rated value	kW	2.2
• at 690 V Rated value	kW	3
Operating voltage		
<ul> <li>at AC-3 Rated value maximum</li> </ul>	V	690
Operating current		
<ul> <li>with AC at 400 V Rated value</li> </ul>	А	4
• at AC-43		
— at 400 V Rated value	А	3.6
— at 500 V Rated value	А	3.9
— at 690 V Rated value	А	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
Control supply voltage 1 with AC		
• at 50 Hz	V	110 240

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• at 60 Hz

110 ... 240

V

Control supply voltage 1		
• for DC	V	110 240
Rated value	Hz	50
Control supply voltage frequency 2 Rated value	Hz	60
Holding power	_	
<ul> <li>with AC maximum</li> </ul>	W	6
• for DC maximum	W	5.1
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>		2
<ul> <li>of the instantaneous short-circuit release for</li> </ul>		1
signaling contact		
Number of CO contacts		
<ul> <li>of the current-dependent overload release for</li> </ul>		1
signaling contact		
Product expansion Auxiliary switch		Yes
Operating current of the auxiliary contacts at AC-12	А	10
maximum	_	
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		

(lcs)		
● 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	А	4
• at 600 V Rated value	А	4
yielded mechanical performance [hp]		
<ul> <li>for three-phase AC motor at 200/208 V Rated value</li> </ul>	metric hp	0.75
<ul> <li>for three-phase AC motor at 220/230 V Rated value</li> </ul>	metric hp	0.75
<ul> <li>for three-phase AC motor at 460/480 V Rated value</li> </ul>	metric hp	2

<ul> <li>for three-phase AC motor at 575/600 V Rated value</li> </ul>	metric hp	3
Contact rating of the auxiliary contacts acc. to UL		contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300

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		
<ul> <li>for short-circuit protection of the signaling switch of the short-circuit release required</li> </ul>	6A gL/gG/400V		
<ul> <li>for short-circuit protection of the signaling switch of the overload release required</li> </ul>	4A gL/gG/400V		

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	90		
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>	screw-type terminals
Product function	
<ul> <li>removable terminal for main circuit</li> </ul>	Yes
<ul> <li>removable terminal for auxiliary and control</li> </ul>	Yes
circuit	
Type of connectable conductor cross-section	
<ul> <li>for main contacts</li> </ul>	
— solid	2x (1.5 6 mm²), 1x 10 mm²
<ul> <li>— finely stranded with core end processing</li> </ul>	2x (1.5 6 mm²)
<ul> <li>for AWG conductors for main contacts</li> </ul>	2x (16 10), 1x 8
<ul> <li>for auxiliary contacts</li> </ul>	
— solid	0.5 4 mm², 2x (0.5 2.5 mm²)
<ul> <li>— finely stranded with core end processing</li> </ul>	0.5 2.5 mm², 2x (0.5 1.5 mm²)
<ul> <li>for AWG conductors for auxiliary contacts</li> </ul>	2x (20 14)
Safety related data:	
B10 value with high demand rate acc. to SN 31920	3 000 000
Proportion of dangerous failures	

<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	%	40
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	%	50
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	100
T1 value for proof test interval or service life acc. to IEC 61508	У	20
Protection against electrical shock	_	finger-safe
Communication/ Protocol:		
Product function Bus communication		No
Product function Control circuit interface with IO link	-	No
Ambient conditions:		
Installation altitude at height above sea level	m	2 000
maximum		
Ambient temperature	-	
<ul> <li>during operation</li> </ul>	°C	-20 +60
<ul> <li>during storage</li> </ul>	°C	-55 +80
<ul> <li>during transport</li> </ul>	°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 contacts, 2 kV auxiliary contacts
Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5	_	4 kV main contacts, 2 kV auxiliary contacts
Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5	_	2 kV main contacts, 1 kV auxiliary contacts
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		10 V/m
Electrostatic discharge acc. to IEC 61000-4-2		8 kV
Supply voltage:		
Supply voltage required Auxiliary voltage		No
Certificates/ approvals:		

General Produc	t Approval			EMC	Functional Safety/Safety of Machinery
	CSA		EHC	C-TICK	VDE
Test Certificates	Shipping Approv	val			
<u>Type Test</u> Certificates/Test <u>Report</u>	BUREAU VERITAS		Lloyd's Register LRS	PRS	RINA
Shipping Approval	other				
RMRS	Declaration of Conformity	Environmental Confirmations	other		

## Further information

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

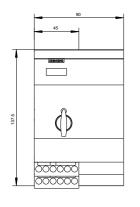
Industry Mall (Online ordering system) http://www.siemens.com/industrymall

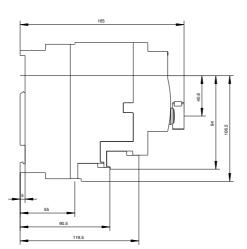
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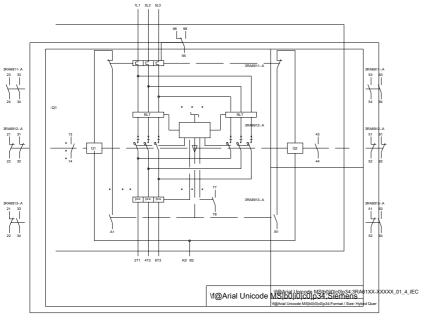
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA62501CP33

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RA62501CP33/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=3RA62501CP33&lang=en







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