

CIRCUIT BREAKER, SIZE S2, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 35...45A, N-RELEASE 650A, SCREW TERMINAL, STANDARD BREAKING CAPACITY W. TRANSV. AUX. SWITCH 1NO+1NC



Figure similar

product brandname	SIRIUS
Product designation	Circuit breaker
Design of the product	For motor protection
Product type designation	3RV2

General technical data	
Size of the circuit-breaker	S2
Size of contactor can be combined company-specific	S2
Product extension	
• Auxiliary switch	Yes
Power loss [W] total typical	17 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	IP00
Mechanical service life (switching cycles)	
• of the main contacts typical	50 000
• of 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

Ambient temperature	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-50 ... +80 °C
Temperature compensation	-20 ... +60 °C

Main circuit

Number of poles for main current circuit	3
Adjustable pick-up 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

Auxiliary circuit

Design of the auxiliary switch	transverse
Number of NC contacts	
• for auxiliary contacts	1
— Note	1

Number of NO contacts	
• for auxiliary contacts	1
— Note	1
Operating current of auxiliary contacts at AC-15	
• at 24 V	2 A
• at 230 V	0.5 A
Operating current of auxiliary contacts at DC-13	
• at 24 V	1 A
• at 60 V	0.15 A
• at 110 V	0 A
• at 125 V	0 A
• at 220 V	0 A

Protective and monitoring functions

Product function	
• Ground fault detection	No
• Phase failure detection	Yes
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

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
Contact rating of auxiliary contacts according to UL	C300 / R300
Short-circuit protection	
Product function Short circuit protection	Yes
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 $I_k < 400$ A)
Design of the fuse link for IT network for short-circuit protection of the main circuit • at 240 V • at 400 V • at 500 V • at 690 V	none required 125 100 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 - for auxiliary and control current circuit	screw-type terminals screw-type 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 - finely stranded with core end processing - at AWG conductors for main contacts	2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) 2x (1 ... 16 mm ²), 1x (1 ... 25 mm ²) 2x (18 ... 3), 1x (18 ... 2)
Type of connectable conductor cross-sections - for auxiliary contacts - single or multi-stranded - finely stranded with core end processing - at AWG conductors for auxiliary contacts	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14)
Tightening torque - for main contacts with screw-type terminals - for auxiliary contacts with screw-type terminals	3 ... 4.5 N·m 0.8 ... 1.2 N·m
Design of screwdriver shaft	Diameter 5 to 6 mm

Safety related data

B10 value with high demand rate acc. to SN 31920	5 000
Proportion of dangerous failures - with low demand rate acc. to SN 31920 - with high demand rate acc. to SN 31920	50 % 50 %
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				Declaration of Conformity	Test Certificates
 CCC	 CSA	 UL	 EAC	 EG-Konf.	Special Test Certificate

Test Certificates	Shipping Approval				
Type Test Certificates/Test Report	 ABS	 LRS	 PRS	 RINA	 RMRS

other	Railway		
Environmental Confirmations	Confirmation	Miscellaneous	Vibration and Shock

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=3RV2031-4VA15>

Cax online generator

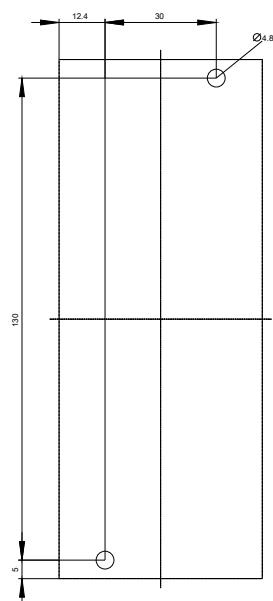
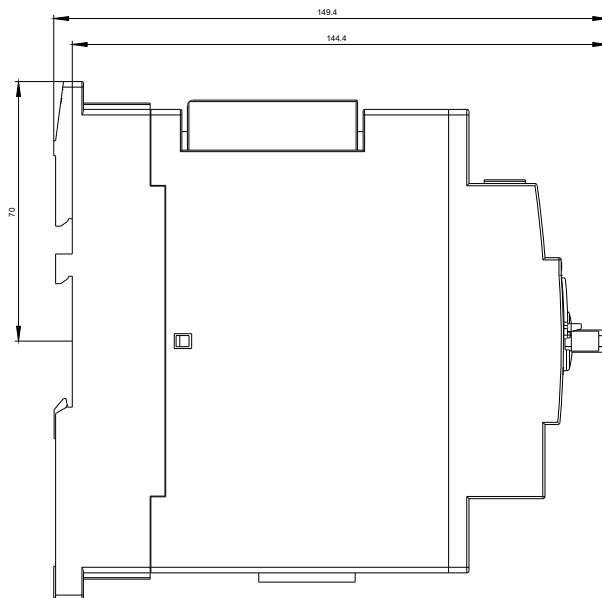
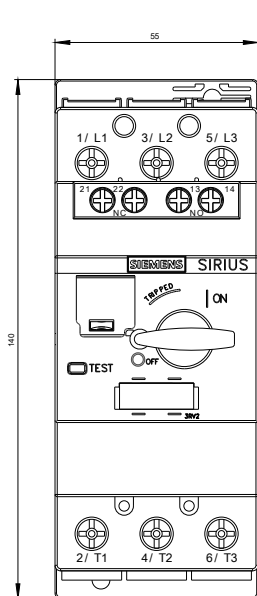
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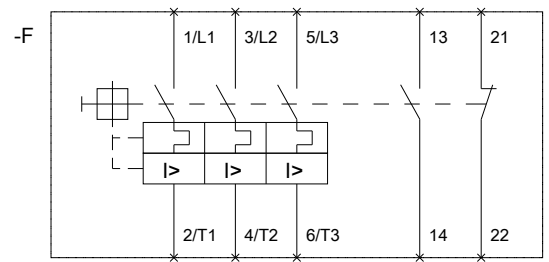
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4VA15>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4VA15&lang=en





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