

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
<b>General technical data:</b>	
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

<b>Electrical endurance (switching cycles)</b>	
• typical	50 000
<b>Protection against electrical shock</b>	finger-safe when touched vertically from front acc. to IEC 60529
Equipment marking acc. to DIN EN 81346-2	Q

#### Ambient conditions:

<b>Installation altitude at height above sea level maximum</b>	2 000 m
<b>Ambient temperature</b>	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-50 ... +80 °C
<b>Temperature compensation</b>	-20 ... +60 °C
<b>Relative humidity during operation</b>	10 ... 95 %

#### Main circuit:

<b>Number of poles for main current circuit</b>	3
<b>Adjustable response value current of the current-dependent overload release</b>	35 ... 45 A
<b>Operating voltage</b>	
• Rated value	690 V
• at AC-3 Rated value maximum	690 V
<b>Operating frequency Rated value</b>	50 ... 60 Hz
<b>Operating current Rated value</b>	45 A
<b>Operating current</b>	
• at AC-3	
— at 400 V Rated value	45 A
<b>Operating power</b>	
• 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
<b>Operating frequency</b>	
• at AC-3 maximum	15 1/h

#### Protective and monitoring functions:

<b>Trip class</b>	CLASS 10
<b>Design of the overload release</b>	thermal
<b>Operational short-circuit current breaking capacity (Ics) at AC</b>	
• 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

<b>Maximum short-circuit current breaking capacity (I<sub>cu</sub>)</b>	
<ul style="list-style-type: none"> <li>• at AC at 240 V Rated value</li> <li>• at AC at 400 V Rated value</li> <li>• at AC at 500 V Rated value</li> <li>• at AC at 690 V Rated value</li> </ul>	<p>100 kA</p> <p>65 kA</p> <p>10 kA</p> <p>4 kA</p>
<b>Response value current of the instantaneous short-circuit release</b>	650 A

#### UL/CSA ratings:

<b>Full-load current (FLA) for three-phase AC motor</b>	
<ul style="list-style-type: none"> <li>• at 480 V Rated value</li> <li>• at 600 V Rated value</li> </ul>	<p>45 A</p> <p>45 A</p>
<b>yielded mechanical performance [hp]</b>	
<ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V Rated value</li> <li>— at 230 V Rated value</li> </ul> </li> <li>• for three-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V Rated value</li> <li>— at 220/230 V Rated value</li> <li>— at 460/480 V Rated value</li> <li>— at 575/600 V Rated value</li> </ul> </li> </ul>	<p>3 hp</p> <p>10 hp</p> <p>15 hp</p> <p>15 hp</p> <p>40 hp</p> <p>50 hp</p>

#### Short-circuit protection

<b>Design of the short-circuit trip</b>	magnetic
<b>Design of the fuse link for IT network for short-circuit protection of the main circuit</b>	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	<p>none required</p> <p>125</p> <p>100</p> <p>80</p>

#### Installation/ mounting/ dimensions:

<b>mounting position</b>	any
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
<b>Height</b>	140 mm
<b>Width</b>	55 mm
<b>Depth</b>	149 mm
<b>Required spacing</b>	
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> </ul> </li> </ul>	<p>0 mm</p> <p>0 mm</p> <p>50 mm</p> <p>50 mm</p>

— 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:

<b>Product function</b>	
• removable terminal for auxiliary and control circuit	No
<b>Type of electrical connection</b>	
• for main current circuit	screw-type terminals
<b>Arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>Type of connectable conductor cross-section</b>	
• for main contacts	
— single or multi-stranded	2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )
— finely stranded with core end processing	2x (1 ... 16 mm <sup>2</sup> ), 1x (1 ... 25 mm <sup>2</sup> )
• for AWG conductors for main contacts	2x (18 ... 3), 1x (18 ... 2)
<b>Tightening torque</b>	
• for main contacts with screw-type terminals	3 ... 4.5 N·m
<b>Design of screwdriver shaft</b>	Diameter 5 to 6 mm
<b>Design of the thread of the connection screw</b>	
• for main contacts	M6

#### Safety related data:

<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	10 y
<b>Display version</b>	
• for switching status	Handle

#### Certificates/ approvals:

General Product Approval	Test Certificates	other	Railway
 CSA	 UL	<a href="#">spezielle Prüfbescheinigung</a> <a href="#">n</a>	<a href="#">Bestätigungen</a> <a href="#">Umweltbestätigung</a> <a href="#">Bestätigungen</a>

#### 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

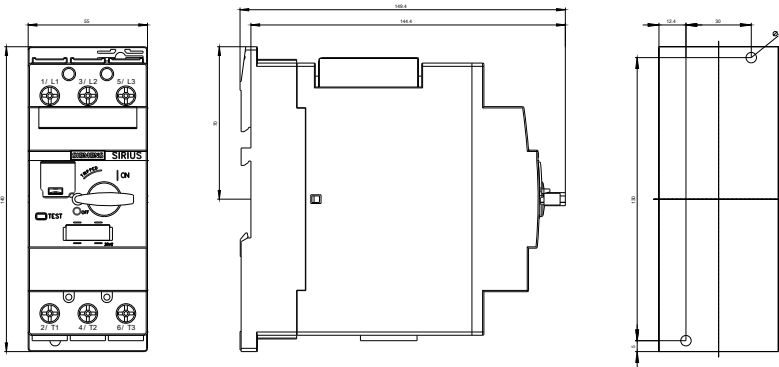
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV20314VA10>

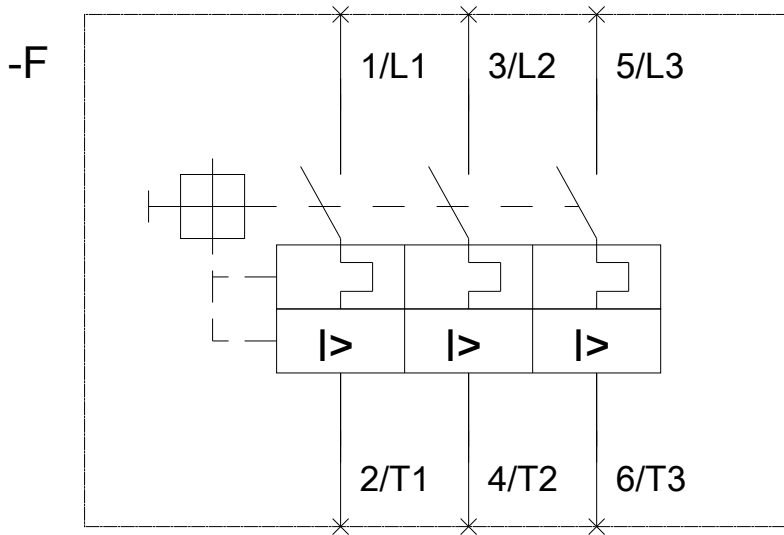
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<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](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV20314VA10&lang=en)





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