

Siemens  
EcoTech



Circuit breaker size S0 for motor protection, CLASS 10 A-release 0.45...0.63 A N-release 8.2 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
<b>General technical data</b>	
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	0.335 kg
<b>Ambient conditions</b>	
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 %
<b>Environmental footprint</b>	
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	0.45 ... 0.63 A
type of voltage for main current circuit	AC
operating voltage <ul style="list-style-type: none"> <li>rated value</li> <li>at AC-3 rated value maximum</li> <li>at AC-3e rated value maximum</li> </ul>	20 ... 690 V 690 V 690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	0.63 A
operational current <ul style="list-style-type: none"> <li>at AC-3 at 400 V rated value</li> <li>at AC-3e at 400 V rated value</li> </ul>	0.63 A 0.63 A
operating power <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> <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>	0.1 kW 0.2 kW 0.2 kW 0.3 kW 0.1 kW 0.2 kW 0.2 kW 0.3 kW
operating frequency <ul style="list-style-type: none"> <li>at AC-3 maximum</li> <li>at AC-3e maximum</li> </ul>	15 1/h 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 <ul style="list-style-type: none"> <li>ground fault detection</li> <li>phase failure detection</li> </ul>	No Yes
trip class	CLASS 10
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu) <ul style="list-style-type: none"> <li>at AC at 240 V rated value</li> <li>at AC at 400 V rated value</li> <li>at AC at 500 V rated value</li> <li>at AC at 690 V rated value</li> </ul>	100 kA 100 kA 100 kA 100 kA
operating short-circuit current breaking capacity (Ics) at AC <ul style="list-style-type: none"> <li>at 240 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>	100 kA 100 kA 100 kA 100 kA
response value current of instantaneous short-circuit trip unit	8.2 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor <ul style="list-style-type: none"> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul>	0.63 A 0.63 A
Category Control Number (CCN)	E156943 (NKJH, NKJH7)
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
Installation/ mounting/ dimensions	
mounting position	any
fastening method	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> </ul>	0 mm
<ul style="list-style-type: none"> <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> </ul>	30 mm 30 mm 9 mm
<ul style="list-style-type: none"> <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> </ul>	30 mm 30 mm 9 mm
<ul style="list-style-type: none"> <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> </ul>	30 mm 30 mm 9 mm
<ul style="list-style-type: none"> <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> </ul>	30 mm 30 mm 9 mm
<ul style="list-style-type: none"> <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> </ul>	50 mm 50 mm 0 mm 30 mm 0 mm
<ul style="list-style-type: none"> <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>	50 mm 50 mm 0 mm 30 mm 0 mm
<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>	2x (1 ... 10 mm <sup>2</sup> ) 2x (1 ... 6 mm <sup>2</sup> ) 2x (1 ... 6 mm <sup>2</sup> ) 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
<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>	No Yes
<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> <li>● with high demand rate according to SN 31920</li> </ul>	40 % 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

overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
T1 value	10 a
<ul style="list-style-type: none"> <li>for proof test interval or service life according to IEC 61508</li> </ul>	
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	



[KC](#)



General Product Approval	For use in hazardous locations	Test Certificates
		<a href="#">Type Test Certificates/Test Report</a>
		<a href="#">Special Test Certificate</a>

Maritime application					

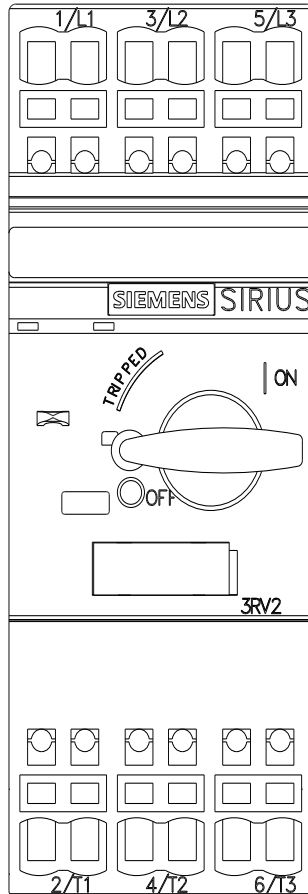
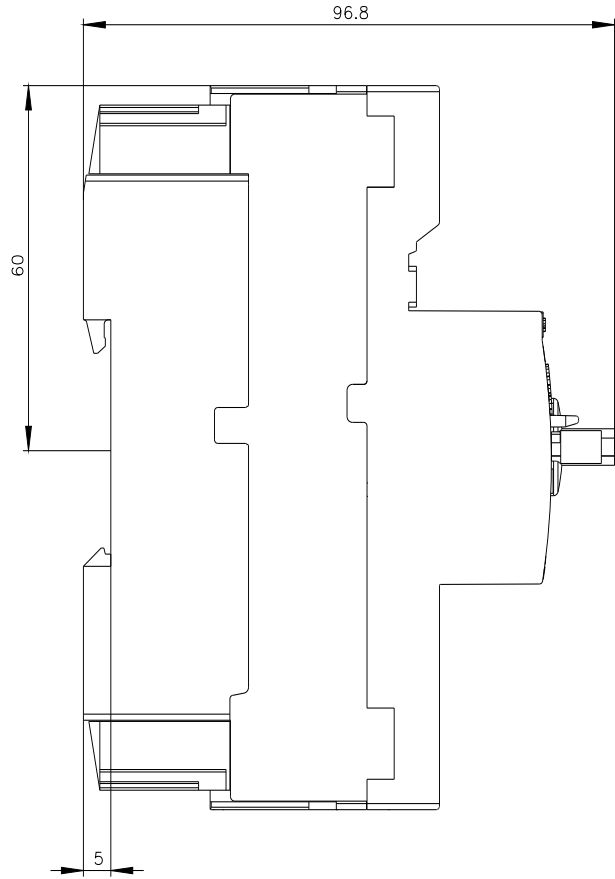
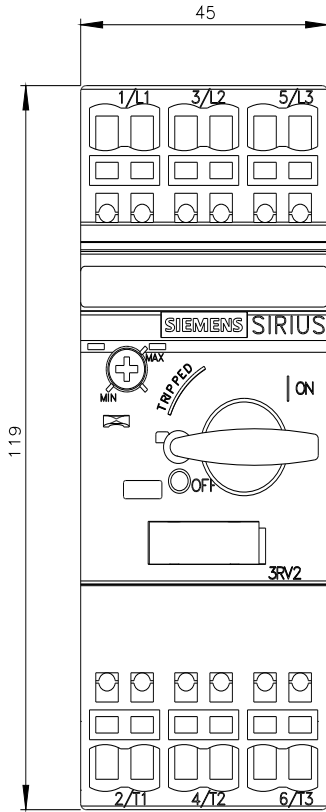
other	Railway				
<a href="#">Miscellaneous</a>		<a href="#">Confirmation</a>		<a href="#">Special Test Certificate</a>	<a href="#">Confirmation</a>

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

Further information
<a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">Information on the packaging</a> <a href="https://support.industry.siemens.com/cs/ww/en/view/109995012">Information for data generation and storage</a> Information- and Downloadcenter (Catalogs, Brochures,...) <a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a> Industry Mall (Online ordering system) <a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-0GA20">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-0GA20</a> Cax online generator <a href="https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RV2021-0GA20">https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RV2021-0GA20</a> Service&Support (Manuals, Certificates, Characteristics, FAQs,...) <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0GA20">https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0GA20</a> Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0GA20&amp;lang=en">https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0GA20&amp;lang=en</a> Characteristic: Tripping characteristics, I <sub>t</sub> , Let-through current <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0GA20/char">https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0GA20/char</a>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-0GA20&objecttype=14&gridview=view1>





last modified:

11/13/2025 