

Siemens
EcoTech



Circuit breaker size S00 for transformer protection A-release 0.18...0.25 A N-release 5.2 A Spring-type terminal Standard switching capacity

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For transformer protection
product type designation	3RV2
General technical data	
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	5.5 W
• at AC in hot operating state per pole	1.8 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	0.25 A
Substance Prohibitance (day/month/year)	10/01/2009
SVHC substance name	Lead CAS-No. 7439-92-1
Net Weight	300 g
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
temperature compensation	-20 ... +60 °C
relative humidity during operation	10 ... 95 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	0.18 ... 0.25 A
type of voltage for main current circuit	AC

operating voltage	
• 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
operating frequency rated value	50 ... 60 Hz
operational current rated value	0.25 A
operational current	
• at AC-3 at 400 V rated value	0.25 A
• at AC-3e at 400 V rated value	0.25 A
operating power	
• at AC-3	
— at 230 V rated value	0 kW
— at 400 V rated value	0.1 kW
— at 500 V rated value	0.1 kW
— at 690 V rated value	0.1 kW
• at AC-3e	
— at 230 V rated value	0 kW
— at 400 V rated value	0.1 kW
— at 500 V rated value	0.1 kW
— at 690 V rated value	0.1 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
protection function thermal overload protection (ANSI 49)	Yes
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	5.2 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	0.25 A
• at 600 V rated value	0.25 A
UL File Number (CCN)	E47705 (NLRV, NLRV7)
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
Mounting method of circuit breaker for Transformer	Yes

protection, Generator protection and system protection optional standard bar mounting	
height	106 mm
width	45 mm
depth	97 mm
required spacing	
• 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	
product component removable terminal for auxiliary and control circuit	No
type of electrical connection	
• for main current circuit	spring-loaded terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections	

• for main contacts — solid or stranded — finely stranded with core end processing — finely stranded without core end processing • for AWG cables for main contacts	2x (0,5 ... 4 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (20 ... 12)
connectable conductor cross-section for main contacts	
• solid or stranded • finely stranded with core end processing • finely stranded without core end processing	0.5 ... 4 mm ² 0.5 ... 2.5 mm ² 0.5 ... 2.5 mm ²
AWG number as coded connectable conductor cross section for main contacts	20 ... 12
design of screwdriver shaft	Diameter 3 mm
size of the screwdriver tip	3,0 x 0,5 mm

Safety related data

product function suitable for safety function	Yes
suitability for use	
• safety-related switching on • safety-related switching OFF	No Yes
service life maximum	10 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
• with low demand rate according to SN 31920 • with high demand rate according to SN 31920	40 % 50 %
B10 value with high demand rate according to SN 31920	5 000
failure rate [FIT] with low demand rate according to SN 31920	50 FIT

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
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Approvals Certificates

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

Environment General Product Approval

[Environmental Confirmations](#)



General Product Approval Test Certificates



[Special Test Certificate](#)

Test Certificates	Maritime application				
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[Type Test Certificates/Test Report](#)



Maritime application	other			Railway	
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[Miscellaneous](#)

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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=3RV2411-0CA20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-0CA20>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2411-0CA20&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2411-0CA20>

Characteristic curves

https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>



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