

Siemens
EcoTech



circuit breaker frame size S00 for system protection with approval circuit breaker UL 489, CSA C22.2 no. 5-02 thermal overload release 12.5 A short-circuit release 163 A screw terminal standard switching capacity



product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For system protection according to UL 489/CSA C22.2 No. 5
product type designation	3RV2
General technical data	
size of the circuit-breaker	S00
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	9.25 W
• at AC in hot operating state per pole	3.1 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	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
Substance Prohibitance (Date)	10/01/2009
Weight	498 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
relative humidity during operation	10 ... 95 %
Environmental footprint	
Environmental Product Declaration (EPD)	Yes
global warming potential [CO2 eq] total	74.698 kg
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
Siemens Eco Profile (SEP)	Siemens EcoTech
Main circuit	
number of poles for main current circuit	3

type of voltage for main current circuit	AC
operating voltage	
• 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	12.5 A
operational current	
• at AC-3 at 400 V rated value	12.5 A
• at AC-3e at 400 V rated value	12.5 A
operating power	
• at AC-3	
— at 230 V rated value	3 kW
— at 400 V rated value	5.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	7.5 kW
• at AC-3e	
— at 230 V rated value	3 kW
— at 400 V rated value	5.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	7.5 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	No
design of the overload release	thermal
maximum short-circuit current breaking capacity (I_{cu})	
• 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	42 kA
• at AC at 690 V rated value	6 kA
• at 480 AC Y/277 V according to UL 489 rated value	65 kA
operating short-circuit current breaking capacity (I_{cs}) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	100 kA
• at 500 V rated value	42 kA
• at 690 V rated value	4 kA
response value current of instantaneous short-circuit trip unit	163 A
UL/CSA ratings	
Category Control Number (CCN)	E156943 (NKJH, NKJH7)
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	
• at 400 V	gG 63 A
• at 500 V	gG 50 A
• at 690 V	gG 40 A
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
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

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) 	
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

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	
<ul style="list-style-type: none"> ● 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	10 a
<ul style="list-style-type: none"> for proof test interval or service life according to IEC 61508 	
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	



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General Product Approval	Test Certificates	Maritime application	other
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[Miscellaneous](#)

other	Railway	Environment
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[Confirmation](#)



[Special Test Certificate](#)



Siemens EcoTech



Environment

[Environmental Confirmations](#)

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=3RV2711-1KD10>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2711-1KD10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2711-1KD10>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2711-1KD10&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2711-1KD10/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2711-1KD10&objecttype=14&gridview=view1>





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