



Circuit breaker size S0 for motor protection, CLASS 10 A-release 0.9...1.25 A N-release 16 A Spring-type terminal Standard switching capacity



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

### General technical data

size of the circuit-breaker	S0
size of contactor can be combined company-specific	S00, S0
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• 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
surge voltage resistance rated value	6 kV
shock resistance according to IEC 60068-2-27	25g / 11 ms
mechanical service life (operating cycles)	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
electrical endurance (operating cycles) typical	100 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1
Weight	0.4 kg

### Ambient conditions

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

### Environmental footprint

Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	75.078 kg
global warming potential [CO2 eq] during manufacturing	2.68 kg
global warming potential [CO2 eq] during sales	0.143 kg
global warming potential [CO2 eq] during operation	72.7 kg
global warming potential [CO2 eq] after end of life	-0.445 kg
Siemens Eco Profile (SEP)	Siemens EcoTech

Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	0.9 ... 1.25 A
type of voltage for main current circuit	AC
operating voltage	
• rated value	20 ... 690 V
• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	1.25 A
operational current	
• at AC-3 at 400 V rated value	1.25 A
• at AC-3e at 400 V rated value	1.25 A
operating power	
• at AC-3	
— at 230 V rated value	0.2 kW
— at 400 V rated value	0.4 kW
— at 500 V rated value	0.4 kW
— at 690 V rated value	0.8 kW
• at AC-3e	
— at 230 V rated value	0.2 kW
— at 400 V rated value	0.4 kW
— at 500 V rated value	0.4 kW
— at 690 V rated value	0.8 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Auxiliary circuit	
type of voltage for auxiliary and control circuit	AC/DC
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	0
Protective and monitoring functions	
product function	
• ground fault detection	No
• phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	
• 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	100 kA
• at AC at 690 V rated value	100 kA
operating short-circuit current breaking capacity (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	100 kA
• at 500 V rated value	100 kA
• at 690 V rated value	100 kA
response value current of instantaneous short-circuit trip unit	16 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	1.25 A
• at 600 V rated value	1.25 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
— at 460/480 V rated value	1 hp
— at 575/600 V rated value	0.5 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	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>	119 mm
<b>width</b>	45 mm
<b>depth</b>	97 mm
<b>required spacing</b>	
• with side-by-side mounting at the side	0 mm
• for grounded parts at 400 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for live parts at 400 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for grounded parts at 500 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for live parts at 500 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for grounded parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
• for live parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
Connections/ Terminals	
<b>type of electrical connection</b>	
• for main current circuit	spring-loaded terminals
<b>arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>type of connectable conductor cross-sections</b>	
• for main contacts	
— solid or stranded	2x (1 ... 10 mm <sup>2</sup> )
— finely stranded with core end processing	2x (1 ... 6 mm <sup>2</sup> )
— finely stranded without core end processing	2x (1 ... 6 mm <sup>2</sup> )
• for AWG cables for main contacts	2x (18 ... 8)
<b>design of screwdriver shaft</b>	Diameter 3 mm
<b>size of the screwdriver tip</b>	3,0 x 0,5 mm
Safety related data	
product function suitable for safety function	Yes
<b>suitability for use</b>	
• safety-related switching on	No
• safety-related switching OFF	Yes
<b>service life maximum</b>	10 a
<b>test wear-related service life necessary</b>	Yes
<b>proportion of dangerous failures</b>	
• with low demand rate according to SN 31920	40 %
• with high demand rate according to SN 31920	50 %
<b>B10 value with high demand rate according to SN 31920</b>	5 000
<b>failure rate [FIT] with low demand rate according to SN</b>	50 FIT

31920	
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
T1 value	
• for proof test interval or service life according to IEC 61508	10 a
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Display	
display version for switching status	Handle

#### Approvals Certificates

##### General Product Approval



For use in hazardous locations	Test Certificates	Maritime application
 IECEx	 ATEX	<a href="#">Special Test Certificate</a> <a href="#">Type Test Certificates/Test Report</a>

Maritime application	other
 DNV	 LRS



other	Railway	Environment
<a href="#">Confirmation</a> 	<a href="#">Special Test Certificate</a> 	<a href="#">Confirmation</a> 

Environment
<a href="#">Environmental Confirmations</a>

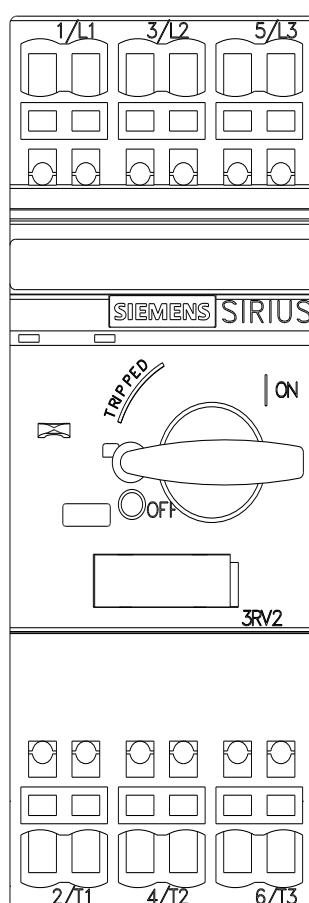
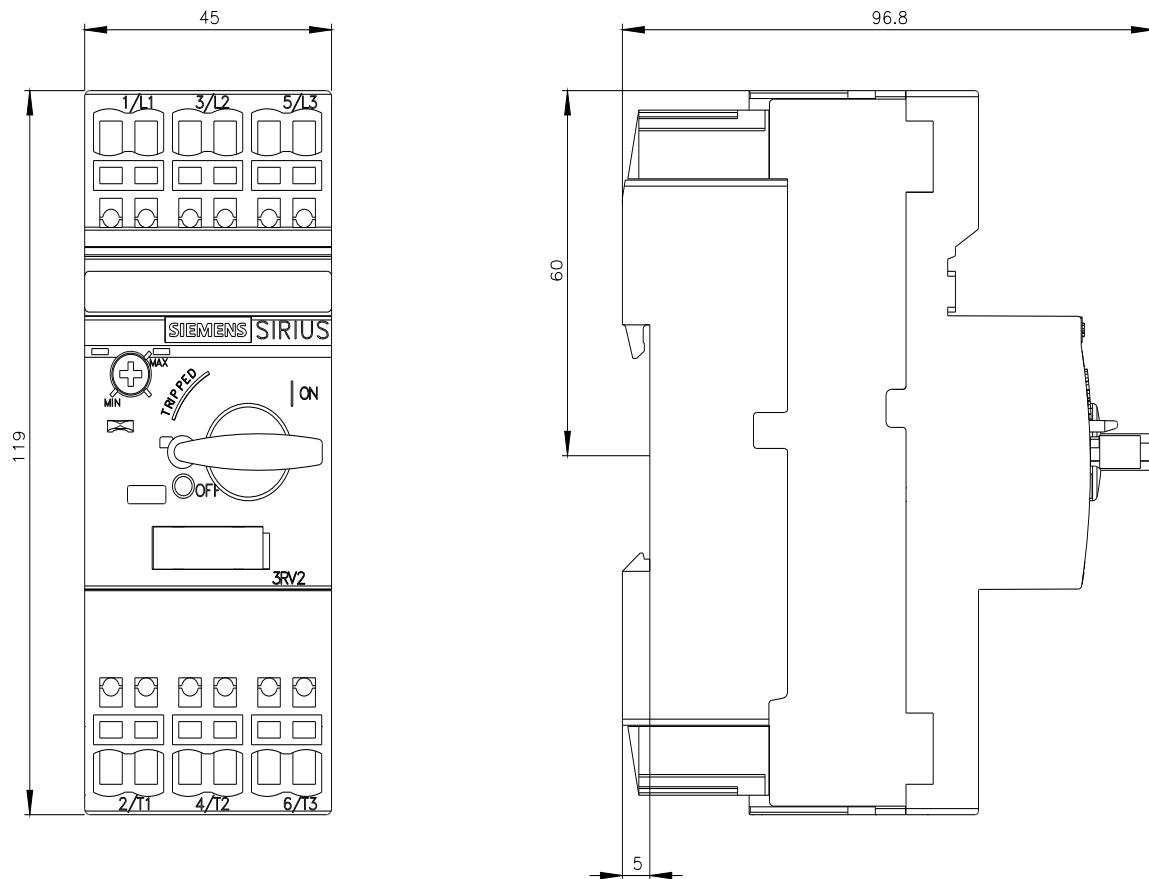
Further information
Information on the packaging <a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a>
Information- and Downloadcenter (Catalogs, Brochures,...) <a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a>
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Service&Support (Manuals, Certificates, Characteristics, FAQs,...) <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0KA20">https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0KA20</a>
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0KA20&amp;lang=en">http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0KA20&amp;lang=en</a>

Characteristic: Tripping characteristics,  $I^t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0KA20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-0KA20&objecttype=14&gridview=view1>





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