

Siemens  
EcoTech



Circuit breaker size S0 for motor protection, CLASS 10 A-release 27...32 A N-release 400 A Spring-type terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC



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	13.25 W
• at AC in hot operating state per pole	4.4 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 titanium zirconium oxide - 12626-81-2
Weight	0.443 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	27 ... 32 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	32 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>	32 A 32 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>	7.5 kW 15 kW 18.5 kW 30 kW  7.5 kW 15 kW 18.5 kW 30 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	
design of the auxiliary switch	transverse
type of voltage for auxiliary and control circuit	AC/DC
number of NC contacts for auxiliary contacts	1
number of NO contacts for auxiliary contacts	1
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15 <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 120 V</li> <li>• at 125 V</li> <li>• at 230 V</li> </ul>	2 A 0.5 A 0.5 A 0.5 A
operational current of auxiliary contacts at DC-13 <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 60 V</li> </ul>	1 A 0.15 A
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 (I <sub>cu</sub> ) <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 55 kA 10 kA 4 kA
operating short-circuit current breaking capacity (I <sub>cs</sub> ) 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 25 kA 5 kA 2 kA
response value current of instantaneous short-circuit trip unit	400 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>	32 A 32 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> <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> </ul> </li> </ul>	2 hp 5 hp 7.5 hp 10 hp 20 hp
<b>contact rating of auxiliary contacts according to UL</b>	C300 / R300
<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</b>	
<ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400$ A)
<b>design of the fuse link for IT network for short-circuit protection of the main circuit</b>	
<ul style="list-style-type: none"> <li>• at 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	gL/gG 63 A gL/gG 63 A gL/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>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>	0 mm 30 mm 30 mm 9 mm 30 mm 30 mm 9 mm 30 mm 30 mm 9 mm 50 mm 50 mm 0 mm 30 mm 0 mm 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

• for auxiliary and control 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>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid or stranded	2x (0.5 ... 2.5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> )
— finely stranded without core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> )
• for AWG cables for auxiliary contacts	2x (20 ... 14)
<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 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
<b>T1 value</b>	
• for proof test interval or service life according to IEC 61508	10 a

Electrical Safety	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front

#### Display

display version for switching status	Handle
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#### Approvals Certificates

##### General Product Approval



[KC](#)



General Product Approval	For use in hazardous locations	Test Certificates	Maritime application
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[Special Test Certificate](#)




[Type Test Certificates/Test Report](#)



Maritime application	other
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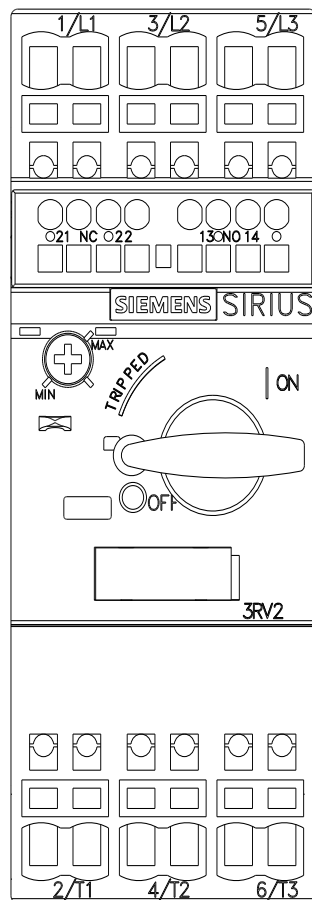
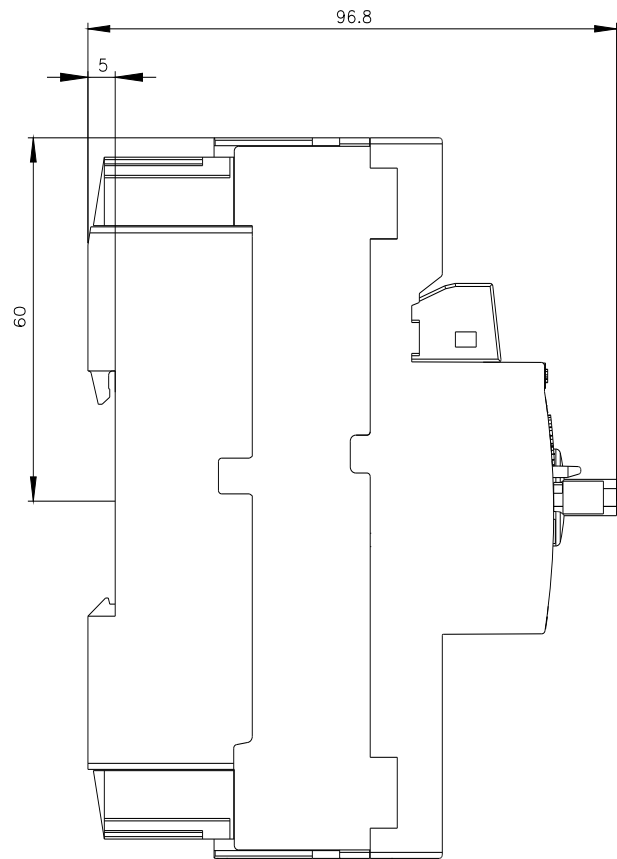
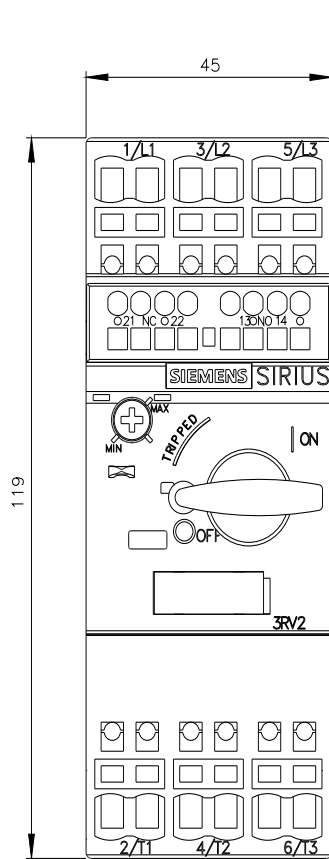


[Miscellaneous](#)

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
<p>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></p> <p>Information for data generation and storage  <a href="https://support.industry.siemens.com/cs/ww/en/view/109995012">https://support.industry.siemens.com/cs/ww/en/view/109995012</a></p> <p>Information- and Downloadcenter (Catalogs, Brochures,...)  <a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a></p> <p>Industry Mall (Online ordering system)  <a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-4EA25">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-4EA25</a></p> <p>Cax online generator  <a href="http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RV2021-4EA25">http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RV2021-4EA25</a></p> <p>Service&amp;Support (Manuals, Certificates, Characteristics, FAQs,...)  <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA25">https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA25</a></p> <p>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=3RV2021-4EA25&amp;lang=en">http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4EA25&amp;lang=en</a></p> <p>Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current  <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA25/char">https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA25/char</a></p> <p>Further characteristics (e.g. electrical endurance, switching frequency)  <a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&amp;mlfb=3RV2021-4EA25&amp;objecttype=14&amp;gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&amp;mlfb=3RV2021-4EA25&amp;objecttype=14&amp;gridview=view1</a></p>





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