# SIEMENS

# **Product data sheet**

## 3RV2311-1KC10



CIRCUIT-BREAKER SZ S00, FOR STARTER COMBINATION, RATED CURRENT 12.5A, N-RELEASE 163A, SCREW CONNECTION, STANDARD SW. CAPACITY

General technical data:		
Product brand name		SIRIUS
product designation		3RV2 circuit breaker
Size of the circuit-breaker		S00
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	7.3
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
Mechanical operating cycles as operating time		

• of the auxiliary contacts / typical     ID0.000       Type of the driving mechanism / motor drive     No       Design of the operating mechanism     selector switch       Product function     No       • overload protection     No       • overload protection     No       • dualiary switch     No       • auxiliary switch     No       • undervoltage release mechanism     No       • indicator     No       Product stension / optional / motor drive     No       Number of poles / for main current circuit     3       Operating outside / at AC-3 / at 400 V / rated value     A       • at 500 V / rated value     W       • at 600 V / rated value     W       • at 7500     Ithh       15     Ithh	of the main contacts / typical		100,000
Type of the driving mechanism / motor driveIdealNoDesign of the operating mechanismIdealselector switchProduct functionNoNo• overload protectionNoNo• phase disturbance recognitionNoNoProduct componentNoNo• undervoltage release mechanismNoNo• undervoltage release mechanismNoNo• tip indicatorNoNoProduct extension / optional / motor driveNoMather collIdealSecondOperating wortage / at AC-3 / rated value / maximumV690Operating wortage / at AC-3 / rated value / maximumV590Operating wortage / at AC-3 / rated valueA12.5Service power / at AC-3 / at 400 V / rated valueW5,500• at 400 V / rated valueW7,500• at 600 V / rated valueM7,500• at 600 V / rated valueA15.• at 600 V / rated valueA163			100,000
Design of the operating mechanism         selector switch           Product function         No           • overload protection         No           • phase disturbance recognition         No           Product component         No           • auxiliary switch         No           • undervoltage release mechanism         No           • inip indicator         No           Product extension / optional / motor drive         No           Mumber of poles / for main current circuit         No           Operating voltage / at AC-3 / rated value / maximum         V         690           Operating current / at AC-3 / at 400 V / rated value         A         12.5           Service power / at AC-3         Sincol         Sincol           • at 400 V / rated value         W         7.500           • at 600 V / rated value         W         7.500           • at 600 V rated value         W         3.000           • at 600 V rated value         W         3.000           • at 600 V rated value         A         163			
• overlaad protectionNo• phase disturbance recognitionNoProduct componentNo• audilary switchNo• undervoltage release mechanismNo• indervoltage release mechanismNo• indervoltage release mechanismNo• trid catorNoProduct extension / optional / motor driveNoMain Circuit:NoMulter of poles / for main current circuit3Operating voltage / at AC-3 / rated value / maximumVOperating current / at AC-3 / rated valueNO• at 400 V / rated valueW• at 400 V / rated valueK• at 400 V / rated value		-	selector switch
• phase distributes recognitionImage: status in the status in	Product function	-	
Product component     No       • audiliary switch     No       • undervoltage release mechanism     No       • trip indicator     No       Product extension / optional / motor drive     No       Main circuit:     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     12.5       Service power / at AC-3     Su     Su       • at 400 V / rated value     W     5.500       • at 400 V / rated value     W     7.500       Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum     Top and bottom       Adjustable response current     Implement of electrical connectors / for main current circuit     Top and bottom       Adjustable response current     A     163 163       • of the non-delayed short-circuit release     A     163 163       Service power / at AC-3 / at 230 V / rated value     W     3.000       Continuous current / rated value     M     3.000       Continuous current / rated value     M     3.000       Auxiliary switch	overload protection		No
• auxiliary switchNo• undervoltage release mechanismNo• tip indicatorNoProduct extension / optional / motor driveNoProduct extension / optional / motor driveNoMumber of poles / for main current circuit3Operating voltage / at AC-3 / rated value / maximumV900Operating current / at AC-3 / at 400 V / rated valueA12.5Service power / at AC-3V• at 400 V / rated valueW5,500• at 500 V / rated valueW• at 600 V / rated valueW• of the non-deleyed short-circuit releaseA• at 610 run-delayed short-circuit releaseA• of the non-delayed short-circuit releaseA• at 611 run fact walueW• at 612 run fact walueW• at 613 run fact walueY• at 614 run fact walueY• at 616 run fact walueY </th <th>phase disturbance recognition</th> <th></th> <th>No</th>	phase disturbance recognition		No
• 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 / rated value / maximumV690Operating current / at AC-3 / rated value / maximumV690Operating current / at AC-3 / at 400 V / rated valueA12.5Service power / at AC-3W5,500• at 400 V / rated valueW5,500• at 500 V / rated valueW7,500• at 600 V / rated valueW3,000• at 7,500 Power / at AC-3 / at 230 V / rated valueW3,000• of the non-delayed short-circuit releaseA163 163• at 600 V / rated valueW3,00012.5• at 610 V / rated valueW3,00012.5• at 610 V / rated valueYes12.5• at 610 V / rated valueYes12.5• at 610 V / rated	Product component	-	
• trip indicatorNoProduct extension / optional / motor driveNoMain circuit:3Number of poles / for main current circuit990Operating voltage / at AC-3 / rated value / maximumVService power / at AC-3640Service power / at AC-3V• at 400 V / rated valueM5.5005.500• at 400 V / rated valueW5.600 // rated valueW• at 600 V / rated valueW7.500Top and bottomFrequency of operation / at AC-3 / according to IEC 60947-6-2 / maximumTop and bottomAdjustable response currentInh• of the non-delayed short-circuit releaseAAdjustable response currentA• of the non-delayed short-circuit releaseAService power / at AC-3 / at 230 V / rated valueW3.0003.000Continuous current / rated valueAInh163 163Service power / at AC-3 / at 230 V / rated valueMAutiliary circuit:YesProduct extension / auxiliary contacts / instantaneous switchingNNumber of NC contacts / for auxiliary contacts / instantaneous switchingIoNumber of change-over switches / for auxiliary contactsIoInture for change-over switches / for auxiliary contactsIo	auxiliary switch		No
Product extension / optional / motor drive       No         Main circuit:       3         Number of poles / for main current circuit       3         Operating outage / at AC-3 / rated value / maximum       V       690         Operating current / at AC-3 / at 400 V / rated value       A       12.5         Service power / at AC-3       W       5,500         • at 400 V / rated value       W       5,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       3,000         Arrangement of electrical connectors / for main current circuit       Top and bottom         • of the non-delayed short-circuit release       A       163 163         Service power / at AC-3 / at 230 V / rated value       W       3,000         Continuous current / rated value       Image: Service power / at AC-3 / at 230 V / rated value       Yes         Number of NC contact	undervoltage release mechanism		No
Main circuit:       Image: Circuit Circuit       Image: Circuit Circuit       Image: Circuit Circuit Circuit       Image: Circuit C	• trip indicator		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         12.5           Service power / at AC-3         W         5,500           • at 400 V / rated value         W         5,500           • at 500 V / rated value         W         7,500           • at 600 V / rated value         W         7,500           • at 600 V / rated value         W         7,500           Frequency of operation / at AC-3 / according to IEC 60947-6-2 / and bottom         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         163 163           Service power / at AC-3 / at 230 V / rated value         W         3,000           Continuous current / rated value         V         12.5           Auxiliary circuit:         Yes         0           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 s	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       12.5         Service power / at AC-3       W       5,500         • at 400 V / rated value       W       5,500         • at 500 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         • at 600 V / rated value       W       7,500         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       A       163 163         • of the non-delayed short-circuit release       A       163 163         Service power / at AC-3 / at 230 V / rated value       W       3,000         Continuous current / rated value       Yes       Service power / at AC-3 / according to auxiliary contacts / instantaneous switching         Number of NC contacts / for auxiliary contacts / instantaneous switching       Yes       Service power / according to auxiliary contacts / instantaneous switching	Main circuit:		
Operating current / at AC-3 / at 400 V / rated valueA12.5Service power / at AC-3V5,500• at 400 V / rated valueW5,500• at 500 V / rated valueW7,500• at 600 V / rated valueW7,500• at 600 V / rated valueW7,500• at 600 V / rated valueW7,500• at 690 V / rated valueW7,500Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum1/h15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response current·Top and bottom• of the non-delayed short-circuit releaseA163 163Service power / at AC-3 / at 230 V / rated valueW3,000Continuous current / rated valueW12.5Auxiliary circuit:YesProduct extension / auxiliary switchYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of NC contacts / for auxiliary contacts / instantaneous switching0Number of NC contacts / for auxiliary contacts / instantaneous switching0	Number of poles / for main current circuit		3
Service power / at AC-3       V       5,500         • at 400 V / rated value       W       5,500         • at 500 V / rated value       W       7,500         • at 690 V / rated value       W       7,500         • at 690 V / rated value       W       7,500         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       I       Top and bottom         • of the non-delayed short-circuit release       A       163 163         Service power / at AC-3 / at 230 V / rated value       W       3,000         Continuous current / rated value       W       3,000         Auxiliary circuit:       Yes       Ves         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       0       0       0       0         Inputs/ Outputs:       Inputs/ Outputs       Inputs/ Outputs       0       Inputs/ Outputs       Inputs/ Outputs	Operating voltage / at AC-3 / rated value / maximum	V	690
• at 400 V / rated valueW5,500• at 500 V / rated valueW7,500• at 690 V / rated valueW7,500Frequency 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 releaseA163 163Service power / at AC-3 / at 230 V / rated valueW3,000Continuous current / rated valueW3,000Auxiliary 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 contacts0Number of change-over switches / for auxiliary contacts0Number of change-over switches / for auxiliary contacts0	Operating current / at AC-3 / at 400 V / rated value	A	12.5
• at 500 V / rated valueW7,500• at 690 V / rated valueW7,500Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximumW15Arrangement of electrical connectors / for main current circuitTop and bottomAdjustable response current • of the non-delayed short-circuit releaseA163 163Service power / at AC-3 / at 230 V / rated valueW3,000Continuous current / rated valueW3,000Auxiliary circuit:VesProduct extension / auxiliary switchYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0Inputs/Outputs:U	Service power / at AC-3	-	
• at 690 V / rated valueW7,500Frequency 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 releaseA163 163Service power / at AC-3 / at 230 V / rated valueW3,000Continuous current / rated valueA12.5Auxiliary 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:0	• at 400 V / rated value	W	5,500
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       163 163         Service power / at AC-3 / at 230 V / rated value       W       3,000         Continuous current / rated value       W       3,000         Auxiliary circuit:       Impute of NC contacts / for auxiliary contacts / instantaneous switching       Yes         Number of NO 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	• at 500 V / rated value	W	7,500
maximumImaximumImaximumArrangement of electrical connectors / for main current circuitTop and bottomAdjustable response currentImaximumImaximum• of the non-delayed short-circuit releaseA163 163Service power / at AC-3 / at 230 V / rated valueImaximumImaximumContinuous current / rated valueImaximumImaximumAuxiliary circuit:ImaximumImaximumProduct extension / auxiliary switchImaximumImaximumNumber of NC contacts / for auxiliary contacts / instantaneous switchingImaximumNumber of NO contacts / for auxiliary contacts / instantaneous switchingImaximumImputs/ Outputs:ImaximumImaximum	• at 690 V / rated value	W	7,500
Adjustable response currentAdjustable response current• of the non-delayed short-circuit releaseA163 163Service power / at AC-3 / at 230 V / rated valueW3,000Continuous current / rated valueA12.5Auxiliary 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 contacts0		1/h	15
• of the non-delayed short-circuit releaseA163 163Service power / at AC-3 / at 230 V / rated valueW3,000Continuous current / rated valueA12.5Auxiliary 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:Ves	Arrangement of electrical connectors / for main current circuit	-	Top and bottom
Service power / at AC-3 / at 230 V / rated valueW3,000Continuous current / rated valueA12.5Auxiliary 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		
Continuous current / rated valueA12.5Auxiliary circuit:YesProduct extension / auxiliary switchYesNumber of NC contacts / for auxiliary contacts / instantaneous switching0Number of NO contacts / for auxiliary contacts / instantaneous switching0Number of NO contacts / for auxiliary contacts / instantaneous switching0Number of NO contacts / for auxiliary contacts / instantaneous switching0Number of change-over switches / for auxiliary contacts0Inputs/ Outputs:0	<ul> <li>of the non-delayed short-circuit release</li> </ul>	А	163 163
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 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	3,000
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	12.5
Number of NC contacts / for auxiliary contacts / instantaneous       0         Number of NO contacts / for auxiliary contacts / instantaneous       0         Number of NO contacts / for auxiliary contacts / instantaneous       0         Number of change-over switches / for auxiliary contacts       0         Inputs/ Outputs:       0	Auxiliary circuit:		
switching     Image: Switching       Number of NO contacts / for auxiliary contacts / instantaneous     0       switching     0       Number of change-over switches / for auxiliary contacts     0	Product extension / auxiliary switch		Yes
switching   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 (Icu)

• at 400 V / rated value	А	100,000
• at 500 V / rated value	А	42,000
• at 690 V / rated value	А	6,000
Design of the overcurrent release and short-circuit release		thermomagnetic
Installation/mounting/dimensions:		
Built in orientation		any
Type of mounting	ounting screw and snap-on mounting onto 35 mm stan 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		
removable terminal for main circuit		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 (0.75 2.5 mm2), 2x (1 4 mm2)
• stranded		2x (0.75 2.5 mm²), 2x 4 mm²

<ul> <li>finely strande</li> </ul>	d				
<ul> <li>with condu</li> </ul>	ictor end processing			2x (0.5 1.5 mm2), 2x (	0.75 2.5 mm2)
<ul> <li>for AWG conduct</li> </ul>	ctors / for main contact	S		2x (18 14), 2x 12	
Certificates/appr	ovals:				
Verification of suita	ability			CE / UL / CSA	
<ul> <li>für Staubexplosi</li> </ul>	onsschutz für Zone 21	/22		no	
<ul> <li>for gas explosion</li> </ul>	n protection for zone 1	/2		no	
General Product	Approval			Test Certificate	95
COC	(SA)	ROSTEST		Manufacturer	
Shipping Approva	al				
ABS	GL GL	Llovd's Kegister	PRS	RINA	RMRS
other					
Manufacturer	other				

UL/CSA ratings		
yielded mechanical performance (hp)		
<ul> <li>for single-phase squirrel cage motors</li> </ul>		
• at 110/120 V / rated value	hp	0.5
• at 230 V / rated value	hp	2
<ul> <li>for three-phase squirrel cage motors</li> </ul>		
• at 200/208 V / rated value	hp	3
• at 220/230 V / rated value	hp	3
• at 460/480 V / rated value	hp	7.5
• at 575/600 V / rated value	hp	10
Operating current (FLA) / for three-phase squirrel cage motors		
• at 480 V / rated value	А	11
• at 600 V / rated value	А	11
Safety:		
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

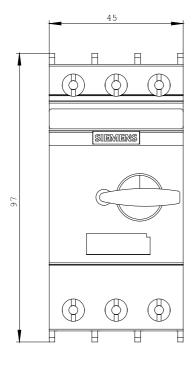
#### CAx-Online-Generator

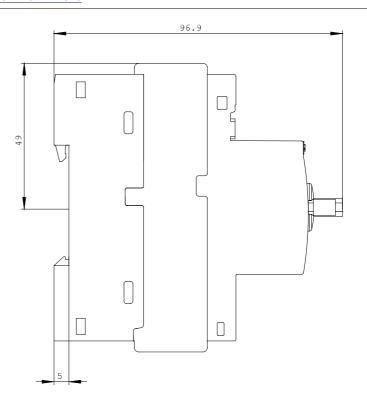
http://www.siemens.com/cax

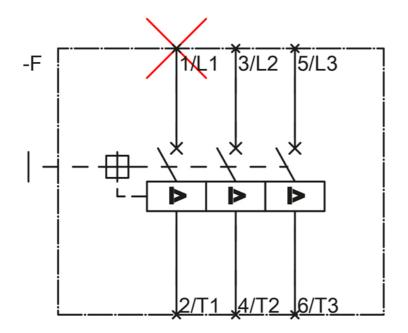
## Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

http://support.automation.siemens.com/WW/view/en/3RV2311-1KC10/all

#### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RV2311-1KC10







last change:

Oct 17, 2011