# SIEMENS

## **Product data sheet**

### 3RV2011-1CA10



CIRCUIT-BREAKER SZ S00, FOR MOTOR PROTECTION, CLASS 10, A-REL.1.8...2.5A, N-RELEASE 33A, SCREW CONNECTION, STANDARD SW. CAPACITY

General technical data:			
product brand name		SIRIUS	
product designation		3RV2 circuit breaker	
Size of the circuit-breaker		S00	
Trip class		CLASS 10	
Protection class IP / on the front		IP20	
Degree of pollution		3	
Installation altitude / at a height over sea level / maximum	m	2,000	
Ambient temperature			
during storage	°C	-50 +80	
during operating	°C	-20 +60	
during transport	°C	-50 +80	
Resistance against shock		25g / 11 ms	
Impulse voltage resistance / rated value	kV	6	
Insulation voltage / rated value	V	690	
Active power loss / total / typical	W	6	
Item designation			
<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>		F	
according to DIN EN 61346-2		F	

• of the main contracts / typical100,000Type of the driving mechanism / motor driveNoDesign of the operating mechanismSector switchProduct functionYes• overload protectionYes• have diary switchNo• undiary switchSector• undiary switchNo• undiary switchNo• undiary switchNo• undiary switchSector• undiary switchNo• undiary switchNo• undiary switchSector• undiary switchNo• undiary switchSector• undiary switchNo• undiary switchNo• undiary switchNo• undiary switchNo• undiary switchNo• undiary switchNo<	Mechanical operating cycles as operating time	_	
Type of the driving mechanism / motor drive         No           Design of the operating mechanism         selector switch           Product function         Yes           • overload protection         Yes           • phase disturbance recognition         Yes           • auxiliary switch         No           • undervoltage release mechanism         No           • inp indicator         No           Product extension / optional / motor drive         No           Main circuit:         No           Number of poles / for main current circuit         3           Operating current / at AC-3 / rated value / maximum         V           of all door / rated value         AV           • at 400 V / rated value         W           • at 600 V / rated value         W           • of the non-delayed short-circuit release         A           A rangement of electrical connectors / for main current circuit         Top and bottom           • of the non-delayed short-circuit release         A         3	of the main contacts / typical		100,000
Design of the operating mechanism         Image: Constraint of the constref of the constraint of the constraint of the const	of the auxiliary contacts / typical		100,000
Product function         Yes           • overfoad protection         Yes           • phase disturbance recognition         Yes           Product component         Yes           • audilary switch         No           • undervoltage release mechanism         No           • trip indicator         No           Product extension / optional / motor drive         No           Main circuit:         No           Number of poles / for main current circuit         3           Operating voltage / at AC-3 / rated value / maximum         V           Operating current / at AC-3 / at 400 V / rated value         A           Service power / at AC-3         -           • at 400 V / rated value         W           • of the non-delayed short-circuit release         A           A         2.5	Type of the driving mechanism / motor drive	_	No
• overload protectionYes• phase disturbance recognitionYesProduct componentYes• auxiliary switchNo• undervoltage release mechanismNo• indicatorNoProduct extension / optional / motor driveNoProduct extension / optional / motor driveNoOperating voltage / at AC-3 / rated value / maximumVOperating units of at AC-3 / rated value / maximumVOperating current / at AC-3 / rated valueW• at 400 V rated valueY• at 400 V rated valueA• at 400 V rated valueA<	Design of the operating mechanism	_	selector switch
• phase disturbance recognitionImage: Second Se	Product function		
Product component       Image: Selection of the component of the com	overload protection		Yes
• auxiliary switchNo• undervoltage release mechanismNo• trip indicatorNoProduct extension / optional / motor driveNoMumber of poles / for main current circuit3Operating voltage / at AC-3 / rated value / maximumVOperating current / at AC-3 / rated value / maximumVOperating current / at AC-3 / rated value / maximumVOperating current / at AC-3 / rated valueA2.5Service power / at AC-3V• at 400 V / rated valueW• at 500 V / rated valueW• at 600 V / rated valueW• of the non-delayed short-circuit releaseA• of the non-delayed short-circuit releaseA• of the current-dependent overload releaseA• of the current-dependent overload releaseA• of the current-dependent overload releaseA• oth current-dependent o	phase disturbance recognition		Yes
• undervoltage release mechanismNo• trip indicatorNoProduct extension / optional / motor driveNoMumber of poles / for main current circuit3Operating voltage / at AC-3 / rated value / maximumV690Operating current / at AC-3 / at 400 V / rated valueA2.5Service power / at AC-3 / at 400 V / rated valueW750• at 400 V / rated valueW1.100• at 600 V / rated valueW1.500• at 600 V / rated valueM1.500• at 600 V / rated valueW1.500• file current-dependent current circuitM333• of the non-delayed short-ficuit releaseA1825• of the non-delayed short-ficuit releaseA1825 </th <th>Product component</th> <th></th> <th></th>	Product component		
• trip indicator       No         Product extension / optional / motor drive       No         Main circuit:       3         Number of poles / for main current circuit       3         Operating voltage / at AC-3 / rated value / maximum       V       690         Operating current / at AC-3 / rated value / maximum       V       690         Operating current / at AC-3 / rated value / maximum       V       690         Operating current / at AC-3 / at 400 V / rated value       A       2.5         Service power / at AC-3       Top       750         • at 400 V / rated value       W       1,100         • at 690 V / rated value       W       1,500         • at 690 V / rated value       W       1,500         • at 690 V / rated value       W       1,500         • at 690 V / rated value       W       1,500         • at 690 V / rated value       W       1,500         • at 690 V / rated value       W       1,500         • at 690 V / rated value       W       1,500         • at 690 V / rated value       M       3 33         • of the non-delayed short-circuit release       A       1 & 2.5         Service power / at AC-3 / at 230 V / rated value       W       370	auxiliary switch		No
Product extension / optional / motor drive       No         Main circuit:       3         Number of poles / for main current circuit       3         Operating voltage / at AC-3 / rated value / maximum       V       690         Operating current / at AC-3 / at 400 V / rated value       A       2.5         Service power / at AC-3       W       750         • at 400 V / rated value       W       750         • at 400 V / rated value       W       1,000         • at 600 V / rated value       W       1,000         • at 600 V / rated value       W       1,000         • at 600 V / rated value       W       1,000         • at 600 V / rated value       W       1,000         • at 600 V / rated value       W       1,500         Frequency of operation / at AC-3 / according to IEC 60947-6-2 /       I/h       15         Arrangement of electrical connectors / for main current circuit       Top and bottom         • of the non-delayed short-circuit release       A       3333         • of the current-dependent overload release       A       18 2.5         Service power / at AC-3 / at 230 V / rated value       Y       Yes         Number of NC contacts / for auxiliary contacts / instantaneous switching       0       0	undervoltage release mechanism		No
Main circuit:       3         Operating voltage / at AC-3 / rated value / maximum       V       690         Operating vortage / at AC-3 / rated value / maximum       V       690         Operating current / at AC-3 / at 400 V / rated value       A       2.5         Service power / at AC-3       W       750         • at 400 V / rated value       W       1,100         • at 600 V / rated value       W       1,500         • at 600 V / rated value       W       1,500         Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum       Top and bottom         Arrangement of electrical connectors / for main current circuit       Top and bottom         Adjustable response current       Inh       15         • of the non-delayed short-circuit release       A       33 33         • of the current-dependent overload release       A       18 2.5         Service power / at AC-3 / at 230 V / rated value       W       370         Continuous current / rated value       Yes       Number of NC contacts / for auxiliary contacts / instantaneous switching       0         Number of NC contacts / for auxiliary contacts / instantaneous switching       0       0         Number of non contacts / for auxiliary contacts / instantaneous switching       0       0	trip indicator		No
Number of poles / for main current circuit3Operating voltage / at AC-3 / rated value / maximumV690Operating current / at AC-3 / at 400 V / rated valueA2.5Service power / at AC-3W750• at 400 V / rated valueW750• at 600 V / rated valueW1.100• at 600 V / rated valueW1.500Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response current• of the non-delayed short-circuit releaseA33 33• of the current-dependent overload releaseA1.8 2.5Service power / at AC-3 / at 230 V / rated valueW370Continuous current / rated valueVes0Number of NC contacts / for auxillary contacts / instantaneous switching0Number of NO contacts / for auxillary contacts / instantaneous switching0Number of change-over switches / for auxillary contacts0Number of change-over switches / for auxillary contacts0	Product extension / optional / motor drive		No
Operating voltage / at AC-3 / rated value / maximum       V       690         Operating current / at AC-3 / at 400 V / rated value       A       2.5         Service power / at AC-3       W       750         • at 400 V / rated value       W       750         • at 600 V / rated value       W       1,000         • at 600 V / rated value       W       1,500         Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum       Top and bottom         Arrangement of electrical connectors / for main current circuit       Top and bottom         Adjustable response current       -       -         • of the non-delayed short-circuit release       A       3333         • of the current-dependent overload release       A       182.5         Service power / at AC-3 / at 230 V / rated value       W       370         Continuous current / rated value       A       2.5         Auxiliary circuit:       Yes       1         Product extension / auxiliary contacts / instantaneous switching       0       0         Number of NC contacts / for auxiliary contacts / instantaneous switching       0       0       0         Number of change-over switches / for auxiliary contacts       In       0       0       0       0       0       0       <	Main circuit:		
Operating current / at AC-3 / at 400 V / rated valueA2.5Service power / at AC-3V750• at 400 V / rated valueW750• at 500 V / rated valueW1,100• at 690 V / rated valueW1,500Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response current• of the non-delayed short-circuit releaseA33 33• of the current-dependent overload releaseA1.8 2.5Service power / at AC-3 / at 230 V / rated valueW370Continuous current / rated valueW370Continuous current / rated valueYesNumber of NC contacts / for auxiliary contacts / instantaneous switchingYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0Inputs/Outputs:	Number of poles / for main current circuit		3
Service power / at AC-3W750• at 400 V / rated valueW1,100• at 500 V / rated valueW1,500• at 690 V / rated valueW1,500Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response currentIA• of the non-delayed short-circuit releaseA33 33• of the current-dependent overload releaseA1.8 2.5Service power / at AC-3 / at 230 V / rated valueW370Continuous current / rated valueA2.5Auxiliary circuit:YesProduct extension / auxiliary switchYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of NC contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0	Operating voltage / at AC-3 / rated value / maximum	V	690
• at 400 V / rated valueW750• at 500 V / rated valueW1,100• at 690 V / rated valueW1,500Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response current • of the non-delayed short-circuit releaseA33 33• of the current-dependent overload releaseA18 2.5Service power / at AC-3 / at 230 V / rated valueW370Continuous current / rated valueW370Auxiliary circuit:YesProduct extension / auxiliary contacts / instantaneous switching0Number of NC contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0Number of change-over switches / for auxiliary contacts0	Operating current / at AC-3 / at 400 V / rated value	А	2.5
• at 500 V / rated valueW1,100• at 690 V / rated valueW1,500Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response current • of the non-delayed short-circuit releaseA33 33• of the current-dependent overload releaseA18 2.5Service power / at AC-3 / at 230 V / rated valueW370Continuous current / rated valueW370Auxiliary circuit:YesProduct extension / auxiliary switchYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0Number of change-over switches / for auxiliary contacts0	Service power / at AC-3	_	
• at 690 V / rated valueW1,500Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response currentTop and bottom• of the non-delayed short-circuit releaseA33 33• of the current-dependent overload releaseA1.8 2.5Service power / at AC-3 / at 230 V / rated valueW370Continuous current / rated valueW370Auxiliary circuit:YesProduct extension / auxiliary switchYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0Inputs/Outputs:Instantaneous	• at 400 V / rated value	W	750
Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum       1/h       15         Arrangement of electrical connectors / for main current circuit       Top and bottom         Adjustable response current       Top and bottom         • of the non-delayed short-circuit release       A       33 33         • of the current-dependent overload release       A       1.8 2.5         Service power / at AC-3 / at 230 V / rated value       W       370         Continuous current / rated value       A       2.5         Auxiliary circuit:       Yes       Ves         Number of NC contacts / for auxiliary contacts / instantaneous switching       0       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0       0         Number of change-over switches / for auxiliary contacts       0       0         Inputs/ Outputs:       Inputs/ Outputs       0       0	• at 500 V / rated value	W	1,100
maximum       Imaximum       Image: Imaximum       Imaximum <t< td=""><td>• at 690 V / rated value</td><td>W</td><td>1,500</td></t<>	• at 690 V / rated value	W	1,500
Adjustable response currentImage: Constant of the non-delayed short-circuit releaseA33 33• of the current-dependent overload releaseA1.8 2.5Service power / at AC-3 / at 230 V / rated valueW370Continuous current / rated valueA2.5Auxiliary circuit:YesProduct extension / auxiliary switchYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of NO contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0Inputs/ Outputs:Imputs/ Outputs:		1/h	15
• of the non-delayed short-circuit releaseA33 33• of the current-dependent overload releaseA1.8 2.5Service power / at AC-3 / at 230 V / rated valueW370Continuous current / rated valueA2.5Auxiliary circuit:VesProduct extension / auxiliary switchYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of NO contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0Inputs/ Outputs:Inputs/ Outputs	Arrangement of electrical connectors / for main current circuit		Top and bottom
• of the current-dependent overload releaseA1.8 2.5Service power / at AC-3 / at 230 V / rated valueW370Continuous current / rated valueA2.5Auxiliary circuit:YesProduct extension / auxiliary switchYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of NO contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0Inputs/ Outputs:U	Adjustable response current		
Service power / at AC-3 / at 230 V / rated value       W       370         Continuous current / rated value       A       2.5         Auxiliary circuit:       Yes         Product extension / auxiliary switch       Yes         Number of NC contacts / for auxiliary contacts / instantaneous switching       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0         Number of change-over switches / for auxiliary contacts       0         Inputs/ Outputs:       U	<ul> <li>of the non-delayed short-circuit release</li> </ul>	А	33 33
Continuous current / rated value       A       2.5         Auxiliary circuit:       Yes         Product extension / auxiliary switch       Yes         Number of NC contacts / for auxiliary contacts / instantaneous switching       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0         Number of change-over switches / for auxiliary contacts       0         Inputs/ Outputs:       U	of the current-dependent overload release	А	1.8 2.5
Auxiliary circuit:       Yes         Product extension / auxiliary switch       Yes         Number of NC contacts / for auxiliary contacts / instantaneous switching       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0         Number of change-over switches / for auxiliary contacts       0         Inputs/ Outputs:       0	Service power / at AC-3 / at 230 V / rated value	W	370
Product extension / auxiliary switch       Yes         Number of NC contacts / for auxiliary contacts / instantaneous switching       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0         Number of change-over switches / for auxiliary contacts       0         Inputs/ Outputs:       0	Continuous current / rated value	А	2.5
Number of NC contacts / for auxiliary contacts / instantaneous switching       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0         Number of change-over switches / for auxiliary contacts       0         Inputs/ Outputs:       0	Auxiliary circuit:		
switching     0       Number of NO contacts / for auxiliary contacts / instantaneous switching     0       Number of change-over switches / for auxiliary contacts     0       Inputs/ Outputs:     0	Product extension / auxiliary switch		Yes
switching     0       Number of change-over switches / for auxiliary contacts     0       Inputs/ Outputs:	-		0
Inputs/ Outputs:			0
	Number of change-over switches / for auxiliary contacts		0
Number of digital inputs 0	Inputs/ Outputs:		
	Number of digital inputs		0

Short-circuit:			
Breaking capacity limit short-circuit current (lcu)			
• at 400 V / rated value	А	100,000	
• at 500 V / rated value	А	100,000	
• at 690 V / rated value	А	10,000	
Design of the overcurrent release and short-circuit release	_	thermomagnetic	
Installation/mounting/dimensions:			
mounting position	any		
Type of mounting	_	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	
Width	mm	45	
Height	mm	97	
Depth	mm	91	
Distance, to be maintained, to the ranks assembly			
forwards	mm	0	
backwards	mm	0	
• upwards	mm	50	
downwards	mm	50	
• sidewards	mm	0	
Distance, to be maintained, to earthed part			
forwards	mm	0	
backwards	mm	0	
• upwards	mm	50	
• sidewards	mm	30	
downwards	mm	50	
Distance, to be maintained, conductive elements			
forwards	mm	0	
backwards	mm	0	
• upwards	mm	50	
downwards	mm	50	
• sidewards	mm	30	
Connections:			
Product function			
<ul> <li>removable terminal for main circuit</li> </ul>		No	
<ul> <li>removable terminal for auxiliary and control circuit</li> </ul>		No	
Design of the electrical connection			
for main current circuit		screw-type terminals	
Type of the connectable conductor cross-section			
for main contacts			

			_			
• solid				2x (0.7	′5 2.5 mm²), 2x 4	mm²
<ul> <li>finely strand</li> </ul>						
with conductor end processing				2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)		
<ul> <li>for AWG cond</li> </ul>	uctors / for main contact	S		2x (18	14), 2x 12	
Certificates/app	provals:					
Verification of su	itability			CE / U	L / CSA / CCC	
<ul> <li>für Staubexplo</li> </ul>	für Staubexplosionsschutz für Zone 21/22			no		
<ul> <li>for gas explosi</li> </ul>	ion protection for zone 1	/2		no		
General Product	t Approval				For use in hazardous locations	Declaration of Conformity
	(SA)	GOST			KEX ATEX	EG-Konf.
Test Certificates	5					
other	Special Test Certificate	<u>Type Test</u> Certificates/Test <u>Report</u>				
Shipping Appro	val					
ABS	GL	Lloyd's Kegister	PRS		RINA	RMRS
other						
	other					
UL/CSA ratings				_		
yielded mechanic	al performance (hp)					
<ul> <li>for single-phase</li> </ul>	se squirrel cage motors					
• at 230 V / ra			hp	0.167		
	e squirrel cage motors					
• at 200/208 V / rated value		hp	0.5			
• at 220/230 V / rated value		hp	0.5			
• at 460/480 V / rated value		hp	1			
• at 575/600	V / rated value		hp	1.5		
Operating current	t (FLA) / for three-phas	e squirrel cage motors				
• at 480 V / rate	d value		А	2.1		

Safety:

## B10 value / with high demand rate

• at 600 V / rated value

А

2.4

according to SN 31920		50,000
T1 value / for proof test interval or service life		
according to IEC 61508	а	10
Failure rate (FIT value) / with low demand rate		
according to SN 31920	FIT	50
Proportion of dangerous failures		
with low demand rate / according to SN 31920	%	40
• with high demand rate / according to SN 31920	%	40
Protection against electrical shock		finger-safe

#### **Further information:**

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

### Industry Mall (Online ordering system)

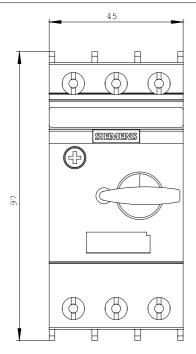
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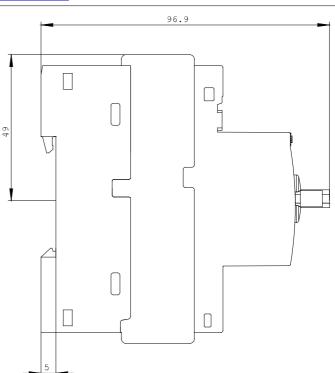
#### **CAx-Online-Generator**

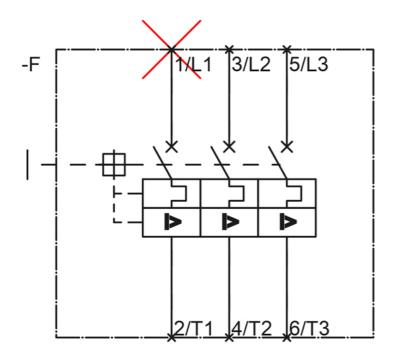
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Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RV2011-1CA10/all

#### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RV2011-1CA10







last change:

Sep 12, 2012