## **SIEMENS**

Data sheet 3RV2321-1AC10



CIRCUIT-BREAKER SZ S0, FOR STARTER COMBINATION, RATED CURRENT 1.6A, N-REL. 21A SCREW CONNECTION, STANDARD SW. CAPACITY

Figure similar

product brand name	SIRIUS
Product designation	3RV2 circuit breaker

Canada tashining data:		
General technical data:	147	
Active power loss total typical	W	6
Insulation voltage		
<ul> <li>with degree of pollution 3 Rated value</li> </ul>	V	690
Shock resistance		
• acc. to IEC 60068-2-27		25g / 11 ms
Surge voltage resistance Rated value	kV	6
Mechanical service life (switching cycles)		
<ul> <li>of the main contacts typical</li> </ul>		100 000
<ul> <li>of the auxiliary contacts typical</li> </ul>		100 000
Electrical endurance (switching cycles)		
• typical		100 000
Size of contactor can be combined company-specific		S00
Protection class IP		
• on the front		IP20
• of the terminal		IP20
Equipment marking		
● acc. to DIN EN 81346-2		Q

Main circuit:		
Number of poles for main current circuit		3
Operating voltage		
Rated value	V	690

● at AC-3 Rated value maximum	V	690
Operating frequency Rated value	Hz	50 60
Operating current Rated value	Α	1.6
Operating current		
• at AC-3		
— at 400 V Rated value	Α	1.6
Operating power		
• at AC-3		
— at 230 V Rated value	W	250
— at 400 V Rated value	W	550
— at 500 V Rated value	W	750
— at 690 V Rated value	W	1 100
Operating frequency		
• at AC-3 maximum	1/h	15
Auxiliary circuit:		
Number of NC contacts		
• for auxiliary contacts		0
Number of NO contacts		
• for auxiliary contacts		0
Number of CO contacts		
<ul> <li>for auxiliary contacts</li> </ul>		0
Product expansion Auxiliary switch		Yes
Protective and monitoring functions:		
Operational short-circuit current breaking capacity		
(Ics) with AC		
• at 240 V Rated value	kA	100
● at 400 V Rated value	kA	100
● at 500 V Rated value	kA	100
• at 690 V Rated value	kA	100
Maximum short-circuit current breaking capacity (Icu)		
• with AC at 240 V Rated value	kA	100
• with AC at 400 V Rated value	kA	100
<ul> <li>with AC at 500 V Rated value</li> </ul>	kA	100
<ul> <li>with AC at 690 V Rated value</li> </ul>	kA	100
Breaking capacity short-circuit current (lcn)		
• with 1 current path for DC at 150 V Rated value	kA	10
<ul> <li>with 2 current paths in series for DC at 300 V</li> <li>Rated value</li> </ul>	kA	10
<ul> <li>with 3 current paths in series for DC at 450 V</li> <li>Rated value</li> </ul>	kA	10
Response value current of the instantaneous short- circuit release	А	21

UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
● at 480 V Rated value	Α	1.6
• at 600 V Rated value	Α	1.6
yielded mechanical performance [hp]		
<ul> <li>for single-phase AC motor at 230 V Rated value</li> </ul>	metric hp	0.1
<ul> <li>for three-phase AC motor at 460/480 V Rated value</li> </ul>	metric hp	0.75
<ul> <li>for three-phase AC motor at 575/600 V Rated value</li> </ul>	metric hp	0.75
Short-circuit:		
Product function Short circuit protection		Yes
Design of the short-circuit trip		magnetic
nstallation/ mounting/ dimensions:		
mounting position		any
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	mm	97
Width	mm	45
Depth	mm	96
Required spacing		
<ul><li>with side-by-side mounting</li></ul>		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	50
— downwards	mm	50
— at the side	mm	0
• for grounded parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	50
— at the side	mm	30
— downwards	mm	50
• for live parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	50
— downwards	mm	50
— at the side	mm	30

Connections/ Terminals:

B10 value with high demand rate acc. to SN 31920 Proportion of dangerous failures  • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  T1 value for proof test interval or service life acc. to IEC 61508  Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  So  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  Relative humidity during operation  • for switching status  Handle	Type of electrical connection		
circuit Product function  • removable terminal for auxiliary and control circuit  Type of connectable conductor cross-section  • for main contacts  — single or multi-stranded — finely stranded with core end processing • for AWG conductors for main contacts  Tightening torque • for main contacts with screw-type terminals  Design of screwdriver shaft  Design of the thread of the connection screw • for main contacts  8	for main current circuit		screw-type terminals
removable terminal for auxiliary and control circuit  Type of connectable conductor cross-section     • for main contacts     — single or multi-stranded     — finely stranded with core end processing     • for AWG conductors for main contacts  Tightening torque     • for main contacts with screw-type terminals     Pesign of screwdriver shaft  Design of the thread of the connection screw     • for main contacts  Flore and a contact	-		Top and bottom
Circuit  Type of connectable conductor cross-section  • for main contacts  — single or multi-stranded — finely stranded with core end processing • for AWG conductors for main contacts  Tightening torque • for main contacts with screw-type terminals Design of screwdriver shaft  Design of screwdriver shaft  Design of the thread of the connection screw • for main contacts  Safety related data:  B10 value with high demand rate acc. to SN 31920  Froportion of dangerous failures • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  To value for proof test interval or service life acc. to graph and the proof test interval or service life acc.	Product function		
• for main contacts — single or multi-stranded — finely stranded with core end processing  • for AWG conductors for main contacts  Tightening torque • for main contacts with screw-type terminals  Pesign of screwdriver shaft  Design of the thread of the connection screw • for main contacts  10 Period of dangerous failures  • with low demand rate acc. to SN 31920 • with ligh demand rate acc. to SN 31920 • with ligh demand rate acc. to SN 31920  • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920  • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920  • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920  Ti value for proof test interval or service life acc. to graph of the circuit-breaker  Mechanical data:  Size of the circuit-breaker  Ambient conditions:  Installation altitude at height above sea level maximum  Amiont temperature  • during operation • during storage • during transport  Relative humidity during operation • for switching status  Vax (1 2,5 mm²), 2x (2.5 10 mm²)  2x (16 12), 2x (14 8)  The main contacts  N'm  2 2.5  Diameter 5 to 6 mm  4 4 40  4 4			No
single or multi-stranded finely stranded with core end processing • for AWG conductors for main contacts  Tightening torque • for main contacts with screw-type terminals  Design of screwdriver shaft  Design of the thread of the connection screw • for main contacts  Safety related data:  B10 value with high demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920  T1 value for proof test interval or service life acc. to IEC 61508  Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  • during operation • during storage • during transport  Relative humidity during operation • for switching status   2x (1 2,5 mm²), 2x (2,5 10 mm²) 2x (16 12), 2x (14 8)  2x (16 12), 2x (14 8)  1x (16 12), 2x (14 .	Type of connectable conductor cross-section		
finely stranded with core end processing  • for AWG conductors for main contacts  Tightening torque  • for main contacts with screw-type terminals  Design of screwdriver shaft  Design of the thread of the connection screw  • for main contacts  B10 value with high demand rate acc. to SN 31920  • with low demand rate acc.	for main contacts		
• for AWG conductors for main contacts  Tightening torque • for main contacts with screw-type terminals  Design of screwdriver shaft  Design of the thread of the connection screw • for main contacts  B10 value with high demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920 • with low demand rate acc. to SN 31920  T1 value for proof test interval or service life acc. to IEC 61508  Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature • during operation • during storage • during transport  Relative humidity during operation • for switching status  Handle	<ul><li>— single or multi-stranded</li></ul>		2x (1 2,5 mm²), 2x (2,5 10 mm²)
Tightening torque  • for main contacts with screw-type terminals  Design of screwdriver shaft  Design of the thread of the connection screw • for main contacts  M4  Safety related data:  B10 value with high demand rate acc. to SN 31920  Proportion of dangerous failures • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  T1 value for proof test interval or service life acc. to IEC 61508  Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature • during operation • during storage • during transport  Relative humidity during operation • for switching status  N'm  2 2.5  Display:  Display version • for switching status	<ul> <li>finely stranded with core end processing</li> </ul>		2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
• for main contacts with screw-type terminals  Design of screwdriver shaft  Design of the thread of the connection screw  • for main contacts  M4  Safety related data:  B10 value with high demand rate acc. to SN 31920  Proportion of dangerous failures  • with low demand rate acc. to SN 31920  • with high demand rate acc. to SN 31920  * with high demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  T1 value for proof test interval or service life acc. to IEC 61508  Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation  • during storage  • during transport  Relative humidity during operation  • for switching status  Nm  M4   Andle  Display:  Display:  Display:  Display version  • for switching status  M4  40  40  40  40  40  40  40  40  40	<ul> <li>for AWG conductors for main contacts</li> </ul>		2x (16 12), 2x (14 8)
Design of screwdriver shaft  Design of the thread of the connection screw  • for main contacts  M4  Safety related data:  B10 value with high demand rate acc. to SN 31920  Proportion of dangerous failures  • with low demand rate acc. to SN 31920  • with high demand rate acc. to SN 31920  * with high demand rate acc. to SN 31920  * with high demand rate acc. to SN 31920  * Till value for proof test interval or service life acc. to  IEC 61508  Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  So  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  Relative humidity during operation • for switching status  Display.  Display version • for switching status  M44  M4  M4  M4  40  40  40  40  40  4	Tightening torque	-	
Design of the thread of the connection screw  • for main contacts  M4  Safety related data:  B10 value with high demand rate acc. to SN 31920  Proportion of dangerous failures  • with low demand rate acc. to SN 31920  • with high demand rate acc. to SN 31920  • with high demand rate acc. to SN 31920  * with high demand rate acc. to SN 31920  Tallure rate [FIT] with low demand rate acc. to SN 31920  Follure rate [FIT] with low demand rate acc. to SN 31920  To use for proof test interval or service life acc. to y 10  IEC 61508  Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  So  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation  • during storage  • during transport  Relative humidity during operation  • for switching status  M4  M4  M4  M4  M4  M5  M6  40  40  40  40  40  40  40  40  40  4	<ul> <li>for main contacts with screw-type terminals</li> </ul>	N·m	2 2.5
of for main contacts  Safety related data:  B10 value with high demand rate acc. to SN 31920  Forportion of dangerous failures  owith low demand rate acc. to SN 31920  with high demand rate acc. to SN 31920  with high demand rate acc. to SN 31920  with high demand rate acc. to SN 31920  failure rate [FIT] with low demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  Filt 50  31920  T1 value for proof test interval or service life acc. to IEC 61508  Protection against electrical shock  finger-safe  Mechanical data:  Size of the circuit-breaker  S0  Ambient conditions:  Installation attitude at height above sea level maximum  Ambient temperature  of during operation  of C -20 +60  of during storage of C -50 +80  eduring transport  Relative humidity during operation  of or switching status  Handle	Design of screwdriver shaft		Diameter 5 to 6 mm
Safety related data:  B10 value with high demand rate acc. to SN 31920 Proportion of dangerous failures  • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  T1 value for proof test interval or service life acc. to IEC 61508 Protection against electrical shock  Mechanical data: Size of the circuit-breaker Size of the circuit-breaker  Size of the circuit-breaker  Ambient conditions: Installation altitude at height above sea level maximum  Ambient temperature • during operation • during storage • during transport  Relative humidity during operation • for switching status  Provided the circuit-breaker  Size of the circuit-breaker  Size o	Design of the thread of the connection screw		
B10 value with high demand rate acc. to SN 31920 Proportion of dangerous failures  • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  T1 value for proof test interval or service life acc. to IEC 61508  Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  So  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  Relative humidity during operation  • for switching status  Handle	• for main contacts		M4
Proportion of dangerous failures  • with low demand rate acc. to SN 31920 % 40  • with high demand rate acc. to SN 31920 % 40  Failure rate [FIT] with low d	Safety related data:		
with low demand rate acc. to SN 31920 with high demand rate acc. to SN 31920 with high demand rate acc. to SN 31920  Failure rate [FIT] with low demand rate acc. to SN 31920  T1 value for proof test interval or service life acc. to IEC 61508  Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  So  Ambient conditions:  Installation altitude at height above sea level maximum  Amblent temperature  during operation during storage during transport  Relative humidity during operation  of tor switching status  with low demand rate acc. to SN 31920  ### 40  #			50 000
with high demand rate acc. to SN 31920		0/	40
Failure rate [FIT] with low demand rate acc. to SN 31920  T1 value for proof test interval or service life acc. to IEC 61508  Protection against electrical shock  Mechanical data: Size of the circuit-breaker  S0  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  Relative humidity during operation • for switching status  FIT  50  10  10  10  10  10  10  10  10  10			
31920 T1 value for proof test interval or service life acc. to IEC 61508 Protection against electrical shock  Mechanical data: Size of the circuit-breaker  S0  Ambient conditions: Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  Relative humidity during operation  • for switching status  y 10  10  10  10  10  10  10  10  10			
IEC 61508 Protection against electrical shock  Mechanical data:  Size of the circuit-breaker  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  Relative humidity during operation  • for switching status    Finger-safe		FII	50
Mechanical data:  Size of the circuit-breaker  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  Relative humidity during operation • for switching status  S0  M  2 000  M  2 000  C  -20 +60  • -20 +80  C  -50 +80  T  10 95  Handle		у	10
Size of the circuit-breaker  Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  Relative humidity during operation  • for switching status  S0	Protection against electrical shock		finger-safe
Ambient conditions:  Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  C -50 +80 • during transport  Relative humidity during operation  Display:  Display version • for switching status  m 2 000  C -20 +60  -20 +60  -10 +80  Handle	Mechanical data:		
Installation altitude at height above sea level maximum  Ambient temperature  • during operation • during storage • during transport  C -20 +60 • during transport  ° C -50 +80  Relative humidity during operation  Display:  Display version • for switching status	Size of the circuit-breaker		S0
maximum  Ambient temperature  • during operation • during storage • during transport • during transport  Relative humidity during operation  Display:  Display version • for switching status  O C -20 +60  -50 +80  -50 +80  -50 +80  Handle	Ambient conditions:		
<ul> <li>during operation</li> <li>during storage</li> <li>during transport</li> <li>C -50 +80</li> <li>during transport</li> <li>C -50 +80</li> <li>Relative humidity during operation</li> <li>M 10 95</li> </ul> Display: <ul> <li>Display version</li> <li>for switching status</li> <li>Handle</li> </ul>	-	m	2 000
<ul> <li>during storage</li> <li>during transport</li> <li>C -50 +80</li> <li>Relative humidity during operation</li> <li>M 10 95</li> </ul> Display: <ul> <li>Display version</li> <li>for switching status</li> <li>Handle</li> </ul>	Ambient temperature		
<ul> <li>during transport</li> <li>C -50 +80</li> <li>Relative humidity during operation</li> <li>M 10 95</li> <li>Display:</li> <li>Display version</li> <li>for switching status</li> <li>Handle</li> </ul>	• during operation	°C	-20 +60
Relative humidity during operation	during storage	°C	-50 +80
Display:  Display version  • for switching status  Handle	during transport	°C	-50 +80
Display version  ● for switching status  Handle	Relative humidity during operation	%	10 95
• for switching status  Handle	Display:		
Certificates/ approvals:	• for switching status		Handle
	Certificates/ approvals:		

### **General Product Approval**

# Declaration of Conformity

### **Test Certificates**









Type Test
Certificates/Test
Report

Special Test Certificate

Test

**Shipping Approval** 

#### Certificates

Declaration of the Compliance with the order









GL



LRS

**Shipping Approval** 

other







Environmental Confirmations

Confirmation



other

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=3RV23211AC10

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

http://support.automation.siemens.com/WW/view/en/3RV23211AC10/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=3RV23211AC10&lang=en



