



Circuit breaker size S00 for transformer protection A-release 2.2...3.2 A N release 65 A screw terminal Standard switching capacity

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For transformer protection
product type designation	3RV2
<b>General technical data</b>	
Product equipment of circuit breaker for motor protection complete unit with protection device	Yes
size of the circuit-breaker	S00
size of contactor can be combined company-specific	S00, S0
product function disconnecter functionality	Yes
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
type of calculation of power loss current-dependent	quadratic
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
• in networks with ungrounded 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	
• on the front according to IEC 60529	IP20
• on the front	IP20
• of the terminal	IP20
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
continuous current rated value	3.2 A
Substance Prohibitance (day/month/year)	10/01/2009
SVHC substance name	Lead CAS-No. 7439-92-1
Net Weight	351 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
<b>temperature compensation</b>	-20 ... +60 °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>	2.2 ... 3.2 A
<b>type of voltage for main current circuit</b>	AC
<b>operating voltage</b>	
• rated value	690 V
• 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>	3.2 A
<b>operational current</b>	
• at AC-3 at 400 V rated value	3.2 A
• at AC-3e at 400 V rated value	3.2 A
<b>operating power</b>	
• at AC-3	
— at 230 V rated value	0.6 kW
— at 400 V rated value	1.1 kW
— at 500 V rated value	1.5 kW
— at 690 V rated value	2.2 kW
• at AC-3e	
— at 230 V rated value	0.6 kW
— at 400 V rated value	1.1 kW
— at 500 V rated value	1.5 kW
— at 690 V rated value	2.2 kW
<b>operating frequency</b>	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
<b>Auxiliary circuit</b>	
<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
<b>Protective and monitoring functions</b>	
<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>protection function thermal overload protection (ANSI 49)</b>	Yes
<b>maximum short-circuit current breaking capacity (I<sub>cu</sub>)</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	100 kA
• at AC at 690 V rated value	10 kA
<b>operating short-circuit current breaking capacity (I<sub>cs</sub>) at AC</b>	
• 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	10 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>	
• at 480 V rated value	3.2 A
• at 600 V rated value	3.2 A
<b>yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V rated value	0.1 hp
— at 230 V rated value	0.25 hp
• for 3-phase AC motor	
— at 200/208 V rated value	0.5 hp
— at 220/230 V rated value	0.75 hp
— at 460/480 V rated value	2 hp
— at 575/600 V rated value	2 hp
<b>UL File Number (CCN)</b>	E47705 (NLRV, NLRV7)

**Short-circuit protection**

<b>product function short circuit protection</b>	Yes
<b>design of the short-circuit trip</b>	magnetic
<b>design of the fuse link for IT network for short-circuit protection of the main circuit</b>	
• at 400 V	gL/gG 25 A
• at 500 V	gL/gG 32 A
• at 690 V	gL/gG 25 A

**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>Mounting method of circuit breaker for Transformer protection, Generator protection and system protection optional standard bar mounting</b>	Yes
<b>height</b>	97 mm
<b>width</b>	45 mm
<b>depth</b>	97 mm
<b>required spacing</b>	
• with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— backwards	0 mm
— upwards	50 mm
— at the side	30 mm
— downwards	50 mm
• for live parts	
— forwards	0 mm
— backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	30 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>product component removable terminal for auxiliary and control circuit</b>	No
<b>type of electrical connection</b>	
● for main current circuit	screw-type 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 (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
● for AWG cables for main contacts	2x (18 ... 14), 2x 12
<b>connectable conductor cross-section for main contacts</b>	
● solid or stranded	0.75 ... 4 mm <sup>2</sup>
● finely stranded with core end processing	0.5 ... 2.5 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section for main contacts</b>	18 ... 12
<b>tightening torque</b>	
● for main contacts with screw-type terminals	0.8 ... 1.2 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>	
● for main contacts	M3

#### 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 31920</b>	50 FIT
ISO 13849	
<b>device type according to ISO 13849-1</b>	3
<b>overdimensioning according to ISO 13849-2 necessary</b>	Yes
IEC 61508	
<b>safety device type according to IEC 61508-2</b>	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**

**Environmental Product Declaration**

- global warming potential [CO2 eq] / during manufacturing 1.98 kg
- global warming potential [CO2 eq] / during sales 0.134 kg
- global warming potential [CO2 eq] / during operation 72.7 kg
- global warming potential [CO2 eq] / after end of life -0.116 kg
- global warming potential [CO2 eq] / total 74.698 kg

**Environment**

**General Product Approval**

[Environmental Confirmations](#)



**General Product Approval**

**Test Certificates**



[Type Test Certificates/Test Report](#)

**Test Certificates**

**Maritime application**

[Special Test Certificate](#)



**Maritime application**

**other**

**Railway**



[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)



[Confirmation](#)

**Railway**

[Special Test Certificate](#)

**Further information**

**Information on the packaging**

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

**Information for data generation and storage**

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

**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?mlfb=3RV2411-1DA10>

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

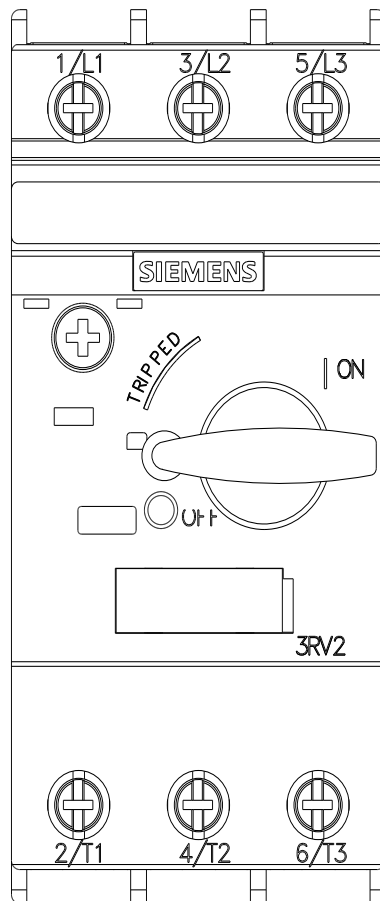
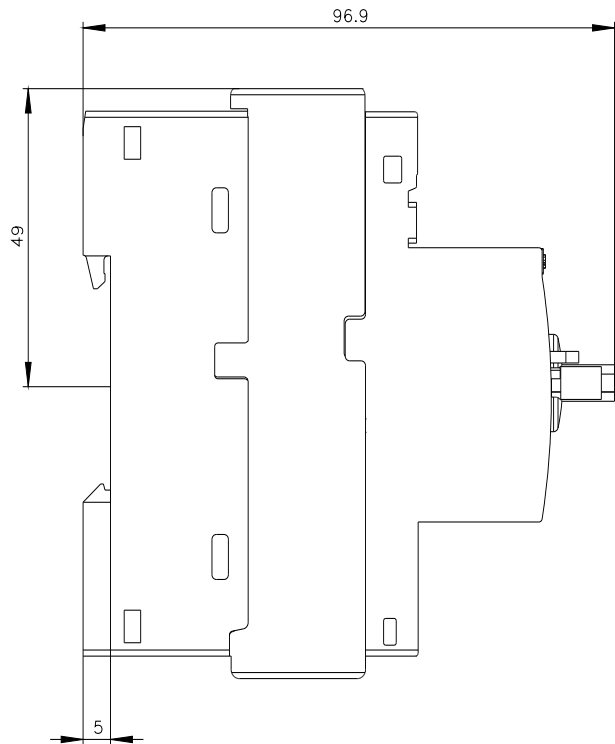
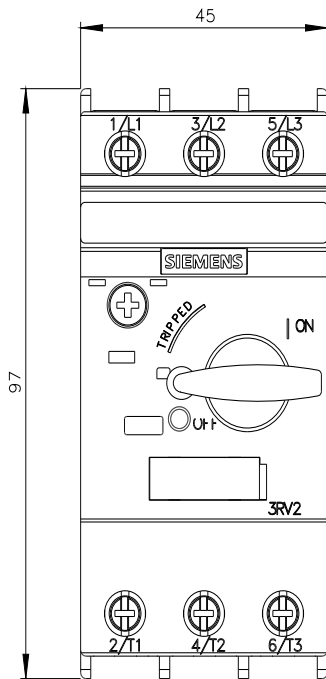
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-1DA10>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2411-1DA10&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2411-1DA10&lang=en)

**Cax online generator**

Characteristic curves





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