SIEMENS

Data sheet 3RV2021-1JA20

CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-REL. 7...10A, N-REL. 130A SPRING-L. CONNECTION, STANDARD SW. CAPACITY

Figure similar

product brand name	SIRIUS
Product designation	3RV2 circuit breaker

General technical data:	
Size of the circuit-breaker	S0
Size of contactor can be combined company-specific	S00, S0
Product extension	
• Auxiliary switch	Yes
Power loss [W] total typical	7 W
Insulation voltage with degree of pollution 3 rated value	690 V
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• in networks with grounded star point between main and auxiliary circuit	400 V
• in networks with grounded star point between main and auxiliary circuit	400 V
Protection class IP	
• on the front	IP20
• of the terminal	IP20

Shock resistance	
• acc. to IEC 60068-2-27	25g / 11 ms
Mechanical service life (switching cycles)	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
Electrical endurance (switching cycles)	
• typical	100 000
Type of protection	Increased safety
Certificate of suitability relating to ATEX	on request
Protection against electrical shock	finger-safe
Equipment marking acc. to DIN EN 81346-2	Q

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
Temperature compensation	-20 ... +60 °C
Relative humidity during operation	10 ... 95 %

Main circuit:

Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	7 ... 10 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	10 A
Operating current	
• at AC-3	
— at 400 V rated value	10 A
Operating power	
• at AC-3	
— at 230 V rated value	2 200 W
— at 400 V rated value	4 000 W
— at 500 V rated value	5 500 W
— at 690 V rated value	7 500 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 release	thermal
Operational short-circuit current breaking capacity (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	100 kA
• at 500 V rated value	42 kA
• at 690 V rated value	4 kA
Maximum short-circuit current breaking capacity (Icu)	
• at AC at 240 V rated value	100 kA
• at AC at 400 V rated value	100 kA
• at AC at 500 V rated value	42 kA
• at AC at 690 V rated value	6 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

UL/CSA ratings:	
Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	10 A
• at 600 V rated value	10 A
Yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	0.5 hp
— at 230 V rated value	1.5 hp
• for three-phase AC motor	
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	7.5 hp

Short-circuit protection	
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	109 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
Arrangement of electrical connectors for main current circuit	Top and bottom
Type of connectable conductor cross-sections	
• 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)
• at 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	50 FIT
T1 value for proof test interval or service life acc. to IEC 61508	10 y
Display version	
• for switching status	Handle

Certificates/approvals

General Product Approval | **For use in hazardous locations**

CCC | CSA | UL | KTL | EAC | ATEX

For use in hazardous locations | **Declaration of Conformity** | **Test Certificates** | **Shipping Approval**

IECEx | EG-Konf. | Typprüfbescheinigung/Werkszeugnis | spezielle Prüfbescheinigungen | ABS | BUREAU VERITAS

Shipping Approval

DNV | GL | LRS | PRS | RINA | RMRS

other | **Railway**

Bestätigungen | Umweltbestätigung | VDE | Schwingen/Schocken

Further information

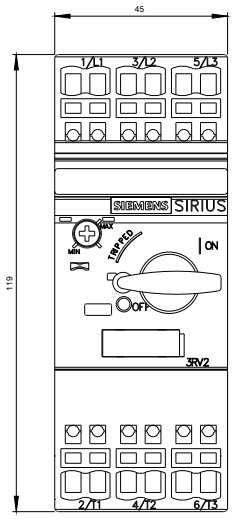
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

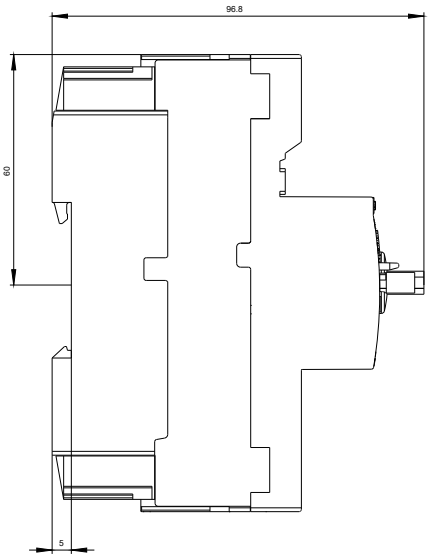
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV20211JA20

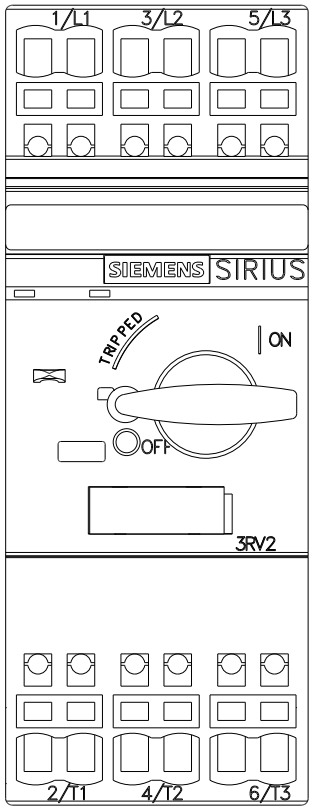
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV20211JA20

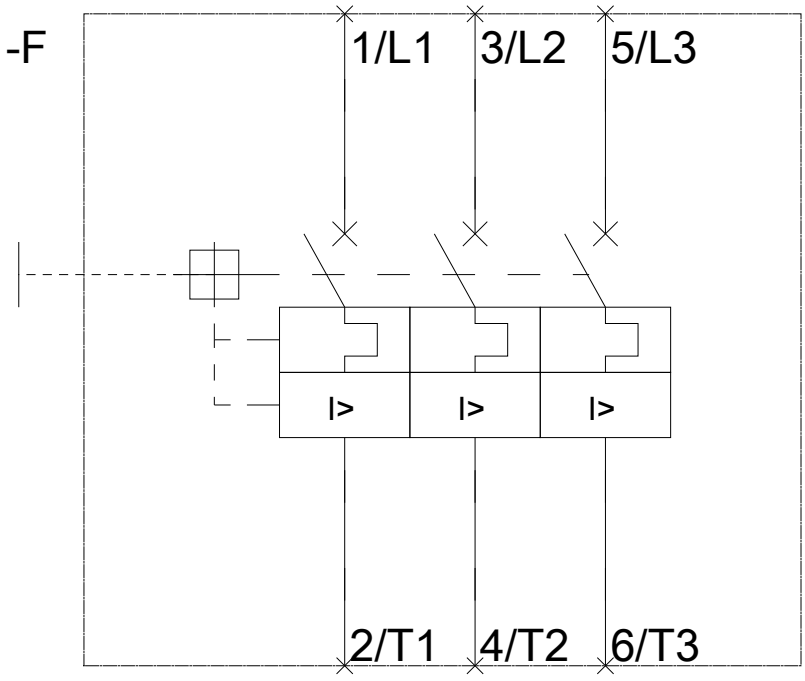
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RV20211JA20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV20211JA20&lang=en









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