SIEMENS

Data sheet 3RV2021-4CA10



CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 16...22A, N-RELEASE 286A, SCREW CONNECTION, STANDARD SW. CAPACITY,

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	8 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

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• 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	16 ... 22 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	22 A
Operating current	
• at AC-3	
— at 400 V Rated value	22 A
Operating power	
• at AC-3	
— at 230 V Rated value	5 500 W
— at 400 V Rated value	11 000 W
— at 500 V Rated value	11 000 W
— at 690 V Rated value	18 500 W
Operating frequency	
• at AC-3 maximum	15 1/h

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

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
• with AC at 400 V Rated value	55 kA

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• at AC at 500 V Rated value	10 kA
• at AC at 690 V Rated value	4 kA
Breaking capacity short-circuit current (Icn)	
• with 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	286 A

UL/CSA ratings:	
Full-load current (FLA) for three-phase AC motor	
• at 480 V Rated value	22 A
• at 600 V Rated value	22 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V Rated value	1.5 hp
— at 230 V Rated value	3 hp
• for three-phase AC motor	
— at 200/208 V Rated value	5 hp
— at 220/230 V Rated value	7.5 hp
— at 460/480 V Rated value	15 hp

Short-circuit:	
Design of the short-circuit trip	magnetic
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 50 A
• at 690 V	gL/gG 50 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	97 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

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— 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	screw-type 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 ... 2,5 mm²), 2x (2,5 ... 10 mm²)
— finely stranded with core end processing	2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²
• for AWG conductors for main contacts	2x (16 ... 12), 2x (14 ... 8)
Design of screwdriver shaft	Diameter 5 to 6 mm
Design of the thread of the connection screw	
• for main contacts	M4

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

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Certificates/ approvals:

General Product Approval				For use in hazardous locations	Declaration of Conformity
CSA	UL	KTL	EAC	ATEX	EG-Konf.

Test Certificates			Shipping Approval		
Typprüfbescheinigung/Werkszeugnis	spezielle Prüfbescheinigungen	Werksbescheinigungen	ABS	BUREAU VERITAS	DNV

Shipping Approval					other
GL	LRS	PRS	RINA	RMRS	Bestätigungen

other	
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=3RV20214CA10

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RV20214CA10

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV20214CA10&lang=en

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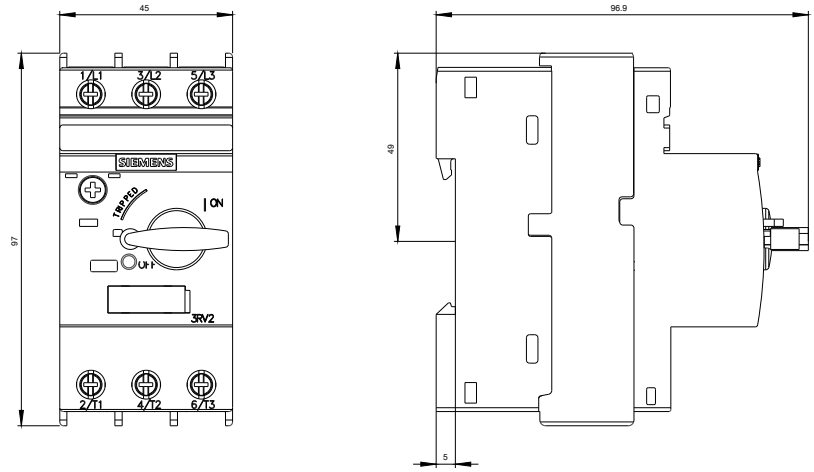

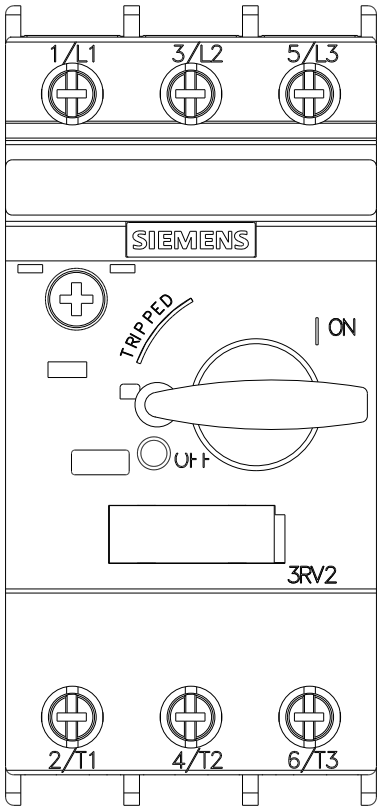

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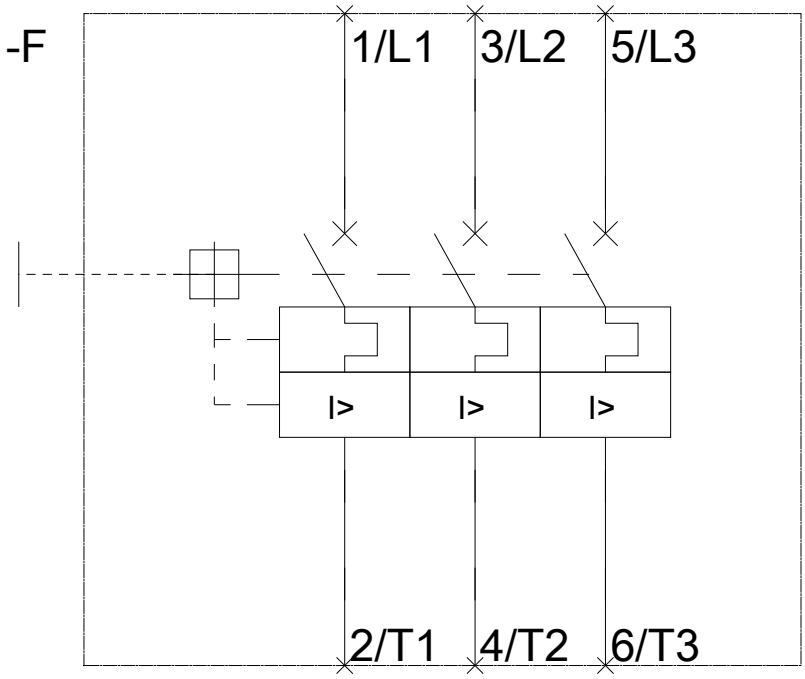

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