SIEMENS

Data sheet 3RV2011-1CA10



Circuit breaker size S00 for motor protection, CLASS 10 A-release 1.8...2.5 A N-release 33 A screw terminal Standard switching capacity

product designation For motor protection	product brand name	SIRIUS
product type designation General technical data size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch yes power loss [W] for rated value of the current • at AC in hot operating state • at AC in hot operating state per pole 1 at AC in hot operating state per pole 2.4 W insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value surge voltage resistance rated value 690 V surge voltage 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 type of protection according to ATEX directive 2014/34/EU Ext I(2) GD certificate of suitability according to ATEX directive 2014/34/EU Ext I(2) GD certificate of suitability according to EC 81346-2 Q Substance Prohibitance (Date) 10/01/2009 SVHC substance name Biel - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature • during operation • during storage • during transport - 50 +80 °C • during transport - 50 +80 °C • during transport - 50 +80 °C - during torage - a during torage - rated value - rated value	product designation	Circuit breaker
size of the circuit-breaker size of contactor can be combined company-specific size of contact can be conta	design of the product	For motor protection
size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch Power loss [W] for rated value of the current • at AC in hot operating state • at AC in hot operating state • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value surge voltage resistance rated value shock resistance according to IEC 60068-2-27 mechanical service life (operating cycles) • of the main contacts typical of auxiliary contacts typical 100 000 electrical endurance (operating cycles) typical lectrical endurance (operating oxcles) typical electrical endurance (operating to ATEX directive 2014/34/EU reference code according to IEC 81346-2 Substance Prohibitance (Date) SVHC substance Prohibitance (Date) SVHC substance name Ambient conditions installation altitude at height above sea level maximum 4 during operation 4 during storage 5 0 +80 °C elduring transport 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 operating voltage 1 according to the current-dependent overload release 0 operating voltage 1 according to the current-dependent overload release 0 operating voltage 1 according to the current-dependent overload release 0 operating voltage 1 according to the current-dependent overload release 0 operating voltage 1 according to the current-dependent overload release 0 operating voltage 1 according to the current of the current-dependent overload release 0 operating voltage 1 according to the current of the current-dependent overload release 0 operating voltage 1 according to the current of the current-dependent overload release 0 operating voltage 1 according to the current of the current-dependent overload release 0 operating voltage 1 according to the current of the current-dependent overload release 0 operating voltage 1 according to the current o	· · · · · · · · · · · · · · · · · · ·	3RV2
size of contactor can be combined company-specific product extension auxiliary switch power loss [W] for rated value of the current • at AC in hot operating state • at AC in hot operating state per pole unsulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value surge voltage resistance rated value surge voltage resistance rated value 6 6 kV shock resistance according to IEC 60068-2-27 mechanical service life (operating cycles) • of the main contacts typical • of auxiliary contacts typical type of protection according to ATEX directive 2014/34/EU EX II (2) GD certificate of suitability according to ATEX directive 2014/34/EU pmT 02 ATEX F 001 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Bilei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport - 20 +60 °C - 40 uring transport relative humidity during operation Main circuit number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release • operating voltage • rated value	General technical data	
product extension auxiliary switch power loss [W] for rated value of the current at AC in hot operating state at AC in hot operating state pole 2.4 W insulation voltage with degree of pollution 3 at AC rated value 690 V surge voltage resistance rated value shock resistance according to IEC 60068-2-27 25g / 11 ms mechanical service life (operating cycles) of the main contacts typical for of the main contacts typical of protection according to ATEX directive 2014/34/EU Ext II (2) GD certificate of suitability according to ATEX directive 2014/34/EU Certificate of suitability according to ATEX directive 2014/34/EU Certificate of suitability according to ATEX directive 2014/34/EU SyHC substance name Blei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation during storage of during transport elative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value a current cancer a current of the current-dependent overload release operating voltage rated value 20 690 V	size of the circuit-breaker	S00
power loss [W] for rated value of the current • at AC in hot operating state • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value shock resistance according to IEC 60068-2-27 25g / 11 ms mechanical service life (operating cycles) • of the main contacts typical • of auxiliary contacts typical lectrical endurance (operating cycles) typical electrical endurance (operating cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU purply of protection according to ATEX directive 2014/34/EU purply of protection according to BC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Blei - 7439-92-1 Ambient conditions Installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value 2 0 690 V	size of contactor can be combined company-specific	S00, S0
at AC in hot operating state at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value shock resistance according to IEC 60068-2-27 mechanical service life (operating cycles) of at main contacts typical of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU preference code according to IEC 81346-2 Qubstance Prohibitance (Date) SVHC substance name Ambient conditions installation altitude at height above sea level maximum ambient temperature of during storage of during storage of during storage of during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage or rated value at AC in hot operating search value and in the current-dependent overload release operating voltage or rated value 2.4 W 1.00 000 2.55 W 2.55 W 2.6 W 2.6 W 2.6 W 2.7 W 2.7 W 2.8 W 3.8 W 3.8 W 3.8 W 3.8 W 3.9 W 4.8 W 3.8 W 3.9 W 4.8 W 4.8 W 5.9 W 6.9	product extension auxiliary switch	Yes
at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value shock resistance according to IEC 60068-2-27 before mechanical service life (operating cycles) of the main contacts typical of auxillary contacts typical of auxillary contacts typical type of protection according to ATEX directive 2014/34/EU pertificate of suitability according to BTEX directive 2014/34/EU pertificate of suitability according to ATEX directive 2014/34/EU pertificate	power loss [W] for rated value of the current	
insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value shock resistance according to IEC 60068-2-27 gethanical service life (operating cycles) of the main contacts typical of auxillary contacts typical electrical endurance (operating cycles) typical type of protection according to ATEX directive 2014/34/EU ertificate of suitability according to ATEX directive 2014/34/EU purificate of suitability according to EC 81346-2 Q Substance Prohibitance (Date) SyHC substance name Biei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature olduring operation olduring storage olduring transport relative humidity during operation number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage or rated value 6 kV 25g / 11 ms 100 000 100 000 100 000 100 000 100 000 EXII (2) GD DMT 02 ATEX F 001 EX II (2) GD DMT 02 ATEX F 001 EX II (2) GD DMT 02 ATEX F 001 EX II (2) GD OUX	 at AC in hot operating state 	7.25 W
surge voltage resistance rated value shock resistance according to IEC 60068-2-27 25g / 11 ms mechanical service life (operating cycles) of the main contacts typical for auxiliary contacts typical of auxiliary contacts typical for oon type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU pm T02 ATEX F 001 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Blei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation of during storage of during transport current elative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value 6 kV 100 000 100 000 100 000 EX II (2) GD EX II (3) GD EX II (4) GD EX II (4	 at AC in hot operating state per pole 	2.4 W
shock resistance according to IEC 60068-2-27 mechanical service life (operating cycles) of the main contacts typical of auxiliary contacts typical electrical endurance (operating cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU perference code according to IEC 81346-2 Quuring treference code according to ATEX directive 2014/34/EU DMT 02 ATEX F 001 PMT 02 ATEX F	insulation voltage with degree of pollution 3 at AC rated value	690 V
mechanical service life (operating cycles) • of the main contacts typical • of auxiliary contacts typical electrical endurance (operating cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU DMT 02 ATEX F 001 reference code according to IEC 81346-2 Q SUbstance Prohibitance (Date) SVHC substance name Biel - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation -20 +60 °C • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value	surge voltage resistance rated value	6 kV
of the main contacts typical of auxiliary contacts typical electrical endurance (operating cycles) typical 100 000 type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU DMT 02 ATEX F 001 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 10/01/2009 SVHC substance name Blei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature o during operation during storage during transport eluring transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value 100 000 100 000 EXIT 100 000 EXIT 2 GD 100 000 100 000 EXIT 2 GD 100 000 100 000 EXIT 2 GD 100 000 100 00	shock resistance according to IEC 60068-2-27	25g / 11 ms
of auxiliary contacts typical electrical endurance (operating cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU DMT 02 ATEX F 001 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Blei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature o during operation during storage during storage during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value 100 000 EXII (2) GD DMT 02 ATEX F 001 EX II (2) GD DMT 02 ATEX F 001 10/01/2009 SVHC substance name Aleci - 7439-92-1 Ambient conditions 10/01/2009	mechanical service life (operating cycles)	
electrical endurance (operating cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU pMT 02 ATEX F 001 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Blei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value 100 000 EXII (2) GD EX II (2) GD EX	 of the main contacts typical 	100 000
type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU preference code according to IEC 81346-2 Substance Prohibitance (Date) SVHC substance name Blei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during storage during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value reference code according to ATEX directive 2014/34/EU DMT 02 ATEX F 001 To World A SHOW C A SUB TO WORLD A SHOW C - 20 +60 °C - 50 +80 °C - 50 +80 °C Telative humidity during operation 10 95 % Main circuit 1.8 2.5 A	of auxiliary contacts typical	100 000
certificate of suitability according to ATEX directive 2014/34/EU reference code according to IEC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Blei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release • rated value DMT 02 ATEX F 001 Q Q 20 BMT 02 ATEX F 001 10/01/2009 SVHC substance name 10/01/2009 Blei - 7439-92-1 Ambient conditions 2 000 m -20 +60 °C -50 +80 °C -50	electrical endurance (operating cycles) typical	100 000
reference code according to IEC 81346-2 Substance Prohibitance (Date) SVHC substance name Blei - 7439-92-1 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value 10//01/2009 10//01/2009 10//01/2009 10//01/2009 10//01/2009 10//01/2009 10//01/2009 10//01/2009 10//01/2009 2 0 690 V	type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
Substance Prohibitance (Date) SVHC substance name Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value 10/01/2009 Blei - 7439-92-1 Blei - 7439-92-1 2 000 m 2 000 m -20 +60 °C -20 +60 °C -50 +80 °C -6060 °C	certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
SVHC substance name Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value Blei - 7439-92-1 8 liei	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum ambient temperature during operation during storage during transport relative humidity during operation mumber of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value 2 000 m	Substance Prohibitance (Date)	10/01/2009
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value 2 000 m 2 0 +60 °C -50 +80 °C 10 95 % 1 1.8 2.5 A	SVHC substance name	Blei - 7439-92-1
ambient temperature • during operation • during storage • during transport -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value 20 690 V	Ambient conditions	
 during operation during storage during transport -50 +80 °C during transport -50 +80 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value 20 690 V 	installation altitude at height above sea level maximum	2 000 m
 during storage during transport du	ambient temperature	
● during transport relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value - contact - cont	during operation	-20 +60 °C
relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value 10 95 % 1.8 2.5 A 20 690 V	during storage	-50 +80 °C
Main circuit number of poles for main current circuit adjustable current response value current of the current- dependent overload release operating voltage • rated value 20 690 V	during transport	-50 +80 °C
number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value 20 690 V	relative humidity during operation	10 95 %
adjustable current response value current of the current- dependent overload release operating voltage • rated value 1.8 2.5 A 20 690 V	Main circuit	
dependent overload release operating voltage ● rated value 20 690 V	number of poles for main current circuit	3
• rated value 20 690 V		1.8 2.5 A
	operating voltage	
• at AC-3 rated value maximum 690 V	rated value	20 690 V
	 at AC-3 rated value maximum 	690 V
• at AC-3e rated value maximum 690 V	at AC-3e rated value maximum	690 V
operating frequency rated value 50 60 Hz	operating frequency rated value	50 60 Hz
operational current rated value 2.5 A	operational current rated value	2.5 A

operational current	
• at AC-3 at 400 V rated value	2.5 A
at AC-3e at 400 V rated value	2.5 A
operating power	
• at AC-3	
— at 230 V rated value	0.4 kW
— at 400 V rated value	0.75 kW
— at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW
• at AC-3e	
— at 230 V rated value	0.4 kW
— at 400 V rated value	0.75 kW
— at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW
operating frequency	
• at AC-3 maximum	15 1/h
at AC-3e maximum	15 1/h
Auxiliary circuit	
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	No
ground fault detection	No
phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
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	10 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	10 kA
response value current of instantaneous short-circuit trip unit	33 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	2.5 A
• at 600 V rated value	2.5 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 230 V rated value	0.17 hp
for 3-phase AC motor	
— at 200/208 V rated value	0.5 hp
— at 220/230 V rated value	0.5 hp
— at 460/480 V rated value	1 hp
— at 575/600 V rated value	1.5 hp
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	ag.ivao
• at 400 V	gL/gG 25 A
• at 500 V	gL/gG 25 A
• at 500 V	
	gL/gG 20 A
Installation/ mounting/ dimensions	any .
mounting position fastening method	any
	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	
with side-by-side mounting at the side	0 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	
type of electrical connection	
for main current circuit	screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections	
for main contacts	
— solid or stranded	2x (0,75 2,5 mm²), 2x 4 mm²
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
• for AWG cables for main contacts	2x (18 14), 2x 12
tightening torque	
for main 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	
for main contacts	M3
Safety related data	
proportion of dangerous failures	
with low demand rate according to SN 31920	50 %
with high demand rate according to SN 31920	50 %
failure rate [FIT] with low demand rate according to SN 31920	50 FIT
B10 value with high demand rate according to SN 31920	5 000
IEC 61508	
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 version for switching status

Approvals Certificates

General Product Approval







Confirmation



<u>KC</u>

General Product Approval

For use in hazardous locations

Test Certificates

Marine / Shipping







Special Test Certific-<u>ate</u>

Type Test Certificates/Test Report



Marine / Shipping











Miscellaneous

other

other

Railway

Environment

Confirmation



Confirmation

EPD Typ II/III (with life cylce assessment)

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RV2011-1CA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-1CA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1CA10

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

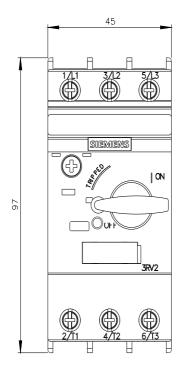
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2011-1CA10&lang=en

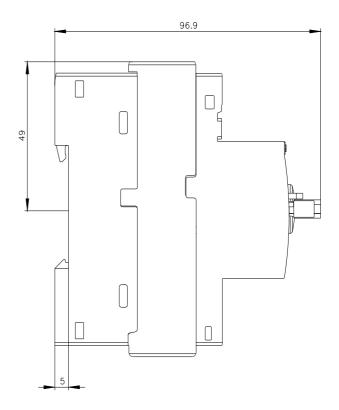
Characteristic: Tripping characteristics, I2t, Let-through current

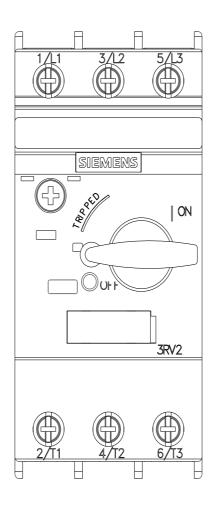
https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1CA10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2011-1CA10&objecttype=14&gridview=view1









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