



CIRCUIT BREAKER, SIZE S2, FOR MOTOR PROTECTION, CLASS 20, 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:

<b>Active power loss total typical</b>	W	17
<b>Insulation voltage</b>	V	690
<ul style="list-style-type: none"> <li>with degree of pollution 3 Rated value</li> </ul>		
<b>Shock resistance</b>		25g / 11 ms Sinus
<ul style="list-style-type: none"> <li>acc. to IEC 60068-2-27</li> </ul>		
<b>Surge voltage resistance Rated value</b>	kV	6
<b>Mechanical service life (switching cycles)</b>		
<ul style="list-style-type: none"> <li>of the main contacts typical</li> </ul>		50 000
<ul style="list-style-type: none"> <li>of the auxiliary contacts typical</li> </ul>		50 000
<b>Electrical endurance (switching cycles)</b>		
<ul style="list-style-type: none"> <li>typical</li> </ul>		50 000
<b>Temperature compensation</b>	°C	-20 ... +60
<b>Size of contactor can be combined company-specific</b>		S2
<b>Protection class IP</b>		
<ul style="list-style-type: none"> <li>on the front</li> </ul>		IP20
<ul style="list-style-type: none"> <li>of the terminal</li> </ul>		IP00
<b>Equipment marking</b>		
<ul style="list-style-type: none"> <li>acc. to DIN EN 81346-2</li> </ul>		Q

### Main circuit:

<b>Number of poles for main current circuit</b>		3
<b>Adjustable response value current of the current-dependent overload release</b>	A	35 ... 45

<b>Operating voltage</b>		
• Rated value	V	690
• at AC-3 Rated value maximum	V	690
Operating frequency Rated value	Hz	50 ... 60
<b>Operating current Rated value</b>	A	45
<b>Operating current</b>		
• at AC-3		
— at 400 V Rated value	A	45
<b>Operating power</b>		
• at AC-3		
— at 230 V Rated value	W	11 000
— at 400 V Rated value	W	22 000
— at 500 V Rated value	W	30 000
— at 690 V Rated value	W	37 000
<b>Operating frequency</b>		
• at AC-3 maximum	1/h	15

#### Auxiliary circuit:

<b>Product expansion Auxiliary switch</b>		Yes
---	--	-----

#### Protective and monitoring functions:

<b>Trip class</b>		CLASS 20
<b>Design of the overload circuit breaker</b>		thermal
<b>Operational short-circuit current breaking capacity (Ics) with AC</b>		
• at 240 V Rated value	A	100
• at 400 V Rated value	kA	30
• at 500 V Rated value	kA	5
• at 690 V Rated value	kA	2
<b>Maximum short-circuit current breaking capacity (Icu)</b>		
• with AC at 240 V Rated value	kA	100
• with AC at 400 V Rated value	kA	65
• with AC at 500 V Rated value	kA	10
• with AC at 690 V Rated value	kA	4
<b>Response value current of the instantaneous short-circuit release</b>	A	650

#### UL/CSA ratings:

<b>Full-load current (FLA) for three-phase AC motor</b>		
• at 480 V Rated value	A	45
• at 600 V Rated value	A	45
<b>yielded mechanical performance [hp]</b>		
• for single-phase AC motor at 110/120 V Rated value	metric hp	3

• for single-phase AC motor at 230 V Rated value	metric hp	10
• for three-phase AC motor at 200/208 V Rated value	metric hp	15
• for three-phase AC motor at 220/230 V Rated value	metric hp	15
• for three-phase AC motor at 460/480 V Rated value	metric hp	40
• for three-phase AC motor at 575/600 V Rated value	metric hp	50

#### Short-circuit:

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		
• 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	mm	140
Width	mm	55
Depth	mm	149
Required spacing		
• with side-by-side mounting		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	50
— downwards	mm	50
— at the side	mm	0
• for grounded parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	50
— at the side	mm	10
— downwards	mm	50
• for live parts		
— forwards	mm	0
— Backwards	mm	0

— upwards	mm	50
— downwards	mm	50
— at the side	mm	10

#### Connections/ Terminals:

<b>Type of electrical connection</b>		screw-type terminals
• for main current circuit		
<b>Arrangement of electrical connectors for main current circuit</b>		Top and bottom
<b>Product function</b>		No
• removable terminal for auxiliary and control circuit		
<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	N·m	3 ... 4.5
<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>Protection against electrical shock</b>		finger-safe when touched vertically from front acc. to IEC 60529
--	--	--

#### Mechanical data:

<b>Size of the circuit-breaker</b>		S2
------------------------------------	--	----

#### Ambient conditions:

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

#### Display:

<b>Display version</b>		
• for switching status		Handle

#### Certificates/ approvals:

[Confirmation](#)[Environmental  
Confirmations](#)

## 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

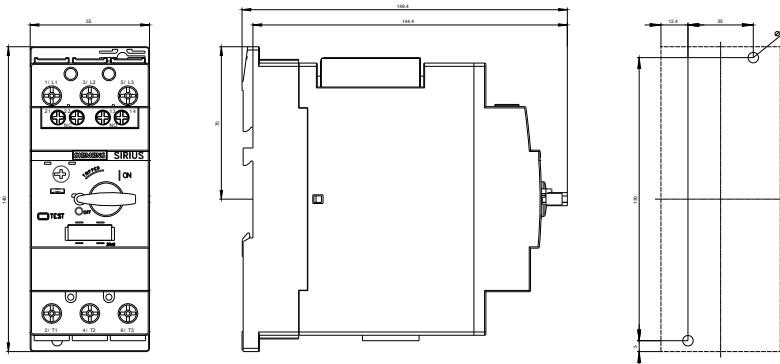
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RV20314VB10>

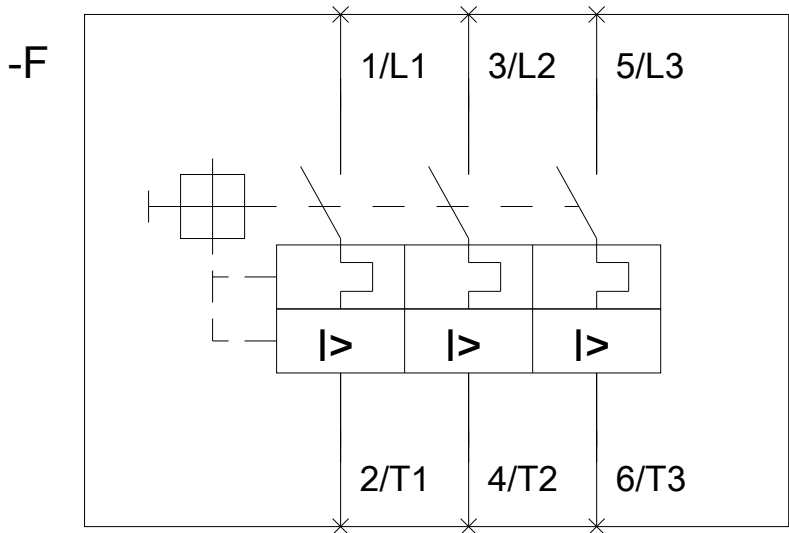
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RV20314VB10/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RV20314VB10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RV20314VB10&lang=en)





last modified:

11.03.2015