



Special type Circuit breaker size S0 for motor protection, CLASS 10 A-release 34...40 A N-release 480 A screw terminal Standard switching capacity Ambient temperature -50 °C 500 switching cycles

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor 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	S0
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	16.25 W
• at AC in hot operating state per pole	5.4 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	500
• of auxiliary contacts typical	500
electrical endurance (operating cycles) typical	500
reference code according to IEC 81346-2	Q
continuous current rated value	40 A
Substance Prohibitance (day/month/year)	10/01/2009
Net Weight	382 g
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m

<b>ambient temperature</b>	
• during operation	-50 ... +40 °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>	34 ... 40 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
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	40 A
<b>operational current</b>	
• at AC-3 at 400 V rated value	40 A
<b>operating power</b>	
• at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	22 kW
— at 690 V rated value	39 kW
<b>operating frequency</b>	
• at AC-3 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 (Icu)</b>	
• at AC at 240 V rated value	100 kA
• at AC at 400 V rated value	20 kA
• at AC at 500 V rated value	6 kA
• at AC at 690 V rated value	3 kA
<b>operating short-circuit current breaking capacity (Ics) at AC</b>	
• at 240 V rated value	100 kA
• at 400 V rated value	10 kA
• at 500 V rated value	3 kA
• at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	480 A
<b>Short-circuit protection</b>	
<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	gG 63 A
• at 500 V	gG 63 A
• at 690 V	gG 63 A
<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>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>	
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 70 mm</li> <li>— downwards 70 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 70 mm</li> <li>— at the side 30 mm</li> <li>— downwards 70 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 70 mm</li> <li>— downwards 70 mm</li> <li>— at the side 30 mm</li> </ul> </li> <li>• for grounded parts at 400 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>• for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>• for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>• for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>• for grounded parts at 690 V <ul style="list-style-type: none"> <li>— downwards 70 mm</li> <li>— upwards 70 mm</li> <li>— backwards 0 mm</li> <li>— at the side 30 mm</li> <li>— forwards 0 mm</li> </ul> </li> <li>• for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards 70 mm</li> <li>— upwards 70 mm</li> <li>— backwards 0 mm</li> <li>— at the side 30 mm</li> <li>— forwards 0 mm</li> </ul> </li> </ul>	
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	No
<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> </ul>	2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> ) 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>
<b>connectable conductor cross-section for main contacts</b>	
<ul style="list-style-type: none"> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul>	1 ... 10 mm <sup>2</sup> 1 ... 10 mm <sup>2</sup>
<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

IEC 61508

**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: 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
- global warming potential [CO2 eq] / total: 75.078 kg

**Environment**

**General Product Approval**

[Environmental Confirmations](#)



**General Product Approval**

**Test Certificates**



EG-Konf.



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

**Maritime application**



**other**

**Railway**

[Confirmation](#)

[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)



[Confirmation](#)

**Railway**

**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=3RV2021-4FA10-0BA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4FA10-0BA0>

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

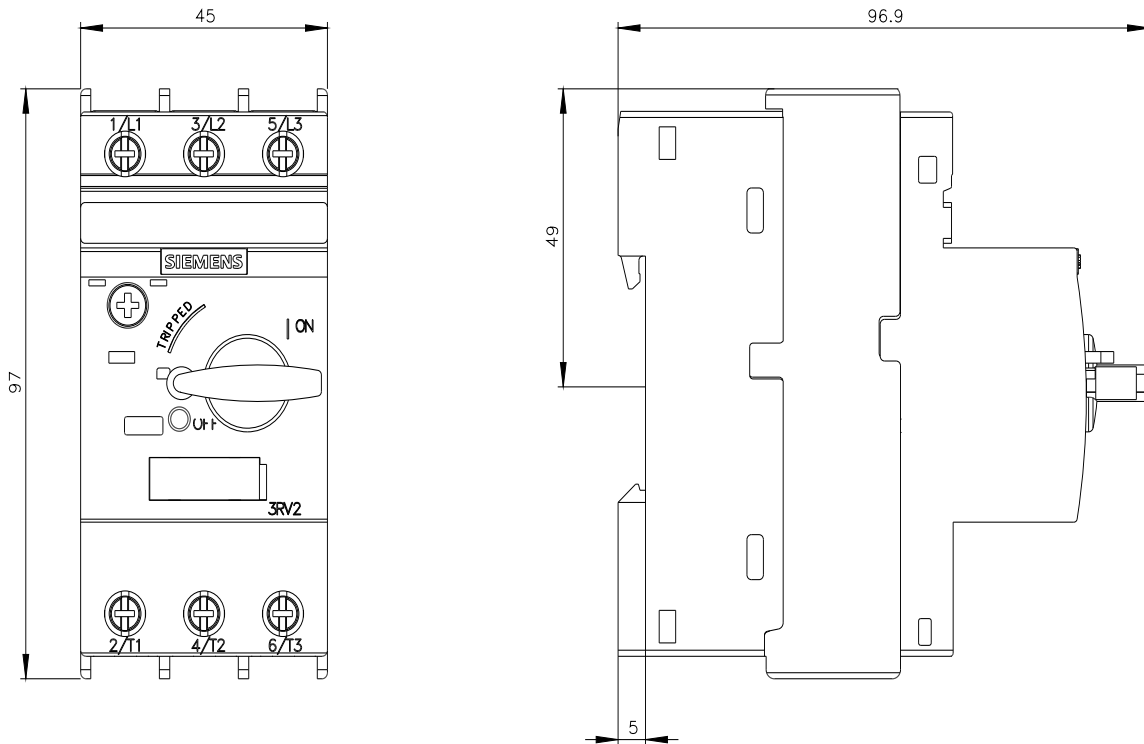
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-4FA10-0BA0&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4FA10-0BA0&lang=en)

**Cax online generator**

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4FA10-0BA0>

**Characteristic curves**

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





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