## **SIEMENS**

Data sheet 3RV2331-4TC10



Circuit breaker size S2 for starter combination Rated current 17 A N-release 260 A screw terminal Standard switching capacity

product designation design of the product product type designation 3RV2  General technical data 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 per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical reference code acc. to IEC 81346-2 Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature duri	product brand name	SIRIUS
General technical data 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 surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • between resistance acc. to IEC 60068-2-27 mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical gelectrical endurance (switching cycles) typical electrical endurance (switching cycles) typical ference code acc. to IEC 81346-2 Qu Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum • ambient temperature during storage • ambient temperature during transport relative humidity during operation • operating voltage rated value • operating frequency rated value  50 +60 +60 • 00	product designation	Circuit breaker
Size of the circuit-breaker   S2	design of the product	For starter combinations
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 per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • between main and suxiliary circuit • between main contacts typical • of the main contacts typical • of the main contacts typical • of ouxiliary contacts typical electrical endurance (switching cycles) typical reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during storage • ambient temperature during transport relative humidity during operation 10 95 %  Main circuit  number of poles for main current circuit  • operating voltage rated value • operating voltage at AC-3 rated value maximum  operating frequency rated value  operating frequency rated value  operating frequency rated value	product type designation	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  • 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  maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of the main contacts typical • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical  electrical endurance (switching cycles) typical reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during sto	General technical data	
product extension auxiliary switch  power loss [M] for rated value of the current  • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit • of the main contacts typical • of the main contacts typical • of auxiliary contacts typical  electrical endurance (switching cycles) typical reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport  relative humidity during operation  • operating voltage at AC-3 rated value maximum  • operating voltage at AC-3 rated value maximum  operating frequency rated value  operating frequency rated value  50 60 Hz	size of the circuit-breaker	S2
power loss [W] for rated value of the current  • at AC in hot operating state 14.5 W  • at AC in hot operating state per pole 4.8 W  insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value 680 V  maximum permissible voltage for safe isolation in networks with grounded star point 400 V  • between main and auxiliary circuit 400 V  shock resistance acc. to IEC 60068-2-27 25g / 11 ms Sinus  mechanical service life (switching cycles)  • of the main contacts typical 50 000  • of auxiliary contacts typical 50 000  reference code acc. to IEC 81346-2 Q  Substance Prohibitance (Date) 15.10.2014 00:00:00  Ambient conditions  installation altitude at height above sea level maximum 2 000 m  • ambient temperature during operation -20 +60 °C  • ambient temperature during storage -50 +80 °C  relative humidity during operation 10 95 %  Main circuit 10 95 %  Main circuit 10 95 %  Main circuit 10 90 Hz	size of contactor can be combined company-specific	S2
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  maximum permissible voltage for safe isolation in networks with grounded star point between main and auxiliary circuit betwee	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  maximum permissible voltage for safe isolation in networks with grounded star point  between main and auxiliary circuit  between main and sunce the control of the main contacts typical  of the main contacts typical  of auxiliary contacts typical  fererence code acc. to IEC 81346-2  Question of the main contacts typical  electrical endurance (switching cycles) typical  reference code acc. to IEC 81346-2  Question of the main contact typical  for 15.10.2014 00:00:00  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature during operation  ambient temperature during storage  ambient temperature during storage  ambient temperature during transport  felative humidity during operation  ambient temperature during transport  felative humidity during operation  felative humidity during operation  ambient temperature during transport  felative humidity during operation  felative humidity	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  maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit  • of the main contacts typical  • of the main contacts typical  • of auxiliary contacts typical  electrical endurance (switching cycles) typical  reference code acc. to IEC 81346-2  Q  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during storage  • ambient temperature during transport  relative humidity during operation  mumber of poles for main current circuit  • operating voltage rated value  • operating requency rated value  • operating frequency rated value  50 60 Hz	<ul> <li>at AC in hot operating state</li> </ul>	14.5 W
surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit • between main and auxiliary circuit • between main and auxiliary circuit 400 V  shock resistance acc. to IEC 60068-2-27 25g / 11 ms Sinus  mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during storage • ambient temperature during transport relative humidity during operation 10 95 %  Main circuit number of poles for main current circuit 3 • operating voltage rated value • operating voltage at AC-3 rated value maximum 690 V operating frequency rated value 50 60 Hz		4.8 W
maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit • d00 V  shock resistance acc. to IEC 60068-2-27  mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of auxiliary contacts typical  electrical endurance (switching cycles) typical  reference code acc. to IEC 81346-2  Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  • operating voltage rated value • operating voltage rated value • operating frequency rated value  • operating frequency rated value  50 60 Hz		690 V
networks with grounded star point  • between main and auxiliary circuit  • between main and auxiliary circuit  • between main and auxiliary circuit  400 V  shock resistance acc. to IEC 60068-2-27  mechanical service life (switching cycles)  • of the main contacts typical  • of auxiliary contacts typical  • of auxiliary contacts typical  • of auxiliary contacts typical  electrical endurance (switching cycles) typical  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during storage  • ambient temperature during storage  • ambient temperature during transport  relative humidity during operation  Main circuit  number of poles for main current circuit  • operating voltage rated value  • operating frequency rated value  50 60 Hz	surge voltage resistance rated value	6 kV
between main and auxiliary circuit  shock resistance acc. to IEC 60068-2-27  mechanical service life (switching cycles)  of the main contacts typical  of auxiliary contacts typical  electrical endurance (switching cycles) typical  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature during operation  ambient temperature during storage  ambient temperature during transport  relative humidity during operation  operating voltage rated value  operating voltage at AC-3 rated value maximum  400 V  25g / 11 ms Sinus  50 000  25g / 10 ms Sinus  150 000  000  150 000		
shock resistance acc. to IEC 60068-2-27  mechanical service life (switching cycles)  of the main contacts typical of auxiliary contacts typical  lectrical endurance (switching cycles) typical  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature during operation ambient temperature during storage ambient temperature during transport relative humidity during operation  ambient circuit  number of poles for main current circuit  operating voltage rated value operating voltage at AC-3 rated value maximum  250 000  250 000  200 00	<ul> <li>between main and auxiliary circuit</li> </ul>	400 V
mechanical service life (switching cycles)  of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ambient temperature during operation ambient temperature during storage ambient temperature during transport ambient temperature during transport relative humidity during operation  operating voltage rated value operating voltage at AC-3 rated value  of the main conditions  50 000  15.10.2014 00:00:00  0  2 000 m  -20 +60 °C  -50 +80 °C  -5080 °C	between main and auxiliary circuit	400 V
of the main contacts typical     of auxiliary contacts typical     electrical endurance (switching cycles) typical     po 000  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum      ambient temperature during operation     ambient temperature during storage     ambient temperature during transport     relative humidity during operation  Ambient circuit  number of poles for main current circuit     operating voltage rated value     operating frequency rated value  of the main contacts typical  50 000  20  C  Q  Substance Prohibitance (Date)  15.10.2014 00:00:00  A  2 000 m  3 000  4 00 C  5 000 M + 80 °C  Felative humidity during operation  1 0 95 %  Main circuit  9 0 V  690 V	shock resistance acc. to IEC 60068-2-27	25g / 11 ms Sinus
<ul> <li>of auxiliary contacts typical</li> <li>electrical endurance (switching cycles) typical</li> <li>ference code acc. to IEC 81346-2</li> <li>Substance Prohibitance (Date)</li> <li>15.10.2014 00:00:00</li> <li>Ambient conditions</li> <li>installation altitude at height above sea level maximum</li> <li>ambient temperature during operation</li> <li>ambient temperature during storage</li> <li>ambient temperature during transport</li> <li>-50 +80 °C</li> <li>ambient temperature during transport</li> <li>relative humidity during operation</li> <li>10 95 %</li> <li>Main circuit</li> <li>number of poles for main current circuit</li> <li>operating voltage rated value</li> <li>operating voltage at AC-3 rated value maximum</li> <li>690 V</li> <li>operating frequency rated value</li> <li>50 60 Hz</li> </ul>	mechanical service life (switching cycles)	
electrical endurance (switching cycles) typical  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport  relative humidity during operation  • operating voltage rated value • operating frequency rated value  50 000  Q  15.10.2014 00:00:00  15.10.2014 00:00:00  Ambient conditions  2 000 m  2 0 +60 °C  -50 +80 °C  -50 +80 °C  10 95 %  Main circuit  3  • operating voltage rated value • operating roltage at AC-3 rated value maximum  690 V  operating frequency rated value  50 60 Hz	<ul> <li>of the main contacts typical</li> </ul>	50 000
reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport  • ambient temperature during transport  -50 +80 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  • operating voltage rated value • operating voltage at AC-3 rated value maximum  operating frequency rated value  50 60 Hz	of auxiliary contacts typical	50 000
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport • ambient temperature during transport • 50 +80 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  • operating voltage rated value • operating voltage at AC-3 rated value maximum  operating frequency rated value  50 60 Hz	electrical endurance (switching cycles) typical	50 000
installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport • ambient temperature during transport -50 +80 °C  relative humidity during operation 10 95 %  Main circuit  number of poles for main current circuit  • operating voltage rated value • operating voltage at AC-3 rated value maximum  operating frequency rated value  50 60 Hz	reference code acc. to IEC 81346-2	Q
installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport • ambient temperature during transport  -50 +80 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  • operating voltage rated value • operating voltage at AC-3 rated value maximum  operating frequency rated value  50 60 Hz	Substance Prohibitance (Date)	15.10.2014 00:00:00
<ul> <li>ambient temperature during operation</li> <li>ambient temperature during storage</li> <li>ambient temperature during transport</li> <li>50 +80 °C</li> <li>relative humidity during operation</li> <li>10 95 %</li> <li>Main circuit</li> <li>number of poles for main current circuit</li> <li>operating voltage rated value</li> <li>operating voltage at AC-3 rated value maximum</li> <li>operating frequency rated value</li> <li>00 V</li> <li>operating frequency rated value</li> <li>50 60 Hz</li> </ul>	Ambient conditions	
<ul> <li>ambient temperature during storage</li> <li>ambient temperature during transport</li> <li>-50 +80 °C</li> <li>relative humidity during operation</li> <li>10 95 %</li> <li>Main circuit</li> <li>number of poles for main current circuit</li> <li>operating voltage rated value</li> <li>operating voltage at AC-3 rated value maximum</li> <li>operating frequency rated value</li> <li> 60 Hz</li> </ul>	installation altitude at height above sea level maximum	2 000 m
<ul> <li>ambient temperature during transport</li> <li>relative humidity during operation</li> <li>Main circuit</li> <li>number of poles for main current circuit</li> <li>operating voltage rated value</li> <li>operating voltage at AC-3 rated value maximum</li> <li>operating frequency rated value</li> <li>690 V</li> <li>operating frequency rated value</li> <li>50 60 Hz</li> </ul>	<ul> <li>ambient temperature during operation</li> </ul>	-20 +60 °C
relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  • operating voltage rated value • operating voltage at AC-3 rated value maximum  operating frequency rated value  50 60 Hz	ambient temperature during storage	-50 +80 °C
Main circuit       number of poles for main current circuit     3       ● operating voltage rated value     690 V       ● operating voltage at AC-3 rated value maximum     690 V       operating frequency rated value     50 60 Hz	<ul> <li>ambient temperature during transport</li> </ul>	-50 +80 °C
number of poles for main current circuit       3         ● operating voltage rated value       690 V         ● operating voltage at AC-3 rated value maximum       690 V         operating frequency rated value       50 60 Hz	relative humidity during operation	10 95 %
<ul> <li>operating voltage rated value</li> <li>operating voltage at AC-3 rated value maximum</li> <li>operating frequency rated value</li> <li>50 60 Hz</li> </ul>	Main circuit	
<ul> <li>◆ operating voltage at AC-3 rated value maximum</li> <li>690 V</li> <li>operating frequency rated value</li> <li>50 60 Hz</li> </ul>	number of poles for main current circuit	3
<ul> <li>◆ operating voltage at AC-3 rated value maximum</li> <li>690 V</li> <li>operating frequency rated value</li> <li>50 60 Hz</li> </ul>	operating voltage rated value	690 V
operating frequency rated value 50 60 Hz		690 V
operational current rated value 17 A		50 60 Hz
	operational current rated value	17 A

operational current at AC-3 at 400 V rated value	17 A
operating power at AC-3	
<ul> <li>at 230 V rated value</li> </ul>	4 000 W
<ul> <li>at 400 V rated value</li> </ul>	7 500 W
at 500 V rated value	7 500 W
● at 690 V rated value	15 000 W
operating frequency at AC-3 maximum	15 1/h
Auxiliary circuit	
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
Protective and monitoring functions	Ü
product function	A.
ground fault detection	No
phase failure detection	No
breaking capacity operating short-circuit current (Ics) at AC	
at 240 V rated value	100 kA
at 400 V rated value	30 kA
• at 500 V rated value	6 kA
• at 690 V rated value	3 kA
breaking capacity maximum short-circuit current (Icu)	*****
• at AC at 240 V rated value	100 kA
<ul> <li>at AC at 400 V rated value</li> </ul>	65 kA
<ul> <li>at AC at 500 V rated value</li> </ul>	12 kA
at AC at 690 V rated value	5 kA
response value current of instantaneous short-circuit trip unit	260 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	17 A
• at 600 V rated value	17 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	1.5 hp
— at 230 V rated value	3 hp
• for 3-phase AC motor	
— at 200/208 V rated value	5 hp
— at 220/230 V rated value	7.5 hp
— at 460/480 V rated value	15 hp
— at 575/600 V rated value	15 hp
	13 lip
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 240 V	none required
	none required
• at 400 V	100
• at 500 V	80
• at 690 V	63
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
	according to DIN EN 60715
height	140 mm
width	55 mm
depth	149 mm
required spacing	
<ul> <li>for grounded parts at 400 V</li> </ul>	
— downwards	50 mm

— upwards	50 mm
— at the side	10 mm
• for live parts at 400 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
	10 111111
• for grounded parts at 500 V	FO
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
<ul> <li>for live parts at 500 V</li> </ul>	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
<ul> <li>for grounded parts at 690 V</li> </ul>	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
• for live parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
Connections/ Terminals	
product function removable terminal for auxiliary and	No
control circuit	
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	0 (4 05 0) 4 (4 05 0)
— solid or stranded	2x (1 25 mm²), 1x (1 35 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 16 mm²), 1x (1 25 mm²)
at AWG cables for main contacts	2x (18 3), 1x (18 2)
<ul> <li>tightening torque for main contacts with screw-type terminals</li> </ul>	3 4.5 N·m
design of screwdriver shaft	Diameter 5 to 6 mm
size of the screwdriver tip	Pozidriv 2
design of the thread of the connection screw	
• for main contacts	M6
Safety related data	
B10 value	
	5 000
with high demand rate acc. to SN 31920  proportion of dangerous failures.	3 000
proportion of dangerous failures	F0 0/
with low demand rate acc. to SN 31920  with high degrand rate acc. to SN 30000	50 %
with high demand rate acc. to SN 31920	50 %
failure rate [FIT]	
with low demand rate acc. to SN 31920	50 FIT
T1 value for proof test interval or service life acc. to IEC 61508	10 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
display version for switching status	Handle
Certificates/ approvals	







<u>KC</u>



**Miscellaneous** 

Declaration of Conformity

**Test Certificates** 

Marine / Shipping



Type Test
Certificates/Test
Report

Special Test Certificate







Marine / Shipping





Confirmation

other



Railway

Confirmation Vibration and Shock

## Further information

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=3RV2331-4TC10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2331-4TC10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2331-4TC10

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

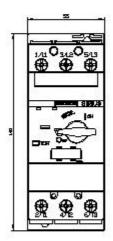
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2331-4TC10&lang=en

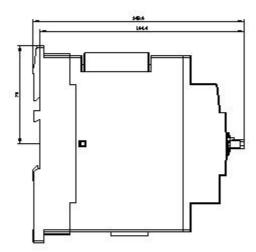
Characteristic: Tripping characteristics, I²t, Let-through current

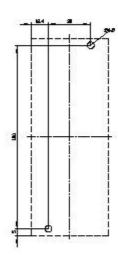
https://support.industry.siemens.com/cs/ww/en/ps/3RV2331-4TC10/char

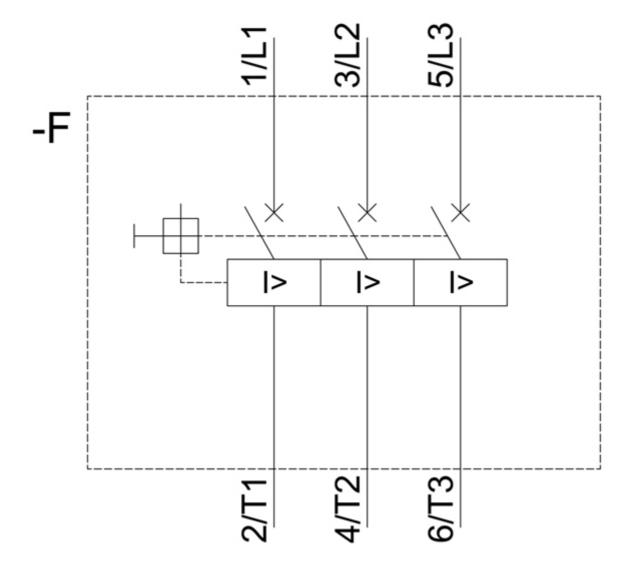
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2331-4TC10&objecttype=14&gridview=view1









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