SIEMENS

Data sheet 3RV2021-1CA20



CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-REL.1.8...2.5A, N-REL.33A SPRING-L. CONNECTION, STANDARD SW. CAPACITY

Figure similar

product brand name	SIRIUS
Product designation	3RV2 circuit breaker

General technical data:			
Active power loss total typical	W	6	
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	3

dependent overload release	A	1.0 2.3
Operating voltage		
Rated value	V	690
at AC-3 Rated value maximum	V	690
Operating frequency Rated value	Hz	50 60
Operating current Rated value	Α	2.5
Operating current		
• at AC-3		
— at 400 V Rated value	Α	2.5
Operating power		
• at AC-3		
— at 230 V Rated value	W	370
— at 400 V Rated value	W	750
— at 500 V Rated value	W	1 100
— at 690 V Rated value	W	1 500
Operating frequency		
• at AC-3 maximum	1/h	15
Auxiliary circuit:		
Number of NC contacts		
for auxiliary contacts		0
Number of NO contacts		
for auxiliary contacts		0
Number of CO contacts		
for auxiliary contacts		0
Product expansion Auxiliary switch		Yes
Protective and monitoring functions:		
Trip class		CLASS 10
Design of the overload circuit breaker		thermal
Operational short-circuit current breaking capacity		
(Ics) with AC	kΛ	100
at 240 V Rated value	kΑ	100
• at 400 V Rated value	kA kA	100
• at 500 V Rated value	kA Is A	100
• at 690 V Rated value	kA	10
Maximum short-circuit current breaking capacity (Icu)	LΑ	400
• with AC at 240 V Rated value	kA IsA	100
• with AC at 400 V Rated value	kA	100
with AC at 500 V Rated value	kA	100
• with AC at 690 V Rated value	kA	10
Breaking capacity short-circuit current (Icn)		
 with 1 current path for DC at 150 V Rated value 	kA	10

1.8 ... 2.5

Adjustable response value current of the current-

 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	А	33
UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	Α	2.5
at 600 V Rated value	Α	2.5
yielded mechanical performance [hp]		
 for single-phase AC motor at 230 V Rated value 	metric hp	0.167
 for three-phase AC motor at 200/208 V Rated value 	metric hp	0.5
 for three-phase AC motor at 220/230 V Rated value 	metric hp	0.5
• for three-phase AC motor at 460/480 V Rated value	metric hp	1
 for three-phase AC motor at 575/600 V Rated value 	metric hp	1.5
Short-circuit:		
Product function Short circuit protection		Yes
Design of the short-circuit trip		magnetic
Installation/ mounting/ dimensions:		
mounting position		any
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	mm	109
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		0
— Backwards— upwards	mm	0 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	:	spring-loaded 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 10 mm²)	
— finely stranded with core end processing		2x (1 6 mm²)	
 finely stranded without core end processing 	;	2x (1 6 mm²)	
 for AWG conductors for main contacts 		2x (18 8)	
Design of screwdriver shaft	-	Diameter 5 to 6 mm	

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	

Ambient conditions:	
Size of the circuit-breaker	S0
Mechanical data:	

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

_				
	ΠG	m	9	V/
_	TG.	121		V/E

Display version

• for switching status Handle

Certificates/ approvals:

General Product Approval

Declaration of Conformity

Test Certificates











Type Test
Certificates/Test
Report

Test Certificates

Shipping Approval

Special Test Certificate Declaration of the Compliance with the order









GL

Shipping Approval



LRS







other

Environmental Confirmations

Confirmation

other



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

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV20211CA20

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

http://support.automation.siemens.com/WW/view/en/3RV20211CA20/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=3RV20211CA20&lang=en





