SIEMENS

Data sheet 3RV2021-4EA10



Circuit breaker size S0 for motor protection, CLASS 10 A-release 27...32 A N-release 400 A screw terminal Standard switching capacity





size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch e at AC in hot operating state e 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 e of the main contacts typical of auxiliary contacts typical electrical endurance (operating cycles) typical electrical endurance (operating cycles) typical surge voltage resistance (Date) 8 VHC substance Prohibitance (Date) SVHC substance name Arabient conditions installation altitude at height above sea level maximum ambient temperature e during operation e during storage e during transport relative humidity during operation 10 95 % e SUB substance name 10 95 % 10 95 % 10 95 %	product brand name	SIRIUS
Servat type designation SRV2	product designation	Circuit breaker
size of the circuit-breaker size of the circuit-breaker solos Solo	design of the product	For motor protection
size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch prower loss [W] for rated value of the current	product type designation	3RV2
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 per pole 4.4 W insulation voltage with degree of pollution 3 at AC rated value 5 kW surge voltage resistance rated value 6 kW surge voltage resistance rated value 6 kW 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 **Ta39-92-1** Lead **Ta	General technical data	
product extension auxiliary switch power loss [W] for rated value of the current at AC in hot operating state e at AC in hot operating state peole at AC in hot operating state peole 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 of auxiliary contacts typical of auxiliary contacts typical lou 000 electrical endurance (operating cycles) typical ference code according to IEC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Lead 7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight o.379 kg Abbient conditions installation altitude at height above sea level maximum ambient temperature oluring operation during storage during storage during transport relative humidity during operation 10 95 % convironmental footprint global warming potential [CO2 eq] during manufacturing 2.68 kg global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during speration 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	size of the circuit-breaker	S0
power loss [W] for rated value of the current at AC in hot operating state at AC in hot operating state pole at AC in hot operating state per lossulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value 68 kV 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 of auxiliary contacts typical loo 000 electrical endurance (operating cycles) typical electrical endurance (operating cycles) typical electrical endurance (operating cycles) typical electrical endurance (Date) Substance Prohibitance (Date) Very SyHC substance name Lead - 7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg Ambient conditions installation altitude at height above sea level maximum ambient temperature olduring operation olduring storage olduring storage olduring storage olduring transport relative humidity during operation auxiliary auxiliar	size of contactor can be combined company-specific	S00, S0
• at AC in hot operating state • at AC in hot operating state per pole • at AC in hot operating state per pole • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value 680 V surge voltage resistance rated value 66 kV 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 100 000 • of auxiliary contacts typical 100 000 • of auxiliary contacts typical 100 000 • delectrical endurance (operating cycles) typical 100 000 gleectrical endurance (Operating cycles) typical 100 000 SVHC substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg Ambient conditions Installation altitude at height above sea level maximum 2 000 m ambient temperature • during operation • during storage • during storage • during storage • during transport 10 +60 °C • during transport 10 +60 °C • during transport 10 +60 °C • during transport 10 +95 % Environmental footprint global warming potential [CO2 eq] total global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during seles global warming potential [CO2 eq] after end of life -0.445 kg	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 25g / 11 ms mechanical service life (operating cycles) • of the main contacts typical • of auxiliary	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 25g / 11 ms mechanical service life (operating cycles) of the main contacts typical of auxiliary contacts typical 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 * 7439-92-1* Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg Anbient conditions installation altitude at height above sea level maximum ambient temperature during operation during storage 50 +60 °C during storage during transport -50 +80 °C relative humidity during operation 10 95 % Environmental footprint global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	 at AC in hot operating state 	13.25 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 of auxiliary contacts typical 100 000 electrical endurance (operating cycles) typical 100 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg Ambient conditions installation altitude at height above sea level maximum ambient temperature olduring operation during storage during transport elduring to preation - 20 +60 °C - 50 +80 °C - during transport relative humidity during operation 10 95 % Total warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life - 0.445 kg	 at AC in hot operating state per pole 	4.4 W
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 electrical endurance (operating cycles) typical electrical endurance (operating cycles) typical 100 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Lead -7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg Ambient conditions Installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage • during transport elative humidity during operation 10 95 % Environmental footprint global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	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 ference code according to IEC 81346-2 Substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight O.379 kg Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation elevironmental footprit global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during speration 72.7 kg global warming potential [CO2 eq] after end of life - 0.000 1	surge voltage resistance rated value	6 kV
of the main contacts typical of auxiliary contacts typical of auxiliary contacts typical electrical endurance (operating cycles) typical incomparison to IEC 81346-2 Substance Prohibitance (Date) SVHC substance name Lead -7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight Outline and the height above sea level maximum ambient conditions Installation altitude at height above sea level maximum ambient temperature ouring operation during storage during storage during transport elative humidity during operation and the height and the first an	shock resistance according to IEC 60068-2-27	25g / 11 ms
of auxiliary contacts typical electrical endurance (operating cycles) typical freference code according to IEC 81346-2 Q Substance Prohibitance (Date) SVHC substance name Lead -7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg Ambient conditions Installation altitude at height above sea level maximum of during operation of during storage of during transport relative humidity during operation relative humidity during operation survironmental footprint global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	mechanical service life (operating cycles)	
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 - 7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg 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 relative humidity during operation 10 95 % Environmental footprint global warming potential [CO2 eq] total 75.078 kg global warming potential [CO2 eq] during sales 0.143 kg global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	 of the main contacts typical 	100 000
reference code according to IEC 81346-2 Substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg Ambient conditions Installation altitude at height above sea level maximum ambient temperature oduring operation oduring storage oduring transport elative humidity during operation Installation altitude at height above sea level maximum 2 000 m 20 +60 °C oduring storage oduring transport oduring	 of auxiliary contacts typical 	100 000
Substance Prohibitance (Date) SVHC substance name Lead -7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport • during transport • advine the middity during operation 10 95 % Environmental footprint global warming potential [CO2 eq] total global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	electrical endurance (operating cycles) typical	100 000
Lead - 7439-92-1 Lead titanium zirconium oxide - 12626-81-2 Weight 0.379 kg 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 global warming potential [CO2 eq] total 75.078 kg global warming potential [CO2 eq] during manufacturing 2.68 kg global warming potential [CO2 eq] during sales 0.143 kg global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	reference code according to IEC 81346-2	Q
Lead titanium zirconium oxide - 12626-81-2 Weight	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 global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during operation global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	SVHC substance name	
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -20 +60 °C -50 +80 °C -50 +80 °C 10 95 % -50 +80 °C 75.078 kg 2.68 kg 9.143 kg 9.143 kg 9.143 kg 9.143 kg 9.1445 kg	Weight	0.379 kg
ambient temperature ● during operation • during storage • during transport -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Environmental footprint global warming potential [CO2 eq] total global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	Ambient conditions	
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● during storage ● during transport −50 +80 °C relative humidity during operation 10 95 % Environmental footprint global warming potential [CO2 eq] total 75.078 kg global warming potential [CO2 eq] during manufacturing 2.68 kg global warming potential [CO2 eq] during sales 0.143 kg global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	ambient temperature	
● during transport	 during operation 	-20 +60 °C
relative humidity during operation 10 95 % Environmental footprint global warming potential [CO2 eq] total global warming potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	during storage	-50 +80 °C
global warming potential [CO2 eq] total 75.078 kg global warming potential [CO2 eq] during manufacturing 2.68 kg global warming potential [CO2 eq] during sales 0.143 kg global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	during transport	-50 +80 °C
global warming potential [CO2 eq] total 75.078 kg global warming potential [CO2 eq] during manufacturing 2.68 kg global warming potential [CO2 eq] during sales 0.143 kg global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	relative humidity during operation	10 95 %
global warming potential [CO2 eq] during manufacturing 2.68 kg global warming potential [CO2 eq] during sales 0.143 kg global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	Environmental footprint	
global warming potential [CO2 eq] during sales global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	global warming potential [CO2 eq] total	75.078 kg
global warming potential [CO2 eq] during operation 72.7 kg global warming potential [CO2 eq] after end of life -0.445 kg	global warming potential [CO2 eq] during manufacturing	2.68 kg
global warming potential [CO2 eq] after end of life -0.445 kg	global warming potential [CO2 eq] during sales	0.143 kg
	global warming potential [CO2 eq] during operation	72.7 kg
Siemens Eco Profile (SEP)	global warming potential [CO2 eq] after end of life	-0.445 kg
	Siemens Eco Profile (SEP)	Siemens EcoTech

Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current- dependent overload release	27 32 A
type of voltage for main current circuit	AC/DC
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	32 A
operational current	
• at AC-3 at 400 V rated value	32 A
• at AC-3e at 400 V rated value	32 A
operating power	
• at AC-3	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	30 kW
• at AC-3e	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	30 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	Ne
ground fault detection phase failure detection	No Voc
phase failure detection trip class	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 240 V rated valueat AC at 400 V rated value	100 kA 55 kA
at AC at 400 V rated valueat AC at 500 V rated value	55 KA 10 kA
at AC at 500 V rated valueat AC at 690 V rated value	10 KA 4 kA
operating short-circuit current breaking capacity (Ics) at AC	
at 240 V rated value	100 kA
at 400 V rated value at 400 V rated value	25 kA
at 500 V rated value at 500 V rated value	5 kA
at 690 V rated value at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	400 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	32 A
at 600 V rated value	32 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	2 hp
— at 230 V rated value	5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	7.5 hp
— at 220/230 V rated value	10 hp
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at 460/490 V rated value	20 hp
— at 460/480 V rated value	20 hp
Short-circuit protection	V
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	gL/gG 63 A
• at 500 V	gL/gG 63 A
• at 690 V	gL/gG 63 A
Installation/ mounting/ dimensions	g_1g_0 00 /t
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	37 11111
with side-by-side mounting at the side	0 mm
for grounded parts at 400 V	V IIIII
— downwards	30 mm
— downwards — upwards	30 mm
— upwards — at the side	9 mm
for live parts at 400 V	V IIIII
·	30 mm
— downwards	30 mm
— upwards	
— at the side	9 mm
• for grounded parts at 500 V	20
— downwards	30 mm 30 mm
— upwards	
— at the side	9 mm
• for live parts at 500 V	20
— downwards	30 mm 30 mm
— upwards	
— at the side	9 mm
• for grounded parts at 690 V	F0 mm
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
• for live parts at 690 V	50 mm
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards Connections/ Terminals	0 mm
type of electrical connection	acray to a terminal
• 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 (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)
tightening torque	
for main contacts with screw-type terminals	2 2.5 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	M4
• for main contacts	IVI 4

Safety related data	
product function suitable for safety function	Yes
suitability for use	
 safety-related switching on 	No
safety-related switching OFF	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	

General Product Approval









<u>KC</u>



For use in hazardous locations

Test Certificates

Marine / Shipping





Special Test Certificate
ate

Type Test Certificates/Test Report





Marine / Shipping





LRS





Miscellaneous

other

Confirmation

other Railway



Special Test Certificate

Confirmation



Environment

Siemens EcoTech



Environmental Confirmations

Further informatior

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=3RV2021-4EA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4EA10

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

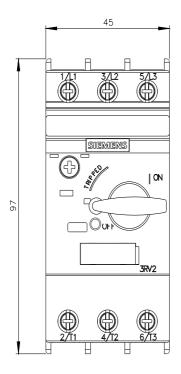
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA10

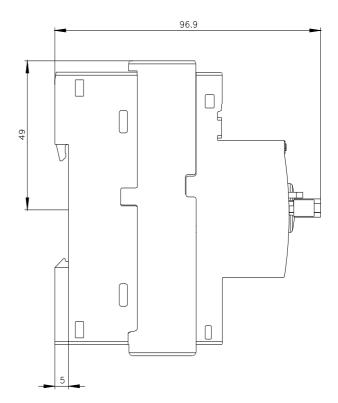
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4EA10&lang=en

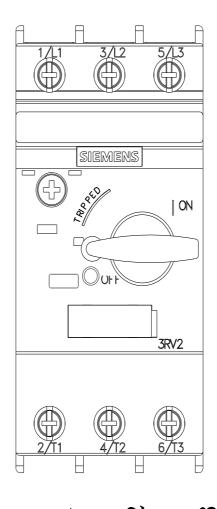
Characteristic: Tripping characteristics, I2t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA10/char

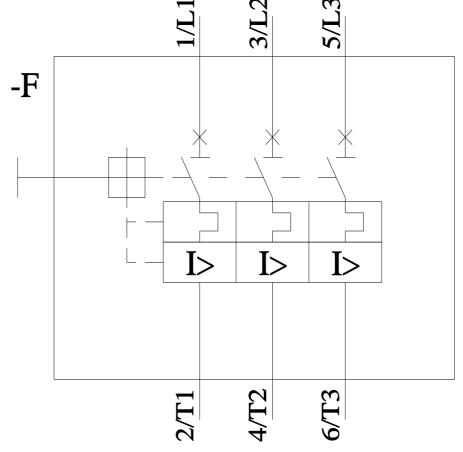
Further characteristics (e.g. electrical endurance, switching frequency)

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