

CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-REL. 0.9...1.25A, N-REL. 16A SCREW CONNECTION, STANDARD SW. CAPACITY W. TRANSVERSE AUX. SWITCH 1NO+1NC



Figure similar

product brand name	SIRIUS
Product designation	3RV2 circuit breaker

General technical data:

Size of the circuit-breaker	S0
Size of contactor can be combined company-specific	S2
Product expansion	
• Auxiliary switch	Yes
Active power loss total typical	6 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	IP20
Shock resistance	
• acc. to IEC 60068-2-27	25g / 11 ms
Mechanical service life (switching cycles)	
• of the main contacts typical	100 000
• of the auxiliary contacts typical	100 000

<b>Electrical endurance (switching cycles)</b>	
• typical	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>	
• 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>	0.9 ... 1.25 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>	1.25 A
<b>Operating current</b>	
• at AC-3	
— at 400 V Rated value	1.25 A
<b>Operating power</b>	
• at AC-3	
— at 230 V Rated value	180 W
— at 400 V Rated value	370 W
— at 500 V Rated value	370 W
— at 690 V Rated value	750 W
<b>Operating frequency</b>	
• at AC-3 maximum	15 1/h

#### Auxiliary circuit:

<b>Design of the auxiliary switch</b>	transverse
<b>Number of NC contacts</b>	
• for auxiliary contacts	1
<b>Number of NO contacts</b>	
• for auxiliary contacts	1
<b>Number of CO contacts</b>	

<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	0
<b>Operating current of the auxiliary contacts at AC-15</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> </ul>	2 A
<ul style="list-style-type: none"> <li>• at 120 V</li> </ul>	0.5 A
<ul style="list-style-type: none"> <li>• at 125 V</li> </ul>	0.5 A
<ul style="list-style-type: none"> <li>• at 230 V</li> </ul>	0.5 A
<b>Operating current of the auxiliary contacts at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> </ul>	1 A
<ul style="list-style-type: none"> <li>• at 60 V</li> </ul>	0.15 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>	
<ul style="list-style-type: none"> <li>• at 240 V Rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>• at 400 V Rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>• at 500 V Rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>• at 690 V Rated value</li> </ul>	100 kA
<b>Maximum short-circuit current breaking capacity (Icu)</b>	
<ul style="list-style-type: none"> <li>• at AC at 240 V Rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>• at AC at 400 V Rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>• at AC at 500 V Rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>• at AC at 690 V Rated value</li> </ul>	100 kA
<b>Breaking capacity short-circuit current (Icn)</b>	
<ul style="list-style-type: none"> <li>• at 1 current path at DC at 150 V Rated value</li> </ul>	10 kA
<ul style="list-style-type: none"> <li>• with 2 current paths in series at DC at 300 V Rated value</li> </ul>	10 kA
<ul style="list-style-type: none"> <li>• with 3 current paths in series at DC at 450 V Rated value</li> </ul>	10 kA
<b>Response value current of the instantaneous short-circuit release</b>	16 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> </ul>	1.25 A
<ul style="list-style-type: none"> <li>• at 600 V Rated value</li> </ul>	1.25 A
<b>yielded mechanical performance [hp]</b>	
<ul style="list-style-type: none"> <li>• for three-phase AC motor <ul style="list-style-type: none"> <li>— at 460/480 V Rated value</li> </ul> </li> </ul>	0.5 hp
<ul style="list-style-type: none"> <li>— at 575/600 V Rated value</li> </ul>	0.5 hp
<b>Contact rating of the auxiliary contacts acc. to UL</b>	C300 / R300

#### Short-circuit protection

<b>Design of the short-circuit trip</b>	magnetic
<b>Design of the fuse link</b>	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400$ A)
<ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	

#### 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>	45 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> <li>— at the side</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>0 mm</li> <li>0 mm</li> <li>50 mm</li> <li>50 mm</li> <li>0 mm</li> <li>0 mm</li> <li>0 mm</li> <li>50 mm</li> <li>30 mm</li> <li>50 mm</li> <li>0 mm</li> <li>0 mm</li> <li>50 mm</li> <li>50 mm</li> <li>30 mm</li> </ul>



#### Connections/ Terminals:


<b>Product function</b>	No
<ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>	
<b>Type of electrical connection</b>	screw-type terminals screw-type terminals
<ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control current circuit</li> </ul>	
<b>Arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>Type of connectable conductor cross-section</b>	2x (1 ... 2,5 mm <sup>2</sup> ), 2x (2,5 ... 10 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>for main contacts <ul style="list-style-type: none"> <li>— single or multi-stranded</li> </ul> </li> </ul>	

<ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> <li>• for AWG conductors for main contacts</li> </ul>	2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> 2x (16 ... 12), 2x (14 ... 8)
<b>Type of connectable conductor cross-section</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>• for 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>	2 ... 2.5 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>	M4 M3

Safety related data:	
<b>B10 value with high demand rate acc. to SN 31920</b>	50 000
<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>	40 % 40 %
<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	For use in hazardous locations
 CCC	 CSA
 UL	<a href="#">KTL</a>
	 ATEX
	 IECEX

Declaration of Conformity	Test Certificates	other	Railway
 EG-Konf.	<a href="#">Typprüfbescheinigung/Werkszeugnis</a>	<a href="#">spezielle Prüfbescheinigungen</a>	<a href="#">Schwingen/Schocke</a>
		<a href="#">Umweltbestätigung</a>	<a href="#">Bestätigungen</a>
			<a href="#">Schwingen/Schocke</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**

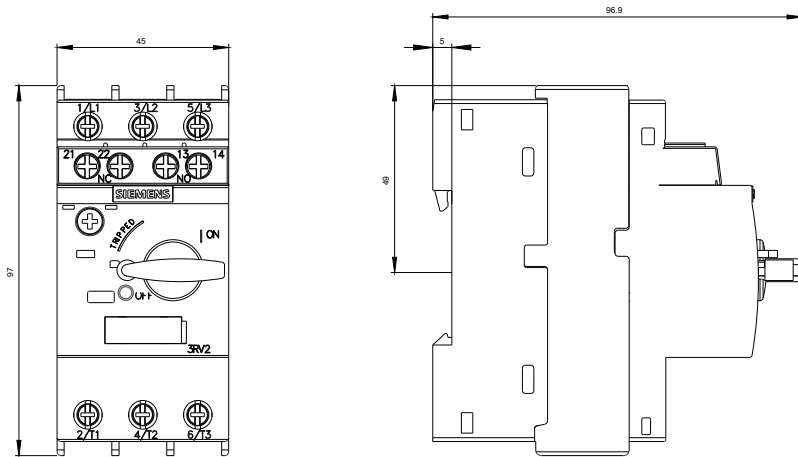
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RV20210KA15>

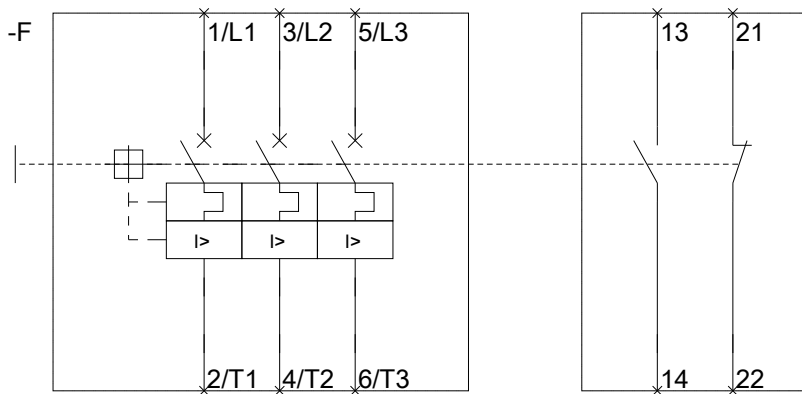
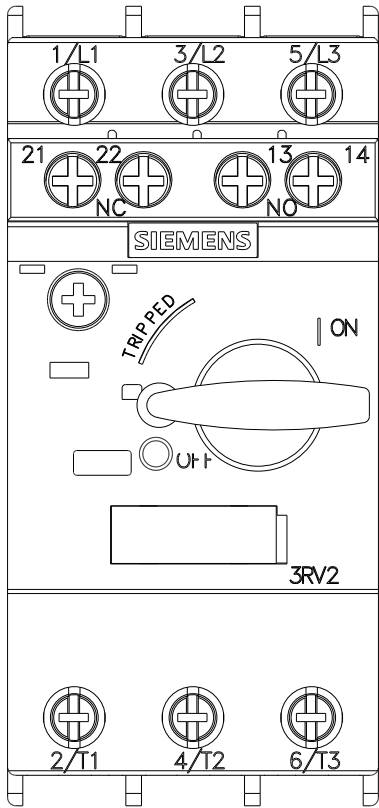
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV20210KA15>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RV20210KA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RV20210KA15&lang=en)





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