SIEMENS

Data sheet 3RV2011-1JA15



CIRCUIT-BREAKER SZ S00, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 7...10A, N-RELEASE 130A, SCREW CONNECTION, STANDARD SW. CAPACITY W. TRANSVERSE AUX. SWITCH 1NO+1NC

product brand name	SIRIUS
Product designation	3RV2 circuit breaker

General technical data:		
Active power loss total typical	W	7
Insulation voltage		
 with degree of pollution 3 Rated value 	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)		
 of the main contacts typical 		100 000
 of the auxiliary contacts typical 		100 000
Electrical endurance (switching cycles)		
• typical		100 000
Temperature compensation	°C	-20 + 60
Size of contactor can be combined company-specific		S2
Protection class IP		
• on the front		IP20
of the terminal		IP20
Type of protection		Increased safety
Equipment marking		
• acc. to DIN EN 81346-2		Q

Main circuit:	
Number of poles for main current circuit	3

Operating voltage	Adjustable response value current of the current-	Α	7 10
	•		
• at AC-3 Rated value maximum Operating frequency Rated value Operating gurrent Rated value A 10 Operating current Rated value Operating current • at AC-3 — at 400 V Rated value A 10 Operating power • at AC-3 — at 230 V Rated value — at 500 V Rated value — at 500 V Rated value — at 600 V Rated value — at 600 V Rated value — at 670 v Rated value —	Operating voltage		
Operating frequency Rated value Hz 50 60 Operating current Rated value A 10 Operating current at AC-3 at 400 V Rated value A 10 Operating power at 400 V Rated value W 2 200 A 10 — at 230 V Rated value W 4 000 A 10 — at 400 V Rated value W 5 500 A 10 — at 500 V Rated value W 5 500 A 5 500 A 10 A <th< td=""><td>Rated value</td><td>V</td><td>690</td></th<>	Rated value	V	690
Operating current Rated value A 10 Operating current ■ at AC-3 — at 400 V Rated value — at 230 V Rated value — at 230 V Rated value — at 400 V Rated value — at 500 V Rated value — at 500 V Rated value — at 690 V Rated value — at 200 V Rated value — at 200 V Rated value — at 200 V Rated value — at 690 V Rated value — at 7500 — at 200 V Contacts — for auxiliary contacts — for auxiliary contacts — for auxiliary contacts	 at AC-3 Rated value maximum 	V	690
Operating current ◆ at AC-3 — at 400 V Rated value Operating power ◆ at AC-3 — at 230 V Rated value — at 230 V Rated value — at 2500 V Rated value — at 500 V Rated value — at 690 V Rated value — at AC-3 maximum — at 690 V Rated value — at AC-3 maximum — b for auxiliary contacts — for auxiliary switch — Design of the auxiliary switch — Design of the auxiliary switch — at 24 V — at 120 V — at 125 V — at 230 V — A — A	Operating frequency Rated value	Hz	50 60
• at AC-3 — at 400 V Rated value A 10 Operating power • at AC-3 — at 230 V Rated value — at 400 V Rated value — at 400 V Rated value — at 500 V Rated value — at 500 V Rated value — at 690 V Rated value — at AC-3 maximum — 1/h — 15 Auxiliary circuit: Number of NC contacts — of or auxiliary contacts — of auxiliary switch — yes Design of the auxiliary switch — transverse Operating current of the auxiliary contacts at AC-15 — of at 24 V — of at 120 V — of at 125 V — of at 230 V — of at 24 V — of 60 V — at 60 V — of 6	Operating current Rated value	Α	10
— at 400 V Rated value	Operating current		
Operating power ■ at AC-3	• at AC-3		
• at AC-3 — at 230 V Rated value — at 400 V Rated value — at 500 V Rated value W 4000 — at 500 V Rated value W 5500 Operating frequency • at AC-3 maximum 1/h 15 Auxiliary circuit: Number of NC contacts • for auxiliary contacts • for auxiliar	— at 400 V Rated value	Α	10
at 230 ∨ Rated value	Operating power	_	
— at 400 ∨ Rated value — at 500 ∨ Rated value — at 690 ∨ Rated value — at 690 ∨ Rated value — w 7 500 Operating frequency • at AC-3 maximum 1/h 15 Auxiliary circuit: Number of NC contacts • for auxiliary contacts • for a	• at AC-3		
— at 500 ∨ Rated value	— at 230 V Rated value	W	2 200
— at 690 V Rated value W 7 500 Operating frequency	— at 400 V Rated value	W	4 000
Operating frequency • at AC-3 maximum 1/h 15 Auxiliary circuit: Number of NC contacts • for auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A 0.5 Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 24 V RAEd value KA 100	— at 500 V Rated value	W	5 500
Auxiliary circuit: Number of NC contacts • for auxiliary switch Design of the auxiliary switch Coperating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Coperating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A • at 60 V A CLASS 10 Trip class Design of the overload circuit breaker Coperational short-circuit current breaking capacity (Ics) with AC • at 24 V V Rated value A A CLASS 10	— at 690 V Rated value	W	7 500
Auxiliary circuit: Number of NC contacts • for auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A 1 CLASS 10 Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 24 V Rated value	Operating frequency		
Number of NC contacts • for auxiliary contacts • auxiliary contacts • auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A 0.15 Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 24 V Rated value kA 100		1/h	15
Number of NC contacts • for auxiliary contacts • auxiliary contacts • auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A 0.15 Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 24 V Rated value kA 100			
• for auxiliary contacts Number of NO contacts • for auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value I 1 1	•		
Number of NO contacts • for auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A O.5 Operating current of the auxiliary contacts at DC-13 • at 29 V • at 60 V CLASS 10 Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value KA 100			4
for auxiliary contacts Number of CO contacts			1
Number of CO contacts • for auxiliary contacts • for auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A O.5 Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V CLASS 10 Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value			4
• for auxiliary contacts Product expansion Auxillary switch Design of the auxiliary switch Operating current of the auxillary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A 1 • at 60 V A 1 CLASS 10 Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value kA 100		_	1
Product expansion Auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A O.5 Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value KA Ves 1 transverse A 2 A 0.5 A 0.5 A 0.5 CLASS 10 The mall Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value KA 100			
Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A O.5 Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A O.15 Protective and monitoring functions: Trip class CLASS 10 Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value kA 100			
Operating current of the auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A O.5 Operating current of the auxiliary contacts at DC-13 • at 60 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V CLASS 10 Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value KA 100	•		
at 24 V at 120 V A 0.5 at 125 V A 0.5 at 230 V Operating current of the auxiliary contacts at DC-13 at 24 V at 60 V A 1 Protective and monitoring functions: Trip class CLASS 10 Design of the overload circuit breaker Operational short-circuit current breaking capacity (lcs) with AC at 240 V Rated value A 2 A 0.5 A 0.5 CLASS 10 CLASS 10 Thermal	•	_	transverse
at 120 V at 125 V at 230 V Operating current of the auxiliary contacts at DC-13 at 24 V at 60 V A O.5 Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC at 240 V Rated value A O.5 A O.5 CLASS 10 The class CLASS 10 The contact of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC at 240 V Rated value A O.5 A O.5			
at 125 V at 230 V A O.5 Operating current of the auxiliary contacts at DC-13 at 24 V at 60 V A O.15 Protective and monitoring functions: Trip class CLASS 10 Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC at 240 V Rated value KA O.5 A O.5 CLASS 10			
at 230 V A 0.5 Operating current of the auxiliary contacts at DC-13 at 24 V at 60 V A 0.15 Protective and monitoring functions: Trip class CLASS 10 Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC at 240 V Rated value kA 100			
Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V A 0.15 Protective and monitoring functions: Trip class CLASS 10 Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value kA 100	● at 125 V	Α	
 at 24 V at 60 V A 0.15 Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC at 240 V Rated value A 1 A 0.15 CLASS 10 thermal thermal 	● at 230 V	Α	0.5
● at 60 V Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC ● at 240 V Rated value A 0.15 CLASS 10 thermal	Operating current of the auxiliary contacts at DC-13		
Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value CLASS 10 thermal	● at 24 V	Α	1
Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value CLASS 10 thermal	● at 60 V	Α	0.15
Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value CLASS 10 thermal	Protective and monitoring functions:		
Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value kA 100			CLASS 10
(Ics) with AC • at 240 V Rated value kA 100	Design of the overload circuit breaker		thermal
• at 240 V Rated value kA 100	Operational short-circuit current breaking capacity		
	(Ics) with AC		
at 400 V Rated value kA 100	• at 240 V Rated value	kA	100
	• at 400 V Rated value	kA	100

● at 500 V Rated value	kA	42
• at 690 V Rated value	kA	4
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
 with AC at 500 V Rated value 	kA	42
 with AC at 690 V Rated value 	kA	6
Breaking capacity short-circuit current (Icn)		
• with 1 current path for DC at 150 V Rated value	kA	10
 with 2 current paths in series for DC at 300 V Rated value 	kA	10
 with 3 current paths in series for DC at 450 V Rated value 	kA	10
Response value current of the instantaneous short- circuit release	Α	130
UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
● at 480 V Rated value	Α	10
● at 600 V Rated value	Α	10
yielded mechanical performance [hp]		
 for single-phase AC motor at 110/120 V Rated value 	metric hp	0.5
 for single-phase AC motor at 230 V Rated value 	metric hp	1.5
 for three-phase AC motor at 200/208 V Rated value 	metric hp	2
 for three-phase AC motor at 220/230 V Rated value 	metric hp	3
• for three-phase AC motor at 460/480 V Rated value	metric hp	5
 for three-phase AC motor at 575/600 V Rated value 	metric hp	7.5
Contact rating of the auxiliary contacts acc. to UL		C300 / R300
Short-circuit:		
Product function Short circuit protection		Yes
Design of the short-circuit trip		magnetic
Design of the fuse link		
 for short-circuit protection of the auxiliary switch required 		Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current lk < 400 A)
Design of the fuse link for IT network for short-circuit protection of the main circuit		
● at 400 V		gL/gG 50 A
● at 500 V		gL/gG 40 A

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		
with side-by-side mounting		
— 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:	
Type of electrical connection	
• for main current circuit	screw-type terminals
 for auxiliary and control current circuit 	screw-type terminals
Arrangement of electrical connectors for main current circuit	Top and bottom
Product function	
 removable terminal for auxiliary and control circuit 	No
Type of connectable conductor cross-section	
• for main contacts	
 single or multi-stranded 	2x (0,75 2,5 mm²), 2x 4 mm²
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 for AWG conductors for main contacts 	2x (18 14), 2x 12

• for auxiliary contacts		
 single or multi-stranded 		2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
 finely stranded with core end processing 		2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 for AWG conductors for auxiliary contacts 		2x (20 16), 2x (18 14)
Tightening torque		
• for main contacts with screw-type terminals	N·m	0.8 1.2
Design of screwdriver shaft		Diameter 5 to 6 mm
Design of the thread of the connection screw		
• for main contacts		M3
 of the auxiliary and control contacts 		M3
Safety related data:		
B10 value with high demand rate acc. to SN 31920		50 000
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 demand rate acc. to SN 31920	FIT	50
T1 value for proof test interval or service life acc. to IEC 61508	У	10
Protection against electrical shock		finger-safe
Mechanical data:		
Size of the circuit-breaker		S00
Ambient conditions:		
Installation altitude at height above sea level maximum	m	2 000
Ambient temperature		
during operation	°C	-20 +60
during storage	°C	-50 +80
during transport	°C	-50 +80
Relative humidity during operation	%	10 95
Display:		
Display version		
• for switching status		Handle
Certificates/ approvals:		

General Product Approval

Declaration of Conformity







KTL

Shipping Approval





Test Certificates

Type Test Declaration of the
Certificates/Test Compliance with the
Report order

Special Test
Certificate







other

Shipping Approval





LRS







Confirmation

other

Environmental Confirmations



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

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RV20111JA15}$

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

http://support.automation.siemens.com/WW/view/en/3RV20111JA15/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=3RV20111JA15&lang=en



