



circuit breaker frame size S0 for motor protection, Class 10 thermal release 0.7...1 A short-circuit release 13 A screw terminal standard switching capacity with transverse auxiliary switch 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	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 CAS-No. 7439-92-1
Net Weight	363 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 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	0.7 ... 1 A
type of voltage for main current circuit	AC
operating voltage	
• 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	1 A
operational current	
<ul style="list-style-type: none"> ● at AC-3 at 400 V rated value 	1 A
<ul style="list-style-type: none"> ● at AC-3e at 400 V rated value 	1 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 	0.2 kW 0.3 kW 0.4 kW 0.6 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 	0.2 kW 0.3 kW 0.4 kW 0.6 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

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"> ● at 24 V 	2 A
<ul style="list-style-type: none"> ● at 120 V 	0.5 A
<ul style="list-style-type: none"> ● at 125 V 	0.5 A
<ul style="list-style-type: none"> ● at 230 V 	0.5 A
operational current of auxiliary contacts at DC-13	
<ul style="list-style-type: none"> ● at 24 V 	1 A
<ul style="list-style-type: none"> ● at 60 V 	0.15 A

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 	Yes
trip class	CLASS 10
design of the overload release	thermal
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 	100 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 	100 kA
response value current of instantaneous short-circuit trip unit	13 A

UL/CSA ratings

full-load current (FLA) for 3-phase AC motor	
<ul style="list-style-type: none"> ● at 480 V rated value 	1 A
<ul style="list-style-type: none"> ● at 600 V rated value 	1 A
yielded mechanical performance [hp]	
<ul style="list-style-type: none"> ● for 3-phase AC motor <ul style="list-style-type: none"> — at 575/600 V rated value 	0.5 hp

contact rating of auxiliary contacts according to UL	C300 / R300	
UL File Number (CCN)	E47705 (NLRV, NLRV7), E156943 (NKJH, NKJH7)	
Short-circuit protection		
product function short circuit protection	Yes	
design of the short-circuit trip	magnetic	
design of the fuse link	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I _k < 400 A)	
<ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required 		
Installation/ mounting/ dimensions		
mounting position	any	
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715	
height	97 mm	
width	45 mm	
depth	97 mm	
required spacing	<ul style="list-style-type: none"> with side-by-side mounting at the side <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 9 mm for live parts at 400 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 9 mm for grounded parts at 500 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 9 mm for live parts at 500 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 9 mm for grounded parts at 690 V <ul style="list-style-type: none"> — downwards 50 mm — upwards 50 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 50 mm — upwards 50 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 for auxiliary and control circuit screw-type terminals
arrangement of electrical connectors for main current circuit		
type of connectable conductor cross-sections		<ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> — solid or stranded 2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²) — finely stranded with core end processing 2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm² for AWG cables for main contacts 2x (16 ... 12), 2x (14 ... 8)
type of connectable conductor cross-sections		

<ul style="list-style-type: none"> for AWG cables for auxiliary contacts 	2x (20 ... 16), 2x (18 ... 14)
tightening torque	
<ul style="list-style-type: none"> for main contacts with screw-type terminals 	2 ... 2.5 N·m
<ul style="list-style-type: none"> for auxiliary contacts with screw-type terminals 	0.8 ... 1.2 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
<ul style="list-style-type: none"> of the auxiliary and control contacts 	M3

Safety related data

product function suitable for safety function	Yes
suitability for use	
<ul style="list-style-type: none"> safety-related switching on 	No
<ul style="list-style-type: none"> safety-related switching OFF 	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 	40 %
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> 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

<ul style="list-style-type: none"> global warming potential [CO2 eq] / during manufacturing 	2.68 kg
<ul style="list-style-type: none"> global warming potential [CO2 eq] / during sales 	0.143 kg
<ul style="list-style-type: none"> global warming potential [CO2 eq] / during operation 	72.7 kg
<ul style="list-style-type: none"> global warming potential [CO2 eq] / after end of life 	-0.445 kg
<ul style="list-style-type: none"> global warming potential [CO2 eq] / total 	75.078 kg

Environment General Product Approval



[Environmental Con-
firmations](#)



General Product Approval For use in hazardous locations



Test Certificates Maritime application

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Maritime application

other



[Miscellaneous](#)



[Confirmation](#)

[Miscellaneous](#)

Railway

[Special Test Certificate](#)

[Confirmation](#)

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=3RV2021-0JA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0JA15>

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

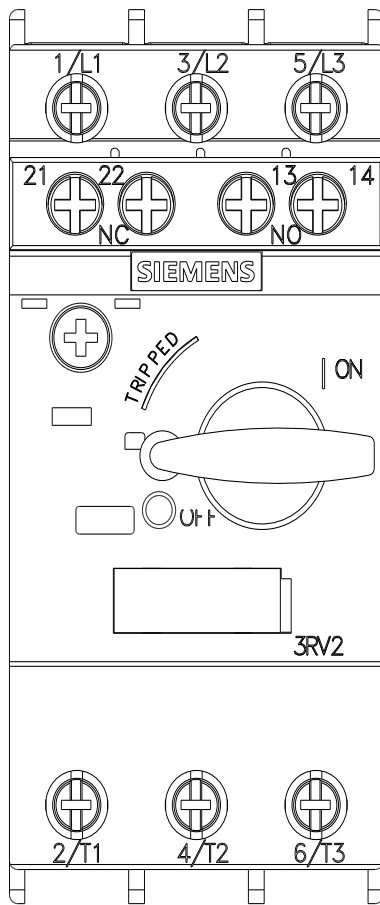
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0JA15&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-0JA15>

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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