SIEMENS

Data sheet 3RV2021-4EA25

CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 27...32A, N-RELEASE 400A, SPRING-L. CONNECTION, STANDARD SW. CAPACITY, W. TRANSVERSE AUX. SWITCH 1NO+1NC

product brand name	SIRIUS
Product designation	3RV2 circuit breaker

General technical data:	
Size of contactor can be combined company-specific	S00
Product expansion	
• Auxiliary switch	Yes
Active power loss total typical	11 W
Insulation voltage	
• with degree of pollution 3 Rated value	690 V
Surge voltage resistance Rated value	6 kV
Protection class IP	
• on the front	IP20
• of the terminal	IP20
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	-20 ... +60 °C

Type of protection	Increased safety
Ambient conditions:	
Installation altitude at height above sea level maximum	2 000 m
Ambient temperature	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-50 ... +80 °C
Relative humidity during operation	10 ... 95 %
Main circuit:	
Adjustable response value current of the current-dependent overload release	27 ... 32 A
Operating voltage	
• Rated value	690 V
• at AC-3 Rated value maximum	690 V
Operating frequency Rated value	50 ... 60 Hz
Operating current Rated value	32 A
Operating current	
• at AC-3	
— at 400 V Rated value	32 A
Operating power	
• at AC-3	
— at 230 V Rated value	7 500 W
— at 400 V Rated value	15 000 W
— at 500 V Rated value	18 500 W
— at 690 V Rated value	30 000 W
Operating frequency	
• at AC-3 maximum	15 1/h
Auxiliary circuit:	
Number of NC contacts	
• for auxiliary contacts	1
Number of NO contacts	
• for auxiliary contacts	1
Number of CO contacts	
• for auxiliary contacts	0
Design of the auxiliary switch	transverse
Operating current of the auxiliary contacts at AC-15	
• at 24 V	2 A
• at 120 V	0.5 A
• at 125 V	0.5 A
• at 230 V	0.5 A

Operating current of the auxiliary contacts at DC-13	
• at 24 V	1 A
• at 60 V	0.15 A

Protective and monitoring functions:	
Trip class	CLASS 10
Design of the overload circuit breaker	thermal
Operational short-circuit current breaking capacity (Ics) at AC	
• at 240 V Rated value	100 kA
• at 400 V Rated value	25 kA
• at 500 V Rated value	5 kA
• at 690 V Rated value	2 kA
Maximum short-circuit current breaking capacity (Icu)	
• at AC at 240 V Rated value	100 kA
• at AC at 400 V Rated value	55 kA
• at AC at 500 V Rated value	10 kA
• at AC at 690 V Rated value	4 kA
Breaking capacity short-circuit current (Icn)	
• at 1 current path at DC at 150 V Rated value	10 kA
• with 2 current paths in series at DC at 300 V Rated value	10 kA
• with 3 current paths in series at DC at 450 V Rated value	10 kA
Response value current of the instantaneous short-circuit release	400 A

UL/CSA ratings:	
Full-load current (FLA) for three-phase AC motor	
• at 480 V Rated value	32 A
• at 600 V Rated value	32 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V Rated value	2 hp
— at 230 V Rated value	5 hp
• for three-phase AC motor	
— at 200/208 V Rated value	7.5 hp
— at 220/230 V Rated value	10 hp
— at 460/480 V Rated value	20 hp
Contact rating of the auxiliary contacts acc. to UL	C300 / R300

Short-circuit:	
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 Ik < 400 A)
Design of the fuse link for IT network for short-circuit protection of the main circuit	
• at 400 V	gL/gG 63 A
• at 500 V	gL/gG 63 A
• at 690 V	gL/gG 63 A

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	119 mm
Width	45 mm
Depth	96 mm
Required spacing	
• with side-by-side mounting	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— at the side	30 mm
— downwards	50 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	30 mm

Connections/ Terminals:	
Product function	
• removable terminal for auxiliary and control circuit	No
Type of electrical connection	
• for main current circuit	spring-loaded terminals
• for auxiliary and control current circuit	spring-loaded terminals
Arrangement of electrical connectors for main current circuit	Top and bottom

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)
Type of connectable conductor cross-section	
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 ... 2,5 mm²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²)
— finely stranded without core end processing	2x (0.5 ... 1.5 mm²)
• for AWG conductors for auxiliary contacts	2x (20 ... 14)
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 %
T1 value for proof test interval or service life acc. to IEC 61508	10 y

Mechanical data:	
Size of the circuit-breaker	S0

Display:	
Display version	
• for switching status	Handle

Certificates/ approvals:

General Product Approval					For use in hazardous locations
CCC	CSA	UL	KTL	EAC	ATEX

Declaration of Conformity	Test Certificates			Shipping Approval	
EG-Konf.	spezielle Prüfbescheinigungen	Typprüfbescheinigung/Werkszeugnis	Werksbescheinigungen	ABS	BUREAU VERITAS

Shipping Approval					
DNV	GL	LRS	PRS	RINA	RMRS

other		
Bestätigungen	Umweltbestätigung	VDE

Further information

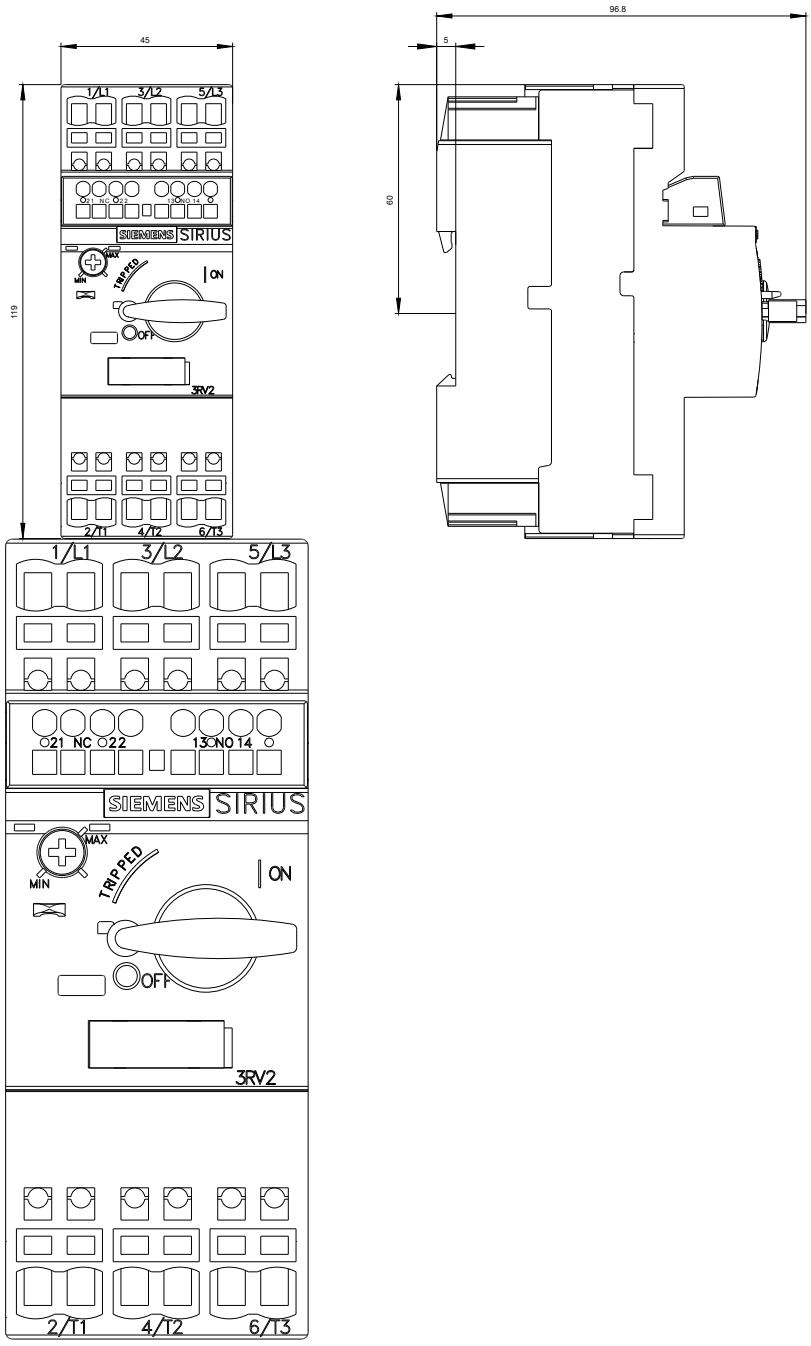
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

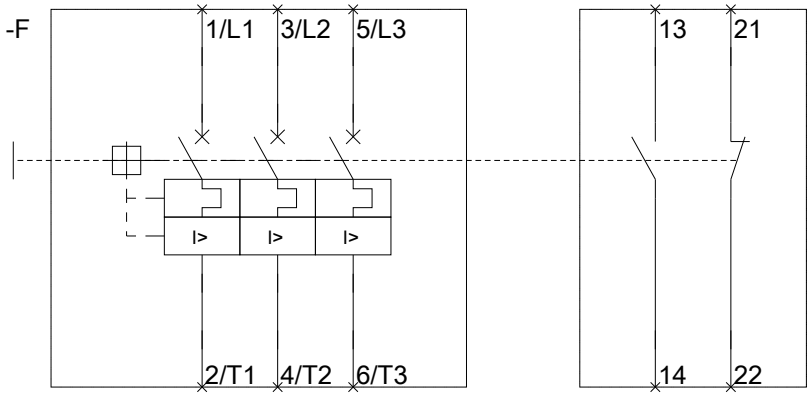
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV20214EA25

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RV20214EA25

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV20214EA25&lang=en





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