

CIRCUIT-BREAKER SZ S00, FOR MOTOR PROTECTION, CLASS 10, W. OVERLOAD RELAY FUNCTION A-RELEASE 9...12.5A, N-RELEASE163A, SCREW CONNECTION, STANDARD SW. CAPACITY



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

General technical data	
Size of the circuit-breaker	S00
Size of contactor can be combined company-specific	S00, S0
Product extension	
• Auxiliary switch	Yes
Power loss [W] total typical	7 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	

<ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>	<p>IP20</p> <p>IP20</p>
<b>Shock resistance</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-27</li> </ul>	25g / 11 ms
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• of the main contacts typical</li> <li>• of auxiliary contacts typical</li> </ul>	<p>100 000</p> <p>100 000</p>
<b>Electrical endurance (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	100 000
<b>Type of protection</b>	Increased safety
<b>Certificate of suitability relating to ATEX</b>	on request
<b>Protection against electrical shock</b>	finger-safe
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>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>	<p>-20 ... +60 °C</p> <p>-50 ... +80 °C</p> <p>-50 ... +80 °C</p>
<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 pick-up value current of the current-dependent overload release</b>	9 ... 12.5 A
<b>Operating voltage</b>	
<ul style="list-style-type: none"> <li>• rated value</li> <li>• at AC-3 rated value maximum</li> </ul>	<p>690 V</p> <p>690 V</p>
<b>Operating frequency rated value</b>	50 ... 60 Hz
<b>Operating current rated value</b>	12.5 A
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>	12.5 A
<b>Operating power</b>	
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>	<p>3 000 W</p> <p>5 500 W</p> <p>7 500 W</p> <p>7 500 W</p>
<b>Operating frequency</b>	
<ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>	15 1/h

Auxiliary circuit	
<b>Design of the auxiliary switch</b>	laterally
<b>Number of NC contacts</b>	
• for auxiliary contacts	0
<b>Number of NO contacts</b>	
• for auxiliary contacts	0
<b>Number of CO contacts</b>	
• for auxiliary contacts	0
<b>Operating current of auxiliary contacts at AC-15</b>	
• at 24 V	1.5 A
• at 230 V	1.5 A
<b>Operating current of auxiliary contacts at DC-13</b>	
• at 24 V	1 A

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 kA
• at 400 V rated value	100 kA
• at 500 V rated value	42 kA
• at 690 V rated value	4 kA
<b>Maximum short-circuit current breaking capacity (Icu)</b>	
• at AC at 240 V rated value	100 kA
• at AC at 400 V rated value	100 kA
• at AC at 500 V rated value	42 kA
• at AC at 690 V rated value	6 kA
<b>Breaking capacity short-circuit current (Icn)</b>	
• at 1 current path at DC at 150 V rated value	10 kA
• with 2 current paths in series at DC at 300 V rated value	10 kA
• with 3 current paths in series at DC at 450 V rated value	10 kA

UL/CSA ratings	
<b>Full-load current (FLA) for three-phase AC motor</b>	
• at 480 V rated value	12.5 A
• at 600 V rated value	12.5 A
<b>Yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V rated value	0.5 hp
— at 230 V rated value	2 hp

<ul style="list-style-type: none"> <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>3 hp</p> <p>7.5 hp</p> <p>10 hp</p>
<b>Contact rating of auxiliary contacts according to UL</b>	C600 / R300

### Short-circuit protection

<b>Design of the short-circuit trip</b>	magnetic
<b>Design of the fuse link</b> <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gL/gG: 6 A, quick: 10 A
<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 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	<p>gL/gG 63 A</p> <p>gL/gG 50 A</p> <p>gL/gG 40 A</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>	97 mm
<b>Width</b>	65 mm
<b>Depth</b>	96 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> <li>— at the side</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts <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> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>50 mm</p> <p>30 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p> <p>50 mm</p> <p>50 mm</p>

— at the side

30 mm

## Connections/Terminals

<b>Product function</b> <ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>	No
<b>Type of electrical connection</b> <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control current circuit</li> </ul>	screw-type terminals screw-type terminals
<b>Arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>Type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>for main contacts               <ul style="list-style-type: none"> <li>single or multi-stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG conductors for main contacts</li> </ul>	2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (18 ... 14), 2x 12
<b>Type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>for auxiliary contacts               <ul style="list-style-type: none"> <li>single or multi-stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG conductors for auxiliary contacts</li> </ul>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14)
<b>Tightening torque</b> <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> <li>for auxiliary contacts with screw-type terminals</li> </ul>	0.8 ... 1.2 N·m 0.8 ... 1.2 N·m
<b>Design of screwdriver shaft</b>	Diameter 5 to 6 mm
<b>Design of the thread of the connection screw</b> <ul style="list-style-type: none"> <li>for main contacts</li> <li>of the auxiliary and control contacts</li> </ul>	M3 M3

## Safety related data

<b>B10 value</b> <ul style="list-style-type: none"> <li>with high demand rate acc. to SN 31920</li> </ul>	5 000
<b>Proportion of dangerous failures</b> <ul style="list-style-type: none"> <li>with low demand rate acc. to SN 31920</li> <li>with high demand rate acc. to SN 31920</li> </ul>	50 % 50 %
<b>Failure rate [FIT]</b> <ul style="list-style-type: none"> <li>with low demand rate acc. to SN 31920</li> </ul>	50 FIT
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	10 y
<b>Display version</b> <ul style="list-style-type: none"> <li>for switching status</li> </ul>	Handle

## Certificates/approvals

General Product Approval	Declaration of Conformity
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CCC



CSA



UL

[KTL](#)



EG-Konf.

Test Certificates	Shipping Approval
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[Typprüfbescheinigung/Werkszeugnis](#)

[spezielle Prüfbescheinigungen](#)



ABS



LRS



PRS

Shipping Approval	other
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RMRS

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VDE

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Railway
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[Schwingen/Schocke](#)

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Further information
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**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=3RV2111-1KA10>

**Cax online generator**

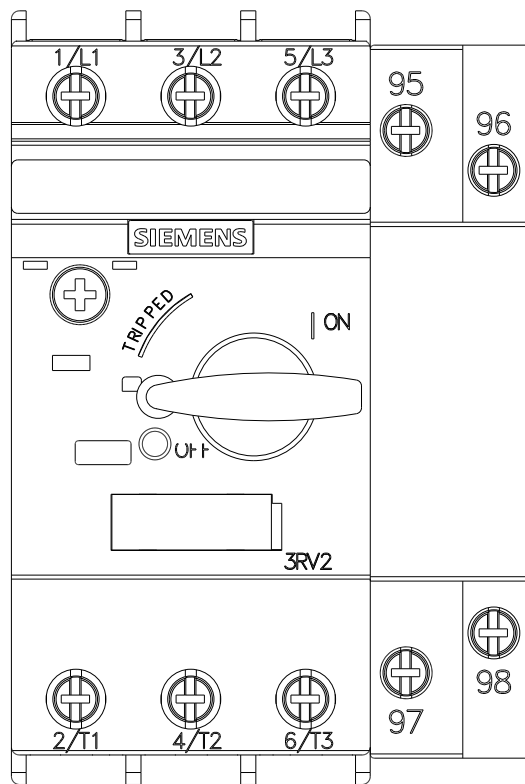
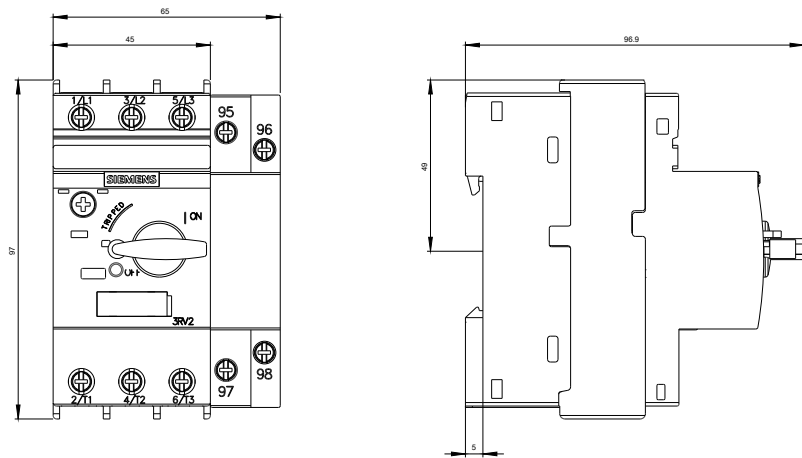
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2111-1KA10>

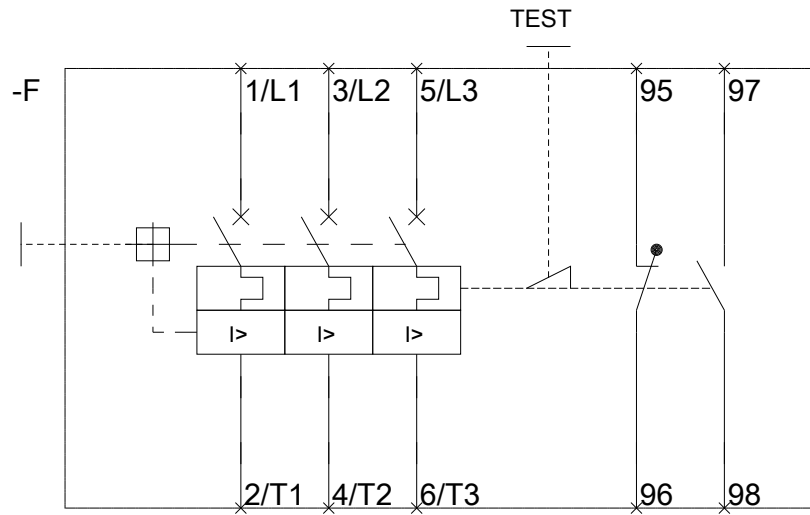
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2111-1KA10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2111-1KA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2111-1KA10&lang=en)





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