SIEMENS

Data sheet 3RV2031-4EA15



CIRCUIT BREAKER, SIZE S2, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 22...32A, N-RELEASE 416A, SCREW TERMINAL, STANDARD BREAKING CAPACITY W. TRANSV. AUX. SWITCH 1NO+1NC

Figure similar

product brand name	SIRIUS
Product designation	3RV2 circuit breaker

General technical data:		
Active power loss total typical	W	14
Insulation voltage		
 with degree of pollution 3 Rated value 	V	690
Shock resistance		
• acc. to IEC 60068-2-27		25g / 11 ms Sinus
Surge voltage resistance Rated value	kV	6
Mechanical service life (switching cycles)		
 of the main contacts typical 		50 000
 of the auxiliary contacts typical 		50 000
Electrical endurance (switching cycles)		
• typical		50 000
Temperature compensation	°C	-20 + 60
Size of contactor can be combined company-specific		S2
Protection class IP		
• on the front		IP20
• of the terminal		IP00
Equipment marking		
• acc. to DIN EN 81346-2		Q

Main circuit:		
Number of poles for main current circuit		3
Adjustable response value current of the current-	Α	22 32
dependent overload release		

	Operating voltage		
Operating frequency Rated value Hz 50 60 Operating current Rated value A 32 ○ at AC-3 - at 400 V Rated value A 32 Operating power • at AC-3 - at 230 V Rated value W 7 500 — at 250 V Rated value W 15 000 - 4 15 000 — at 990 V Rated value W 30 000 Operating frequency • 14 C-3 maximum 1/h 15 Auxiliary circuit: Number of NC contacts 1 - 1 • for auxiliary contacts 1 1 - 1 • for auxiliary contacts 1 1 - 1 - 1 Product expansion Auxiliary switch Yes - 1 - 2 - 1 - 1	Rated value	V	690
Operating current Rated value A 32 Operating current • at AC-3 — at 400 V Rated value A 32 Operating power • at AC-3 — at 230 V Rated value W 7 500 — at 400 V Rated value W 15 000 — at 500 V Rated value W 15 000 — at 469 V Rated value W 30 000 0 0 Operating frequency • at AC-3 maximum 1/h 15 Auxiliary circuit: Number of NC contacts 1 — Note • for auxiliary contacts 1 — Note 1 Number of NC contacts 1 — Note 1 Product expansion Auxiliary switch Yes 1 Design of the auxiliary switch Yes 1 Design of the auxiliary switch Yes 1 Operating current of the auxiliary contacts at DC-13 • at 24 V A 2 • at 230 V A 0.5 Operating current of the auxiliary contacts at DC-13 • at 220 V A 0 • at 220 V A	 at AC-3 Rated value maximum 	V	690
Operating current ■ at AC-3 — at 400 V Rated value — at 230 V Rated value — at 230 V Rated value — at 2400 V Rated value — at 490 V Rated value — at 590 V Rated value — at 590 V Rated value — at 690 V Rated value — at 240 V Rated value — at 690 V Rated value	Operating frequency Rated value	Hz	50 60
• at AC-3 — at 400 V Rated value A 32 Operating power • at AC-3 — at 230 V Rated value — at 500 V Rated value — at 500 V Rated value — at 690 V Rated value — w 18 500 — at 690 V Rated value — w 30 000 Operating frequency • at AC-3 maximum I/h 15 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — Note 1 Number of NC contacts • for auxiliary contacts — Note 1 Product expansion Auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 66 V • at 110 V • at 110 V • at 125 V • at 220 V 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 A 100	Operating current Rated value	Α	32
— at 400 V Rated value	Operating current		
Operating power ■ at AC-3	• at AC-3		
• at AC-3 — at 230 V Rated value — at 500 V Rated value — at 500 V Rated value — at 690 V Rated value W 18 500 Operating frequency • at AC-3 maximum 1/h 15 Auxiliary circuit: Number of NC contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary switch Ves Design of the auxiliary contacts at DC-13 • at 24 V • at 230 V • at 240 V • at 110 V • at 110 V • at 110 V • at 110 V • at 125 V • at 220 V • A • 0 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	— at 400 V Rated value	Α	32
- 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 W 18 500 - at 690 V Rated value W 30 000 Operating frequency • at AC-3 maximum 1/h 15 Auxiliary circuit: Number of NC contacts • for auxiliary contacts - Note 1 Number of NO contacts • for auxiliary contacts - Note 1 Product expansion Auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 25 V • at 110 V • at 110 V • at 125 V • at 220 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 100	Operating power		
at 400 ∨ Rated value	• at AC-3		
at 500 V Rated value	— at 230 V Rated value	W	7 500
— at 690 V Rated value	— at 400 V Rated value	W	15 000
Operating frequency • at AC-3 maximum I/h Auxiliary circuit: Number of NC contacts • for auxiliary contacts — Note Number of NO contacts • for auxiliary contacts — Note 1 Product expansion Auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V • at 110 V • at 110 V • at 125 V • at 220 V A O 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 100	— at 500 V Rated value	W	18 500
Auxiliary circuit: Number of NC contacts • for auxiliary contacts - Note Number of NO contacts • for auxiliary contacts - Note Number of NO contacts • for auxiliary contacts - Note 1 Product expansion Auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V • at 10 V • at 110 V • at 125 V • at 120 V A O Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 24 V V Rated value A 1 CLASS 10 In the supplier of the auxiliary contacts at DC-13 CLASS 10 In the supplier of the auxiliary capacity (Ics) with AC • at 24 V V A NO In the supplier of the auxiliary capacity (Ics) with AC • at 24 V V A NO In the supplier of the auxiliary capacity (Ics) with AC • at 24 V V A NO In the supplier of the auxiliary capacity (Ics) with AC • at 24 V V V V V V V V V V V V V V V V V V	— at 690 V Rated value	W	30 000
Auxiliary circuit: Number of NC contacts • for auxiliary contacts 1 Number of NO contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts 1 Product expansion Auxiliary switch Design of the auxiliary switch Operating current of the auxiliary contacts at AC-15 • at 24 V • at 230 V Operating current of the auxiliary contacts at DC-13 • at 24 V • at 60 V • at 110 V • at 110 V • at 125 V • at 220 V A O Protective and monitoring functions: Trip class Design of the overload circuit breaker Operational short-circuit current breaking capacity (ics) with AC • at 24 V V Rated value A 100	Operating frequency		
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● at 220 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 CLASS 10 thermal	● at 110 V	Α	0
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 100	● at 125 V	Α	0
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 220 V	Α	0
Design of the overload circuit breaker Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value A 100			
Operational short-circuit current breaking capacity (Ics) with AC • at 240 V Rated value A 100			
(Ics) with AC • at 240 V Rated value A 100			thermal
at 400 V Rated value kA 30	● at 240 V Rated value	Α	100
	● at 400 V Rated value	kA	30

• at FOO V Dated value	kA	5
• at 500 V Rated value	kA	
• at 690 V Rated value	KA	2
Maximum short-circuit current breaking capacity (Icu)		400
 with AC at 240 V Rated value 	kA	100
 with AC at 400 V Rated value 	kA	65
with AC at 500 V Rated value	kA	10
with AC at 690 V Rated value	kA	4
Response value current of the instantaneous short-	Α	416
circuit release		
UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	Α	32
• at 600 V Rated value	Α	32
yielded mechanical performance [hp]		
• for single-phase AC motor at 110/120 V Rated	metric	3
value	hp	
 for single-phase AC motor at 230 V Rated 	metric	5
value	hp	
• for three-phase AC motor at 200/208 V Rated	metric	10
value	hp	
• for three-phase AC motor at 220/230 V Rated	metric	10
value	hp	0.5
 for three-phase AC motor at 460/480 V Rated value 	metric hp	25
• for three-phase AC motor at 575/600 V Rated	metric	30
value	hp	
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		Fuse gL/gG: 10 A, miniature circuit breaker C 6 A
required		(short-circuit current lk < 400 A)
Design of the fuse link for IT network for short-circuit		
protection of the main circuit		
● at 240 V		none required
● at 400 V		125
● at 500 V		100
● at 690 V		80
Installation/ mounting/ dimensions:		
mounting position		

mounting position

any

Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	mm	140
Width	mm	55
Depth	mm	149
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	10
— downwards	mm	50
• for live parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	50
— downwards	mm	50
— at the side	mm	10

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 (1 25 mm²), 1x (1 35 mm²)
 finely stranded with core end processing 	2x (1 16 mm²), 1x (1 25 mm²)
 for AWG conductors for main contacts 	2x (18 3), 1x (18 2)
 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	3 4.5
Design of screwdriver shaft		Diameter 5 to 6 mm
Design of the thread of the connection screw		
• for main contacts		M6
• of the auxiliary and control contacts		M3
Safety related data:		
Protection against electrical shock		finger-safe when touched vertically from front acc. to
		IEC 60529

Mechanical data:		
Size of the circuit-breaker	S2	

Ambient conditions:		
Installation altitude at height above sea level	m	2 000
maximum		
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 other





Confirmation

Environmental Confirmations

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

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

Industry Mall (Online ordering system)

http://www.siemens.com/industrymall

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV20314EA15

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

http://support.automation.siemens.com/WW/view/en/3RV20314EA15/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=3RV20314EA15&lang=en



