# SIEMENS

## **Product data sheet**

### 3RV2011-0CA20



CIRCUIT-BREAKER SZ S00, FOR MOTOR PROTECTION, CLASS 10, A-REL. 0.18...0.25A, N-RELEASE3.3A SPRING-L. 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	4.8
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 contacts / typical100,000• of the auviliary contacts / typical100,000Type of the driving mechanism / motor driveNoDesign of the operating mechanismNo• overhaad protectionYes• overhaad protectionYes• has disturbance recognitionYesProduct functionNo• auviliary switchNo• undervolage release mechanismNo• unde	Mechanical operating cycles as operating time	_		
Type of the driving mechanism / motor drive         Image: Margin and State	of the main contacts / typical		100,000	
Design of the operating mechanism         Image: Selector switch           Product function         Ves           • overload protection         Yes           • phase disturbance recognition         Yes           Product component         Yes           • survilary switch         No           • undervoltage release mechanism         No           • tip indicator         No           Product statistion / optional / motor drive         No           Main circuit:         No           Number of poles / for main current circuit         3           Operating voltage / at AC-3 / at 400 V / rated value         AV           • at 400 V / rated value         WW         800           • at 400 V / rated value         WW         800           • at 800 V / rated value         WW         800           • at 800 V / rated value         WW         800           • at 800 V / rated value         WW         800           • of the non-delayed short-circuit release         A         3.33.3           Arrangement of electrical connectors / for main current circuit         Top and bottom           • of the non-delayed short-circuit release         A         0.380.25           Service power / at AC-3 / according to IEC 60947-6-2/         Inh	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 stansion / optional / motor drive     No       Main circuit:     No       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     0.2       Service power / at AC-3     W     60       • at 400 V / rated value     W     90       • at 400 V / rated value     W     120       Frequency of operation / at AC-3 / according to IEC 60947-6-2/     1/h     15       Arrangement of electrical connectors / for main current circuit     Top and bottom       Adjustable response current     A     0.25       Service power / at AC-3 at 230 V / rated value     W     40       Continuous current / rated value     A     0.25       Service power / at AC-3 / at 230 V / rated value     W     40       Adjustable response current     A     0.25       Service power / at AC-3 / at 230 V / rated value     A     0.25       Service power	Type of the driving mechanism / motor drive	_	No	
• overload protectionImage: Section of the constraint of th	Design of the operating mechanism	_	selector switch	
• phase disturbance recognitionIYesProduct componentNo• undievoltage release mechanismNo• inf indicatorNoProduct extension / optional / motor driveNoMumber of poles / for main current circuit3Operating voltage / at AC-3 / rated value / maximumV600 / rated valueA0.2Service power / at AC-3W060• at 400 V / rated valueW• at 600 V / rated valueM• at 600 V / rated valueM• at 600 V / rated valueA• at 600 V / rated valueA• at 600 V / rated valueB <td>Product function</td> <td>_</td> <td></td>	Product function	_		
Product component       No         • auxiliary switch       No         • undervoltage release mechanism       No         • trip indicator       No         Product extension / optional / motor drive       No         Mumber 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       A       0.2         Service power / at AC-3	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 / maximumV600600Operating current / at AC-3 / rated value / maximumV0600Operating current / at AC-3 / rated value / maximumV06000 <td< td=""><td>phase disturbance recognition</td><td></td><td>Yes</td></td<>	phase disturbance recognition		Yes	
• undervoltage release mechanismNo• trip indicatorNoProduct extension / optional / motor driveNoMain circuit:NoNumber of poles / for main current circuit3Operating voltage / at AC-3 / rated value / maximumVOperating voltage / at AC-3 / rated value / maximumVOperating voltage / at AC-3 / rated value / maximumVOperating voltage / at AC-3 / rated value / maximumVOperating voltage / at AC-3 / at 400 V / rated valueA0.2Service power / at AC-3• at 400 V / rated valueW• at 600 V / rated valueM• at 600 V / rated valueM• of the non-delayed short-circuit releaseA• of the non-delayed short-circuit releaseA• of the non-delayed short-circuit releaseA• of the current / rated valueW• of the con-delayed short-circuit releaseA• of the current / rated valueM• of the con-delayed short-circuit releaseA• of the current / rated valueYes <td>Product component</td> <td></td> <td></td>	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         • at 400 V / rated value       M       0.2         Service power / at AC-3       W       60         • at 400 V / rated value       W       90         • at 400 V / rated value       W       90         • at 690 V / rated value       W       90         • at 690 V / rated value       W       120         Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum       1/h       15         Arrangement of electrical connectors / for main current circuit       A       3.3 3.3         • of the non-delayed short-circuit release       A       3.3 3.3         • of the current / ated value       W       40         Continuous current / rated value       A       0.25         Service power / at AC-3 / at 230 V / rated value       Q       9         Number of NC contacts / for auxilla	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       0.2         Service power / at AC-3       W       600         • at 400 V / rated value       W       600         • at 400 V / rated value       W       90         • at 600 V / rated value       W       90         • at 600 V / rated value       W       120         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       M       3.3 3.3         • of the non-delayed short-circuit release       A       0.18 0.25         Service power / at AC-3 / at 230 V / rated value       W       40         Continuous current / rated value       M       0.25         Auxiliary circuit:       Yes       1         Product extension / auxiliary sontacts / instantaneous switching       0       0         Number of NO contacts / for auxiliary contacts / instantaneous switching       0       0<	<ul> <li>undervoltage release mechanism</li> </ul>		No	
Main circuit:       3         Operating voltage / at AC-3 / rated value / maximum       V       690         Operating vortent / at AC-3 / at 400 V / rated value       A       0.2         Service power / at AC-3       W       60         • at 400 V / rated value       W       60         • at 400 V / rated value       W       60         • at 600 V / rated value       W       90         • at 600 V / rated value       W       120         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       0.18 0.25         Service power / at AC-3 / at 230 V / rated value       W       40         Continuous current / rated value       W       0         Continuous current / rated value       M       0         Number of NC contacts / for auxiliary contacts / instantaneous switching       0         Number of change-over switches / for auxiliary contacts       0         Number of change-over switches / for auxiliary contacts       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 valueA0.2Service power / at AC-3W60• at 400 V / rated valueW60• at 600 V / rated valueW90• at 600 V / rated valueW120Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response current	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         0.2           Service power / at AC-3         W         60           • at 400 V / rated value         W         60           • at 500 V / rated value         W         90           • at 600 V / rated value         W         90           • at 600 V / rated value         W         90           • at 600 V / rated value         W         90           • at 600 V / rated value         W         90           • at 600 V / rated value         W         90           • at 600 V / rated value         W         120           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         •         •           • of the non-delayed short-circuit release         A         3.3 3.3           • of the current-dependent overload release         A         0.18 0.25           Service power / at AC-3 / at 230 V / rated value         W         40           Continuous current / rated value         Yes         0	Main circuit:			
Operating current / at AC-3 / at 400 V / rated value       A       0.2         Service power / at AC-3       W       60         • at 400 V / rated value       W       90         • at 500 V / rated value       W       90         • at 690 V / rated value       W       120         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       -       -         • of the non-delayed short-circuit release       A       3.3 3.3         • of the current-dependent overload release       A       0.25         Service power / at AC-3 / at 230 V / rated value       W       40         Continuous current / rated value       W       0         Auxiliary circuit:       Yes       1         Product extension / auxiliary switch       Yes       0         Number of NC contacts / for auxiliary contacts / instantaneous switching       0       0         Number of NC contacts / for auxiliary contacts / instantaneous switching       0       0         Number of ND contacts / for auxiliary contacts / instantaneous switching       0       0         Number of change-over switches / for auxiliary contacts       0 <td>Number of poles / for main current circuit</td> <td></td> <td>3</td>	Number of poles / for main current circuit		3	
Service power / at AC-3W60• at 400 V / rated valueW90• at 500 V / rated valueW90• at 690 V / rated valueW120Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response currentII• of the non-delayed short-circuit releaseA3.3 3.3• of the non-delayed short-circuit releaseA0.18 0.25Service power / at AC-3 / at 230 V / rated valueW40Continuous current / rated valueA0.25Auxiliary circuit:YesNumber of NC contacts / for auxiliary contacts / instantaneous switchingYesNumber of NC contacts / for auxiliary contacts / instantaneous switching00Number of change-over switches / for auxiliary contacts / instantaneous switching00Number of change-over switches / for auxiliary contacts / instantaneous switching00Number of NC contacts / for auxiliary contacts / instantaneous switching00Number of NC contacts / for auxiliary contacts / instantaneous switching00Number of change-over switches / for auxiliary contacts / instantaneous switching00	Operating voltage / at AC-3 / rated value / maximum	V	690	
• at 400 V / rated valueW60• at 500 V / rated valueW90• at 690 V / rated valueW120Frequency 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 releaseA3.3 3.3• of the current-dependent overload releaseA0.18 0.25Service power / at AC-3 / at 230 V / rated valueW40Continuous current / rated valueW40Auxiliary circuit:Product 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	Operating current / at AC-3 / at 400 V / rated value	А	0.2	
• at 500 V / rated valueW90• at 690 V / rated valueW120Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response currentImage: Comparison of the non-delayed short-circuit releaseA3.33.3• of the non-delayed short-circuit releaseA0.18 0.25Service power / at AC-3 / at 230 V / rated valueW40Continuous current / rated valueW0.25Auxiliary 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 valueW120Frequency 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 releaseA3.3 3.3• of the current-dependent overload releaseA0.18 0.25Service power / at AC-3 / at 230 V / rated valueW40Continuous current / rated valueA0.25Auxiliary 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 switching	• at 400 V / rated value	W	60	
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       -       -         • of the non-delayed short-circuit release       A       3.3 3.3         • of the current-dependent overload release       A       0.18 0.25         Service power / at AC-3 / at 230 V / rated value       W       40         Continuous current / rated value       A       0.25         Auxiliary circuit:       Yes         Product extension / auxiliary switch       Yes         Number of NC contacts / for auxiliary contacts / instantaneous switching       0         Number of change-over switches / for auxiliary contacts       0         Number of change-over switches / for auxiliary contacts       0	• at 500 V / rated value	W	90	
maximum       Imaximum       Image: Imaximum       Imake: Imaximum       Imaximum <th imaximu<="" td=""><td>• at 690 V / rated value</td><td>W</td><td>120</td></th>	<td>• at 690 V / rated value</td> <td>W</td> <td>120</td>	• at 690 V / rated value	W	120
Adjustable response currentImage: constraint of the non-delayed short-circuit releaseA3.3 3.3• of the current-dependent overload releaseA0.18 0.25Service power / at AC-3 / at 230 V / rated valueW40Continuous current / rated valueA0.25Auxiliary 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 releaseA3.3 3.3• of the current-dependent overload releaseA0.18 0.25Service power / at AC-3 / at 230 V / rated valueW40Continuous current / rated valueA0.25A cuiliary 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:Inputs/ Outputs	Arrangement of electrical connectors / for main current circuit	_	Top and bottom	
• of the current-dependent overload releaseA0.18 0.25Service power / at AC-3 / at 230 V / rated valueW40Continuous current / rated valueA0.25Auxiliary 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 contactsIontactsInputs/ Outputs:IontactsIontacts	Adjustable response current			
Service power / at AC-3 / at 230 V / rated value       W       40         Continuous current / rated value       A       0.25         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	3.3 3.3	
Continuous current / rated value       A       0.25         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         Inputs/ Outputs:       0	• of the current-dependent overload release	А	0.18 0.25	
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	40	
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	0.25	
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	•		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	100,000
Design of the overcurrent release and short-circuit release		thermomagnetic
Installation/mounting/dimensions:		
Built in orientation		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	109
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		
removable terminal for main circuit		No
removable terminal for auxiliary and control circuit		No
Design of the electrical connection		
for main current circuit		spring-loaded terminals
Type of the connectable conductor cross-section		
for main contacts		

• solid				2x (0.5	4 mm²)	
stranded					4 mm²)	
				28 (0.5	4 11111-)	
<ul> <li>finely strande</li> </ul>						
<ul> <li>with condu</li> </ul>	uctor end processing			2x (0.5	2.5 mm²)	
<ul> <li>without co</li> </ul>	nductor final cutting			2x (0.5	2.5 mm²)	
<ul> <li>for AWG conduct</li> </ul>	ctors / for main contact	5		2x (20 .	12)	
Certificates/appr	ovals:					
Verification of suita				CE / UL	/ CSA	
	ionsschutz für Zone 21	/22		no		
	n protection for zone 1			no		
		2		110	For use in hazar	deve le estiene
General Product	Approval					dous locations
Cac	(SP)	ROSTEST	(UL)		DEKRA EXAM, DMT	
CQC	CSA		UL			
Test Certificates						
Manufacturer	other					
Shipping Approva	al					
ABS	GL	Llovd's Register	PRS		RINA	RMRS
other	52	Eng	110			
		•				
Manufacturer	<u>other</u>	UDE VDE				

# Safety:

Calory		
B10 value / with high demand rate		
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)

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

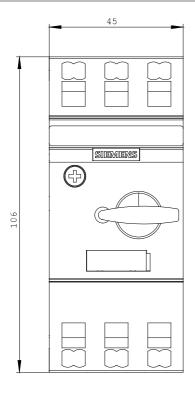
#### CAx-Online-Generator

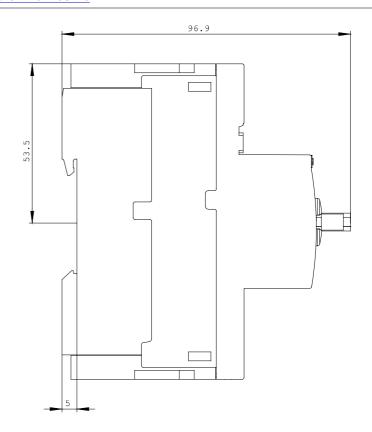
http://www.siemens.com/cax

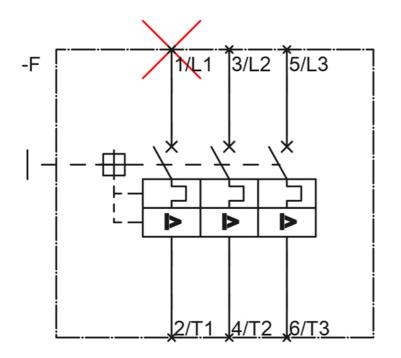
#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

http://support.automation.siemens.com/WW/view/en/3RV2011-0CA20/all

#### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RV2011-0CA20







last change:

Oct 24, 2011