

CIRCUIT BREAKER SIZE S2. FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 54...65A, N-RELEASE 845A, SCREW TERMINAL, STANDARD BREAKING CAPACITY



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	19 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	20 000
• of auxiliary contacts typical	20 000
Electrical endurance (switching cycles)	
• typical	20 000
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	54 ... 65 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	65 A
Operating current	
• at AC-3	
— at 400 V rated value	65 A
Operating power	
• at AC-3	
— at 230 V rated value	18 500 W
— at 400 V rated value	30 000 W
— at 500 V rated value	45 000 W
— at 690 V rated value	55 000 W
Operating frequency	
• at AC-3 maximum	15 1/h

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	
<ul style="list-style-type: none"> • at 240 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value 	100 kA 30 kA 5 kA 2 kA
Maximum short-circuit current breaking capacity (Icu)	
<ul style="list-style-type: none"> • at AC at 240 V rated value • at AC at 400 V rated value • at AC at 500 V rated value • at AC at 690 V rated value • at 480 AC Y/277 V acc. to UL 489 rated value 	65 kA 65 kA 8 kA 4 kA 30 A

UL/CSA ratings

Full-load current (FLA) for three-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	65 A 62 A
Yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 	20 hp 25 hp 50 hp 60 hp

Short-circuit protection

Product function Short circuit protection	Yes
Design of the short-circuit trip	magnetic
Design of the fuse link for IT network for short-circuit protection of the main circuit	
<ul style="list-style-type: none"> • at 240 V • at 400 V • at 500 V • at 690 V 	none required 160 125 100

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	
<ul style="list-style-type: none"> • 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-sections	
• for main contacts	
— single or multi-stranded	2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²)
— finely stranded with core end processing	2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²)
• at AWG conductors for main contacts	2x (18 ... 2), 1x (18 ... 1)
Tightening torque	
• for main contacts with screw-type terminals	3 ... 4.5 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	50 %
• with high demand rate acc. to SN 31920	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	Handle
<ul style="list-style-type: none"> for switching status 	

Certificates/approvals

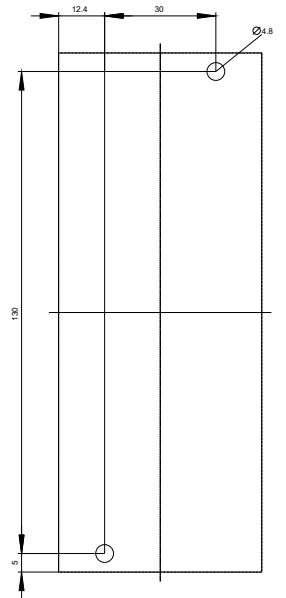
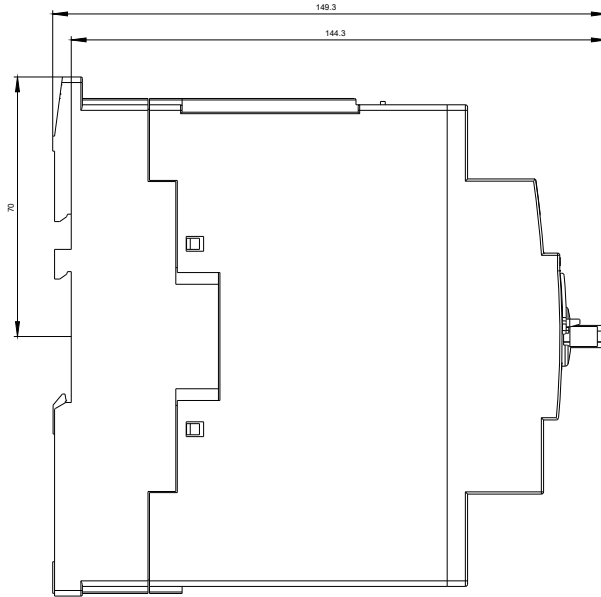
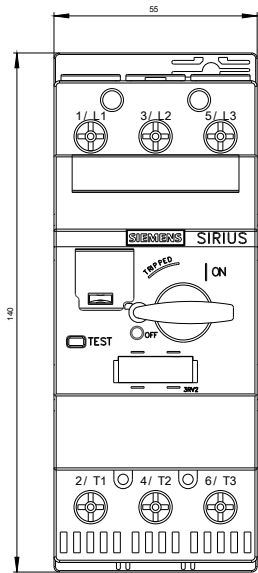
General Product Approval	Declaration of Conformity	Test Certificates
 CCC  CSA  UL  EAC  EG-Konf.		Special Test Certificate

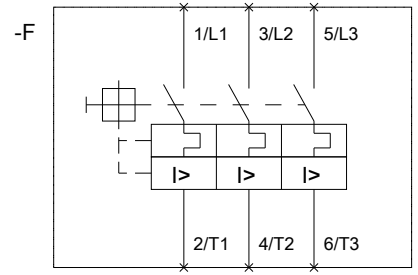
Test Certificates	Shipping Approval
Type Test Certificates/Test Report	 ABS  LRS  PRS  RINA  RMRS

other	Railway
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?mfb=3RV2031-4JA10>
- Cax online generator**
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RV2031-4JA10>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4JA10>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RV2031-4JA10&lang=en





last modified:

06/20/2017