



circuit breaker frame size S00 for transformer protection with approval circuit breaker UL 489, CSA C22.2 no. 5-02 thermal overload release 2 A short-circuit release 42 A screw terminal standard switching capacity

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For transformer protection according to UL 489/CSA C22.2 No.5
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
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	IP00
shock resistance according to IEC 60068-2-27	25 g / 11 ms (rectangular impulse and sine pulse)
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	2 A
Substance Prohibitance (day/month/year)	10/01/2009
SVHC substance name	Lead CAS-No. 7439-92-1
Net Weight	493 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
type of voltage for main current circuit	AC
operating voltage	
• rated value	690 V
• rated value	20 ... 690 V

<ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
<ul style="list-style-type: none"> • at AC-3e rated value maximum 	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	2 A
operational current	
<ul style="list-style-type: none"> • at AC-3 at 400 V rated value 	2 A
<ul style="list-style-type: none"> • at AC-3e at 400 V rated value 	2 A
operating power	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value 	0.4 kW 0.8 kW 0.8 kW 1.1 kW
<ul style="list-style-type: none"> • at AC-3e <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value 	0.4 kW 0.8 kW 0.8 kW 1.1 kW
operating frequency	
<ul style="list-style-type: none"> • at AC-3 maximum 	15 1/h
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • ground fault detection 	No
<ul style="list-style-type: none"> • phase failure detection 	No
design of the overload release	thermal
protection function thermal overload protection (ANSI 49)	Yes
maximum short-circuit current breaking capacity (Icu)	
<ul style="list-style-type: none"> • at AC at 240 V rated value 	100 kA
<ul style="list-style-type: none"> • at AC at 400 V rated value 	100 kA
<ul style="list-style-type: none"> • at AC at 500 V rated value 	100 kA
<ul style="list-style-type: none"> • at AC at 690 V rated value 	10 kA
<ul style="list-style-type: none"> • at 480 AC Y/277 V according to UL 489 rated value 	65 kA
operating short-circuit current breaking capacity (Ics) at AC	
<ul style="list-style-type: none"> • at 240 V rated value 	100 kA
<ul style="list-style-type: none"> • at 400 V rated value 	100 kA
<ul style="list-style-type: none"> • at 500 V rated value 	100 kA
<ul style="list-style-type: none"> • at 690 V rated value 	10 kA
response value current of instantaneous short-circuit trip unit	42 A
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the fuse link for IT network for short-circuit protection of the main circuit	
<ul style="list-style-type: none"> • at 400 V 	gG 25 A
<ul style="list-style-type: none"> • at 500 V 	gG 25 A
<ul style="list-style-type: none"> • at 690 V 	gG 20 A
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 protection, Generator protection and system protection optional standard bar mounting	Yes
height	144 mm
width	45 mm













depth	97 mm
required spacing	
<ul style="list-style-type: none"> ● for grounded parts at 400 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 30 mm ● for live parts at 400 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 30 mm ● for grounded parts at 500 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 30 mm ● for live parts at 500 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 30 mm ● for grounded parts at 690 V <ul style="list-style-type: none"> — downwards 70 mm — upwards 70 mm — backwards 0 mm — at the side 30 mm — forwards 0 mm ● for live parts at 690 V <ul style="list-style-type: none"> — downwards 70 mm — upwards 70 mm — backwards 0 mm — at the side 30 mm — forwards 0 mm 	

Connections/ Terminals	
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product component removable terminal for auxiliary and control circuit	No
type of electrical connection	
<ul style="list-style-type: none"> ● for main current circuit 	screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> ● for main contacts <ul style="list-style-type: none"> — solid or stranded 1 ... 10 mm², max. 2x 10 mm² — finely stranded with core end processing 1 ... 16 mm², max. 6 + 16 mm² ● for AWG cables for main contacts 2x (14 ... 10) 	
connectable conductor cross-section for main contacts	
<ul style="list-style-type: none"> ● solid or stranded 1 ... 10 mm² ● finely stranded with core end processing 1 ... 16 mm² 	
AWG number as coded connectable conductor cross section for main contacts	14 ... 10
tightening torque	
<ul style="list-style-type: none"> ● for main contacts with screw-type terminals 	2.5 ... 3 N·m
design of screwdriver shaft	Diameter 5 to 6 mm
size of the screwdriver tip	Pozidriv size 2
design of the thread of the connection screw	
<ul style="list-style-type: none"> ● for main contacts 	M4

Safety related data	
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product function suitable for safety function	Yes
suitability for use	
<ul style="list-style-type: none"> ● 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	40 %
• with high demand rate according to SN 31920	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
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 Special Test Certificate
Maritime application	other
 	Confirmation Miscellaneous Confirmation Miscellaneous
other	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=3RV2811-1BD10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2811-1BD10>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2811-1BD10&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2811-1BD10>

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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