



Circuit breaker size S0 for motor protection, CLASS 10 A-release 3.5...5 A N release 65 A Spring-type 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
<b>General technical data</b>	
<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	7.25 W
• at AC in hot operating state per pole	2.4 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>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	10/01/2009
<b>SVHC substance name</b>	Lead CAS-No. 7439-92-1
<b>Net Weight</b>	406 g
<b>Ambient conditions</b>	
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 %
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	3
<b>adjustable current response value current of the current-dependent overload release</b>	3.5 ... 5 A
<b>type of voltage for main current circuit</b>	AC
<b>operating voltage</b>	
• rated value	20 ... 690 V

<ul style="list-style-type: none"> <li>● at AC-3 rated value maximum</li> </ul>	690 V
<ul style="list-style-type: none"> <li>● at AC-3e rated value maximum</li> </ul>	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	5 A
<b>operational current</b>	
<ul style="list-style-type: none"> <li>● at AC-3 at 400 V rated value</li> </ul>	5 A
<ul style="list-style-type: none"> <li>● at AC-3e at 400 V rated value</li> </ul>	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>	1.1 kW 1.5 kW 2.2 kW 4 kW
<ul style="list-style-type: none"> <li>● at AC-3e <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>	1.1 kW 1.5 kW 2.2 kW 4 kW
<b>operating frequency</b>	
<ul style="list-style-type: none"> <li>● at AC-3 maximum</li> </ul>	15 1/h
<ul style="list-style-type: none"> <li>● at AC-3e maximum</li> </ul>	15 1/h

#### Auxiliary circuit

<b>type of voltage for auxiliary and control circuit</b>	AC/DC
<b>number of NC contacts for auxiliary contacts</b>	0
<b>number of NO contacts for auxiliary contacts</b>	0
number of CO contacts for auxiliary contacts	0

#### Protective and monitoring functions

<b>product function</b>	
<ul style="list-style-type: none"> <li>● ground fault detection</li> </ul>	No
<ul style="list-style-type: none"> <li>● phase failure detection</li> </ul>	Yes
<b>trip class</b>	CLASS 10
<b>design of the overload release</b>	thermal
<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>	6 kA
<b>operating 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>	4 kA
response value current of instantaneous short-circuit trip unit	65 A

#### UL/CSA ratings

<b>full-load current (FLA) for 3-phase AC motor</b>	
<ul style="list-style-type: none"> <li>● at 480 V rated value</li> </ul>	5 A
<ul style="list-style-type: none"> <li>● at 600 V rated value</li> </ul>	5 A
<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> </ul>	0.17 hp 0.5 hp
<ul style="list-style-type: none"> <li>● for 3-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>	1 hp 1 hp 3 hp 3 hp
<b>UL File Number (CCN)</b>	E47705 (NLRV, NLRV7), E156943 (NKJH, NKJH7)

#### Short-circuit protection

<b>product function short circuit protection</b>	Yes
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<b>design of the short-circuit trip</b>	magnetic
<b>Installation/ mounting/ dimensions</b>	
<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>	119 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>	<ul style="list-style-type: none"> <li>0 mm</li> <li>30 mm</li> <li>30 mm</li> <li>9 mm</li> <li>30 mm</li> <li>30 mm</li> <li>9 mm</li> <li>30 mm</li> <li>30 mm</li> <li>9 mm</li> <li>30 mm</li> <li>30 mm</li> <li>9 mm</li> <li>50 mm</li> <li>50 mm</li> <li>0 mm</li> <li>30 mm</li> <li>0 mm</li> <li>50 mm</li> <li>50 mm</li> <li>0 mm</li> <li>30 mm</li> <li>0 mm</li> </ul>
<b>Connections/ Terminals</b>	
<b>type of electrical connection</b>	
<ul style="list-style-type: none"> <li>● for main current circuit</li> </ul>	spring-loaded 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> <li>— finely stranded without core end processing</li> </ul> </li> <li>● for AWG cables for main contacts</li> </ul>	<ul style="list-style-type: none"> <li>2x (1 ... 10 mm<sup>2</sup>)</li> <li>2x (1 ... 6 mm<sup>2</sup>)</li> <li>2x (1 ... 6 mm<sup>2</sup>)</li> <li>2x (18 ... 8)</li> </ul>
<b>design of screwdriver shaft</b>	Diameter 3 mm
<b>size of the screwdriver tip</b>	3,0 x 0,5 mm
<b>Safety related data</b>	
product function suitable for safety function	Yes
<b>suitability for use</b>	
<ul style="list-style-type: none"> <li>● safety-related switching on</li> <li>● safety-related switching OFF</li> </ul>	<ul style="list-style-type: none"> <li>No</li> <li>Yes</li> </ul>
<b>service life maximum</b>	10 a
<b>test wear-related service life necessary</b>	Yes
<b>proportion of dangerous failures</b>	
<ul style="list-style-type: none"> <li>● with low demand rate according to SN 31920</li> </ul>	40 %



<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1FA20>

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

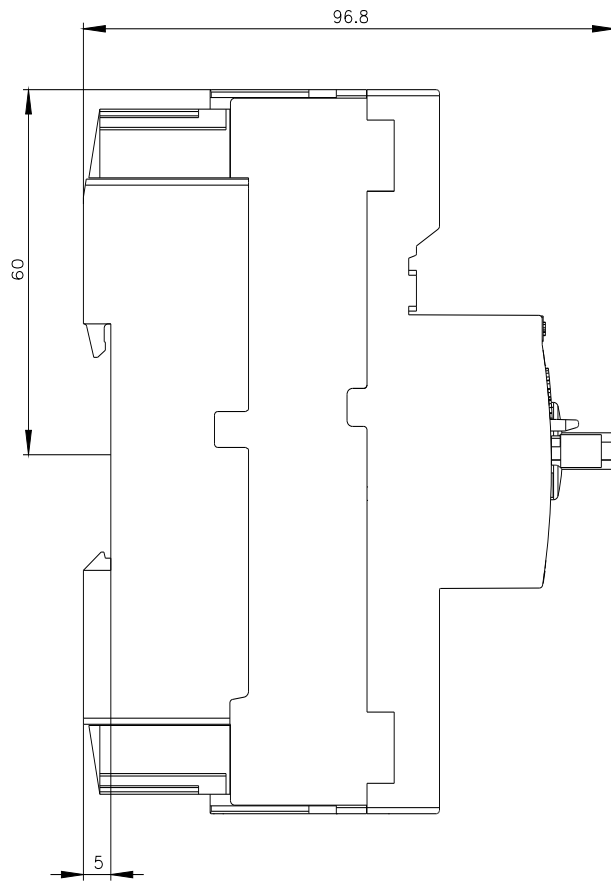
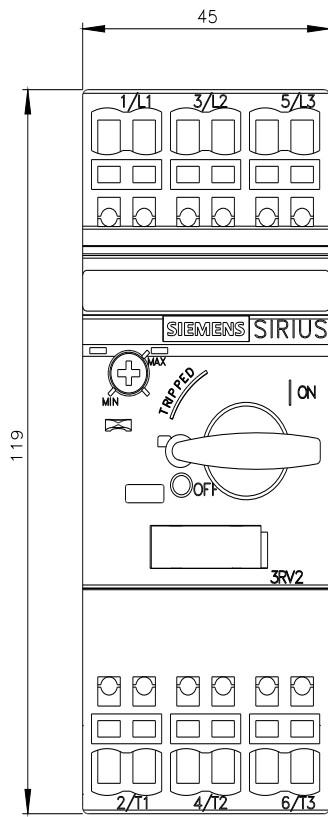
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-1FA20&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1FA20&lang=en)

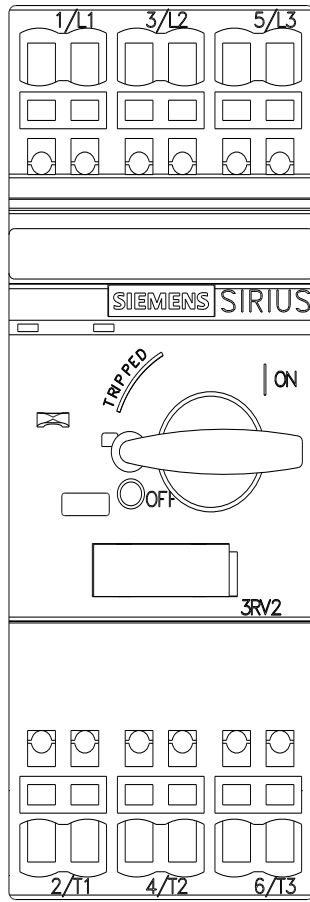
Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1FA20>

Characteristic curves

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last modified:

3/8/2026 ↻