



Circuit breaker size S0 for motor protection, CLASS 10 A-release 7...10 A  
N release 130 A screw terminal Standard switching capacity

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Circuit breaker
<b>design of the product</b>	For motor protection
<b>product type designation</b>	3RV2

### General technical data

<b>size of the circuit-breaker</b>	S0
<b>size of contactor can be combined company-specific</b>	S00, S0
product extension auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state	9.25 W
• at AC in hot operating state per pole	3.1 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
<b>surge voltage resistance rated value</b>	6 kV
<b>shock resistance according to IEC 60068-2-27</b>	25g / 11 ms
<b>mechanical service life (operating cycles)</b>	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
electrical endurance (operating cycles) typical	100 000
<b>type of protection according to ATEX directive 2014/34/EU</b>	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	10/01/2009

### Ambient conditions

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

### Main circuit

<b>number of poles for main current circuit</b>	3
<b>adjustable current response value current of the current-dependent overload release</b>	7 ... 10 A
<b>operating voltage</b>	
• rated value	20 ... 690 V
• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	10 A

<b>operational current</b>	
• at AC-3 at 400 V rated value	10 A
• at AC-3e at 400 V rated value	10 A
<b>operating power</b>	
• at AC-3	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	7.5 kW
• at AC-3e	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	7.5 kW
<b>operating frequency</b>	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h

#### Auxiliary circuit

<b>number of NC contacts for auxiliary contacts</b>	0
<b>number of NO contacts for auxiliary contacts</b>	0
<b>number of CO contacts for auxiliary contacts</b>	0

#### Protective and monitoring functions

<b>product function</b>	
• ground fault detection	No
• phase failure detection	Yes
<b>trip class</b>	CLASS 10
<b>design of the overload release</b>	thermal
<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>operating 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
response value current of instantaneous short-circuit trip unit	130 A

#### UL/CSA ratings

<b>full-load current (FLA) for 3-phase AC motor</b>	
• at 480 V rated value	10 A
• at 600 V rated value	10 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	1.5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	10 hp

#### Short-circuit protection

<b>product function short circuit protection</b>	Yes
<b>design of the short-circuit trip</b>	magnetic

#### Installation/ mounting/ dimensions

<b>mounting position</b>	any
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
<b>height</b>	97 mm
<b>width</b>	45 mm
<b>depth</b>	97 mm

<b>required spacing</b>	
<ul style="list-style-type: none"> <li>● with side-by-side mounting at the side</li> <li>● for grounded parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>● for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>● for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>● for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>● for grounded parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> <li>● for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> </ul>	<p>0 mm</p> <p>30 mm</p> <p>30 mm</p> <p>9 mm</p> <p>30 mm</p> <p>30 mm</p> <p>9 mm</p> <p>30 mm</p> <p>30 mm</p> <p>9 mm</p> <p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>30 mm</p> <p>0 mm</p> <p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>30 mm</p> <p>0 mm</p>

**Connections/ Terminals**

<b>type of electrical connection</b> <ul style="list-style-type: none"> <li>● for main current circuit</li> </ul>	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>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>● at AWG cables for main contacts</li> </ul>	<p>2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 10 mm<sup>2</sup>)</p> <p>2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup></p> <p>2x (16 ... 12), 2x (14 ... 8)</p>
<b>tightening torque</b>	
<ul style="list-style-type: none"> <li>● for main contacts with screw-type terminals</li> </ul>	2 ... 2.5 N·m
<b>design of screwdriver shaft</b>	Diameter 5 to 6 mm
<b>size of the screwdriver tip</b>	Pozidriv size 2
<b>design of the thread of the connection screw</b>	
<ul style="list-style-type: none"> <li>● for main contacts</li> </ul>	M4

**Safety related data**

<b>B10 value</b>	
<ul style="list-style-type: none"> <li>● with high demand rate according to SN 31920</li> </ul>	5 000
<b>proportion of dangerous failures</b>	
<ul style="list-style-type: none"> <li>● with low demand rate according to SN 31920</li> <li>● with high demand rate according to SN 31920</li> </ul>	<p>50 %</p> <p>50 %</p>
<b>failure rate [FIT]</b>	
<ul style="list-style-type: none"> <li>● with low demand rate according to SN 31920</li> </ul>	50 FIT
T1 value for proof test interval or service life according to IEC 61508	10 a
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front
display version for switching status	Handle

**Certificates/ approvals**

<b>General Product Approval</b>	<b>For use in hazard-ous locations</b>
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[Confirmation](#)



[KC](#)



IECEX

For use in hazardous locations	Declaration of Conformity	Test Certificates		Marine / Shipping
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EG-Konf.

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS

### Marine / Shipping



LRS



PRS



RINA



RMRS

other	Railway		
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[Confirmation](#)



VDE

[Confirmation](#)

[Vibration and Shock](#)

### Further information

#### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

#### Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

#### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3RV2021-1JA10>

#### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RV2021-1JA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1JA10>

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

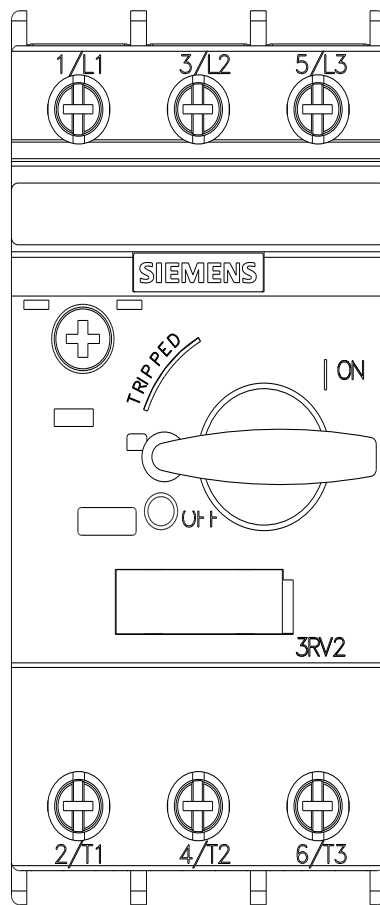
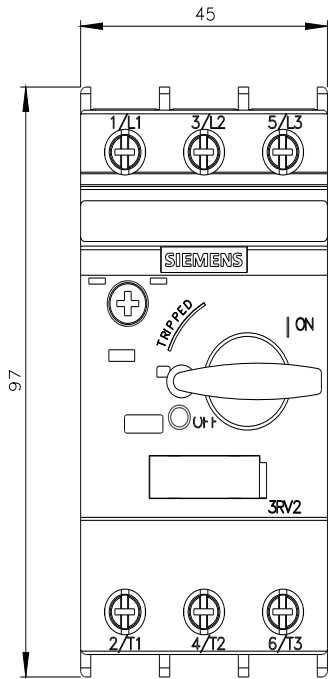
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RV2021-1JA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RV2021-1JA10&lang=en)

#### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1JA10/char>

#### Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mfb=3RV2021-1JA10&objecttype=14&gridview=view1>





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