SIEMENS

Data sheet 3RV2031-4VA10

CIRCUIT BREAKER, SIZE S2, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 35...45A, N-RELEASE 650A, SCREW TERMINAL, STANDARD BREAKING CAPACITY

Figure similar

product brand name	SIRIUS
Product designation	3RV2 circuit breaker

General technical data:	
Size of the circuit-breaker	S2
Size of contactor can be combined company-specific	S2
Product expansion	
• Auxiliary switch	Yes
Active power loss total typical	17 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	IP00
Shock resistance	
• acc. to IEC 60068-2-27	25g / 11 ms Sinus
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
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529
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 response value current of the current-dependent overload release	35 ... 45 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	45 A
Operating current	
• at AC-3	
— at 400 V Rated value	45 A
Operating power	
• at AC-3	
— at 230 V Rated value	11 000 W
— at 400 V Rated value	22 000 W
— at 500 V Rated value	30 000 W
— at 690 V Rated value	37 000 W
Operating frequency	
• at AC-3 maximum	15 1/h

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 A
• at 400 V Rated value	30 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	65 kA
• at AC at 500 V Rated value	10 kA
• at AC at 690 V Rated value	4 kA
Response value current of the instantaneous short-circuit release	650 A

UL/CSA ratings:	
Full-load current (FLA) for three-phase AC motor	
• at 480 V Rated value	45 A
• at 600 V Rated value	45 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V Rated value	3 hp
— at 230 V Rated value	10 hp
• for three-phase AC motor	
— at 200/208 V Rated value	15 hp
— at 220/230 V Rated value	15 hp
— at 460/480 V Rated value	40 hp
— at 575/600 V Rated value	50 hp

Short-circuit protection	
Design of the short-circuit trip	magnetic
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	any
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	140 mm
Width	55 mm
Depth	149 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	10 mm
— downwards	50 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	10 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 ... 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)
Tightening torque	
• for main contacts with screw-type terminals	3 ... 4.5 N·m
Design of screwdriver shaft	Diameter 5 to 6 mm
Design of the thread of the connection screw	
• for main contacts	M6

Safety related data:

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		Test Certificates	other		Railway
CSA	UL	spezielle Prüfbescheinigungen	Bestätigungen	Umweltbestätigung	Bestätigungen

Further information

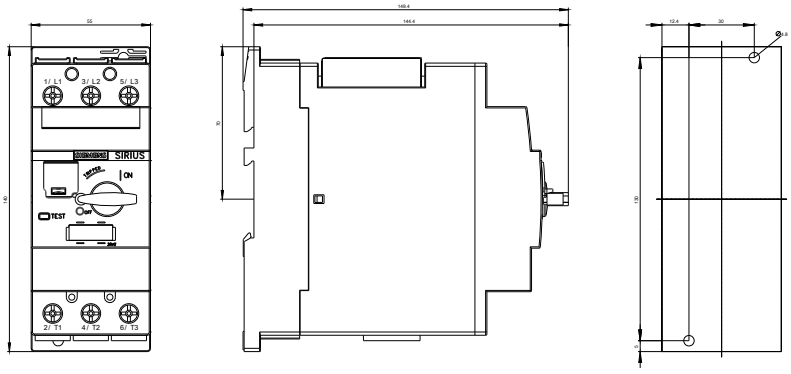
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

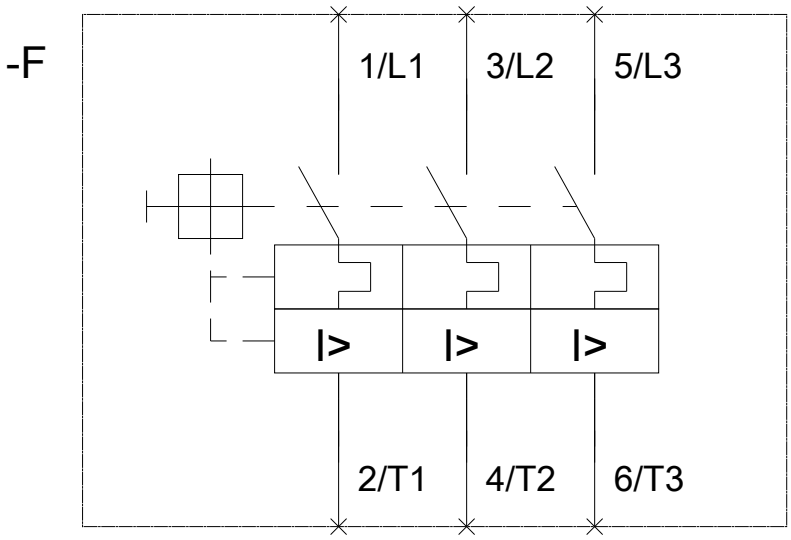
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV20314VA10

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RV20314VA10

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV20314VA10&lang=en





last modified: 27.08.2015