# **SIEMENS**

Product data sheet 3RA6250-1CB33



SIRIUS, COMPACT STARTER,
REVERSING STARTER 690 V, 24 V AC/DC,
50 ... 60 HZ, 1 ... 4 A, IP20,
MAIN CIRCUIT CONNECTION: PLUG-IN,
W/O TERMINALS,
AUXILIARY CIRCUIT CONNECTION: SCREW TERMINAL

General technical data:		
Product brand name		SIRIUS
product designation		compact starter
Design of the product		reversing feeder
Trip class		CLASS 10 and 20 adjustable
Product function		
control circuit interface to parallel wiring		Yes
• bus-communication		No
• short circuit protection		Yes
control circuit interface with IO link		No
Type of assignement		continous operation according to IEC 60947-6-2
Protection class IP		IP20
Degree of pollution		3
Built in orientation / recommended		vertical, on horizontal standard mounting rail
Installation altitude / at a height over sea level		
• maximum	m	2,000
Ambient temperature		
during storage	°C	-55 80
during operating	°C	-20 60
during transport	°C	-55 80

Relative humidity		
during operating phase	%	10 90
Resistance against shock		a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes
Resistance against vibration		f= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles
Impulse voltage resistance / rated value	V	6,000
Field-bound parasitic coupling		
• according to IEC 61000-4-3		10 V/m
Insulation voltage / rated value	V	690
Conductor-bound parasitic coupling conductor-earth SURGE		
• according to IEC 61000-4-5		4 kV main contacts, 2 kV auxiliary contacts
Conductor-bound parasitic coupling conductor-conductor SURGE		
• according to IEC 61000-4-5		2 kV main contacts, 1 kV auxiliary contacts
Conductor-bound parasitic coupling BURST		
• according to IEC 61000-4-4		4 kV main contacts, 2 kV auxiliary contacts
Maximum permissible voltage for safe disconnection		
between main circuit and auxiliary circuit	V	400
between control and auxiliary circuit	V	300
between auxiliary circuit and auxiliary circuit	V	250
Item designation		
<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>		Q
according to DIN EN 61346-2		Q

Main circuit:		
Operating voltage / at AC-3 / rated value		
• maximum	V	690
Number of poles / for main current circuit		3
Adjustable response current		
of the current-dependent overload release	Α	1 4
Formula for making capacity limit current		12 x le
Formula for interruption capacity limit current		10 x le
Emitted mechanical power / for 4-pole three-phase motor		
• at 400 V / rated value	kW	1.5
at 500 V / rated value	kW	2.2
at 690 V / rated value	kW	3
Service power / at AC-3 / at 400 V / rated value	W	1,500
Frequency of operation / at AC-41 / according to IEC 60947-6-2 / maximum	1/h	750
Frequency of operation / at AC-43 / according to IEC 60947-6-2 / maximum	1/h	250

Off-load operating frequency	1/h	3,600
Mechanical operating cycles as operating time		
• of the main contacts / typical		10,000,000
of the auxiliary contacts / typical		10,000,000
• of the signal contacts / typical		10,000,000

Control circuit:		
type of voltage		AC
Control supply voltage / 1		
• for DC		
rated value	V	24
• at 50 Hz / for AC		
rated value	V	24
• at 60 Hz / for AC		
• rated value	V	24
Holding power		
• for AC / maximum	W	2.8
• for DC / maximum	W	2.9
Switch-off delay time	ms	50
Start-up delay time	ms	70

Auxiliary circuit:		
Product extension		
auxiliary switch		Yes
Number of NC contacts		
• for auxiliary contacts		0
Number of NO contacts		
• for auxiliary contacts		2
• of the non-delayed short-circuit release / for alarm contact		1
Number of changeover contacts / of the current-dependent overload release / for alarm contact		1
Operating current / of the auxiliary contacts / at AC-12		
• maximum	Α	10
Electrical switching cycle as operating time / of the auxiliary contacts		
• at AC-15 / at 6 A / at 230 V / typical		500,000
• at DC-13 / at 6 A / at 24 V / typical		100,000
Electrical switching cycle as operating time / of the signal contacts		
• at AC-15 / at 6 A / at 230 V / typical		500,000
• at DC-13 / at 6 A / at 24 V / typical		100,000

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

Installation/mounting/dimensions:		
Type of mounting		screw and snap-on mounting
Width	mm	90
Height	mm	170
Depth	mm	165
Built in orientation		any

Connections:		
Product function		
• removable terminal for main circuit	Yes	
• removable terminal for auxiliary and control circuit	Yes	
Design of the electrical connection		
• for main current circuit	plug-in without terminals	
• for auxiliary and control current circuit	screw-type terminals	
Type of the connectable conductor cross-section		
• for main contacts		
• solid	2x (1.5 6 mm²), 1x 10 mm²	
• finely stranded		
<ul> <li>with conductor end processing</li> </ul>	2x (1.5 6 mm²)	
for auxiliary contacts		
• solid	0.5 4 mm², 2x (0.5 2.5 mm²)	
• finely stranded		
<ul> <li>with conductor end processing</li> </ul>	0.5 2.5 mm², 2x (0.5 1.5 mm²)	
• for AWG conductors		
• for main contacts	2x (16 10), 1x 8	
• for auxiliary contacts	2x (20 14)	

Certificates/approvals:	
Verification of suitability	IEC / EN 60947-6-2

#### **General Product Approval**

Functional Safety / Safety of

**Test Certificates** 





**ROSTEST** 



other

Machinery

Manufacturer

### **Shipping Approval**









other

Manufacturer

other

## UL/CSA ratings:

OL/GSA fatiligs.		
yielded mechanical performance (hp) / for three-phase squirrel cage motors		
• at 200/208 V / rated value	hp	0.75
• at 220/230 V / rated value	hp	0.75
• at 460/480 V / rated value	hp	2
• at 575/600 V / rated value	hp	3
Operating current (FLA) / for three-phase squirrel cage motors		
• at 480 V / rated value	Α	4
• at 600 V / rated value	Α	4
Contact rating designation / for auxiliary contacts / according to UL		contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300

Reliability figures:		
B10 value		3,000,000
Proportion of dangerous failures	%	50
Proportion of dangerous failures / with low demand rate / according to SN 31920	%	40
Protection against electrical shock		finger-safe
Failure rate (FIT value) / with low demand rate / according to SN 31920	FIT	100

### **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

Cax online generator:

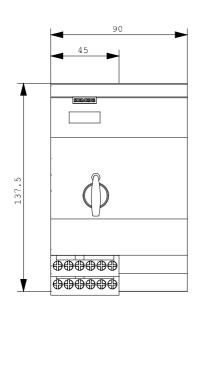
http://www.siemens.com/cax

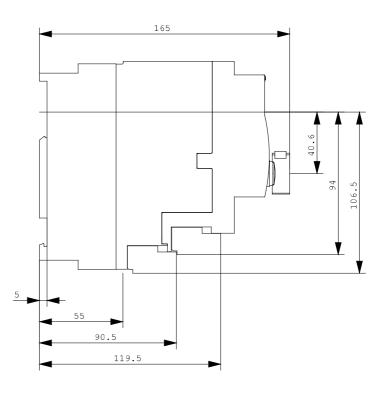
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

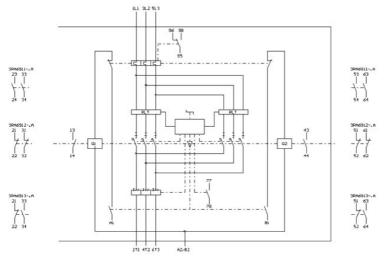
 $\underline{\text{http://support.automation.siemens.com/WW/view/en/3RA6250-1CB33/all}}$ 

 $Image\ database\ (product\ images,\ 2D\ dimension\ drawings,\ 3D\ models,\ device\ circuit\ diagrams,\ ...)$ 

 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RA6250-1CB33}$ 







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