

Solid-state time-delayed auxiliary switch OFF delay With control signal Relay 1 NC + 1 NO 24...240 V AC/DC Time range 0.05...100 s Can be snapped on at the front For 3RT2 S00-S3 contactors and 3RH2 S00 contactor relays Spring-type terminal Varistor for attenuation of the contactor coils integrated



product brand name	SIRIUS
Product designation	Solid-state time-delay auxiliary switch
Product type designation	3RA28

General technical data

<b>Product component</b>	
<ul style="list-style-type: none"> <li>• semi-conductor output</li> </ul>	No
<b>Product extension required remote control</b>	No
<b>Product extension optional remote control</b>	No
<ul style="list-style-type: none"> <li>• — insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value</li> </ul>	300 V
<b>Test voltage for isolation test</b>	1.5 kV
<b>Degree of pollution</b>	3
<b>Surge voltage resistance rated value</b>	4 kV
<b>Test voltage for surge voltage test</b>	4 800 V
<ul style="list-style-type: none"> <li>• Protection class IP of the terminal</li> </ul>	IP20
<b>Shock resistance</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-27</li> </ul>	15g / 11 ms

<b>Vibration resistance</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-6</li> </ul>	10 ... 59 Hz: 0.35 mm, 60 ... 150 Hz: 2g
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	10 000 000
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• with contactor 3R.2 of frame size S00</li> </ul>	10 000 000
<ul style="list-style-type: none"> <li>• with contactor 3R.2 of frame size S0</li> </ul>	10 000 000
<ul style="list-style-type: none"> <li>• with contactor 3R.2 of frame size S2</li> </ul>	10 000 000
<ul style="list-style-type: none"> <li>• with contactor 3R.2 of frame size S3</li> </ul>	10 000 000
<b>Electrical endurance (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• at AC-15 at 230 V typical</li> </ul>	100 000
<b>Electrical endurance (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• with contactor 3R.2 of frame size S00</li> </ul>	100 000
<ul style="list-style-type: none"> <li>• with contactor 3R.2 of frame size S0</li> </ul>	100 000
<ul style="list-style-type: none"> <li>• with contactor 3R.2 of frame size S2</li> </ul>	100 000
<ul style="list-style-type: none"> <li>• with contactor 3R.2 of frame size S3</li> </ul>	100 000
<b>adjustable time</b>	0.05 ... 100 s
<b>Relative setting accuracy relating to full-scale value</b>	15 %
<b>minimum ON period</b>	35 ms
<ul style="list-style-type: none"> <li>• recovery time</li> </ul>	150 ms
<b>Reference code acc. to DIN EN 81346-2</b>	K
<b>relative repeat accuracy</b>	1 %

#### Product Function

<b>Product function star-delta circuit</b>	No
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#### Control circuit/ Control

<b>Type of voltage of the control supply voltage</b>	AC/DC
<b>Control supply voltage 1 at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	24 ... 240 V
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	24 ... 240 V
<b>control supply voltage frequency 1</b>	50 ... 60 Hz
<b>Control supply voltage 1</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	24 ... 240 V
<b>operating range factor control supply voltage rated value at DC</b>	
<ul style="list-style-type: none"> <li>• initial value</li> </ul>	0.85
<ul style="list-style-type: none"> <li>• full-scale value</li> </ul>	1.1
<b>operating range factor control supply voltage rated value at AC at 50 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> </ul>	0.85
<ul style="list-style-type: none"> <li>• full-scale value</li> </ul>	1.1
<b>operating range factor control supply voltage rated value at AC at 60 Hz</b>	

<ul style="list-style-type: none"> <li>• initial value</li> </ul>	0.85
<ul style="list-style-type: none"> <li>• full-scale value</li> </ul>	1.1
<b>Design of the surge suppressor</b>	with varistor
<b>Switching Function</b>	
<ul style="list-style-type: none"> <li>• switching function ON-delay</li> </ul>	No
<ul style="list-style-type: none"> <li>• switching function ON-delay/instantaneous contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• switching function passing make contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• switching function passing make contact/instantaneous contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function OFF delay</li> </ul>	Yes
<b>Switching function</b>	
<ul style="list-style-type: none"> <li>• flashing symmetrically starting with interval/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• flashing symmetrically starting with interval</li> </ul>	No
<ul style="list-style-type: none"> <li>• flashing symmetrically starting with pulse/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• flashing symmetrically starting with pulse</li> </ul>	No
<ul style="list-style-type: none"> <li>• flashing asymmetrically starting with interval</li> </ul>	No
<ul style="list-style-type: none"> <li>• flashing asymmetrically starting with pulse</li> </ul>	No
<b>Switching function</b>	
<ul style="list-style-type: none"> <li>• fixed clock cycle beginning with pulse</li> </ul>	No
<ul style="list-style-type: none"> <li>• fixed clock cycle beginning with interval</li> </ul>	No
<b>Switching function</b>	
<ul style="list-style-type: none"> <li>• variably clocked start with impulse</li> </ul>	No
<ul style="list-style-type: none"> <li>• variably clocked start with interval</li> </ul>	No
<b>Switching function</b>	
<ul style="list-style-type: none"> <li>• star-delta circuit with delay time</li> </ul>	No
<ul style="list-style-type: none"> <li>• star-delta circuit</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal additive ON delay</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal passing break contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal passing break contact/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal OFF delay</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Switching function with control signal OFF delay/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal pulse delayed</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal pulse delayed/instantaneous</li> </ul>	No

<ul style="list-style-type: none"> <li>• switching function with control signal pulse-shaping</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal pulse-shaping/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal additive ON delay/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal ON-delay/OFF-delay</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal ON-delay/OFF-delay/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal passing make contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• Switching function with control signal passing make contact/instantaneous contact</li> </ul>	No
<b>Switching function of interval relay with control signal</b>	
<ul style="list-style-type: none"> <li>• retrotriggerable with deactivated control signal/instantaneous contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• retrotriggerable with activated control signal</li> </ul>	No
<ul style="list-style-type: none"> <li>• retrotriggerable with activated control signal/instantaneous contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• retriggerable with deactivated control signal</li> </ul>	No
<b>Design of the control terminal non-floating</b>	Yes

### Short-circuit protection

<b>Design of the fuse link</b>	
<ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gL/gG: 4 A

### Auxiliary circuit

<b>Material of switching contacts</b>	AgNi
<b>Number of NC contacts</b>	
<ul style="list-style-type: none"> <li>• delayed switching</li> </ul>	1
<b>Number of NO contacts</b>	
<ul style="list-style-type: none"> <li>• delayed switching</li> </ul>	1
<ul style="list-style-type: none"> <li>• Operating current of auxiliary contacts at AC-15 maximum</li> </ul>	3 A
<ul style="list-style-type: none"> <li>• operating current of auxiliary contacts at AC-15 at 24 V</li> </ul>	3 A
<ul style="list-style-type: none"> <li>• operating current of auxiliary contacts at AC-15 at 250 V</li> </ul>	3 A
<b>Operating current of auxiliary contacts as NC contact at AC-15</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> </ul>	3 A
<ul style="list-style-type: none"> <li>• at 250 V</li> </ul>	3 A
<b>Operating current of auxiliary contacts as NO contact at AC-15</b>	

• at 24 V	3 A
• at 250 V	3 A
<b>Operating current of auxiliary contacts at DC-13</b>	1 ... 0.1
• operating current of auxiliary contacts at DC-13 at 24 V	1 A
• operating current of auxiliary contacts at DC-13 at 125 V	0.2 A
• operating current of auxiliary contacts at DC-13 at 250 V	0.1 A
<b>operating frequency with 3RT2 contactor maximum</b>	2 500 1/h
<b>Contact rating of auxiliary contacts according to UL</b>	B300 / R300
<b>influence of the surrounding temperature</b>	±1 %
<b>Power supply influence</b>	±1 %

<b>Main circuit</b>	
<b>type of voltage</b>	AC/DC

<b>Inputs/ Outputs</b>	
• Product function at the relay outputs Switchover delayed/without delay	No
• Product function non-volatile	No

<b>Electromagnetic compatibility</b>	
<b>EMI immunity</b>	
• acc. to IEC 61812-1	Environment A (industrial area)
<b>Conducted interference</b>	
• due to burst acc. to IEC 61000-4-4	2 kV network connection / 1 kV control connection
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
<b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>	10 V/m
<b>Electrostatic discharge acc. to IEC 61000-4-2</b>	8 kV

<b>Safety related data</b>	
<b>Protection against electrical shock</b>	finger-safe
<b>Type of insulation</b>	Basic insulation
<b>Category acc. to EN 954-1</b>	none

<b>Connections/ Terminals</b>	
<b>Product function</b>	
• removable terminal for auxiliary and control circuit	Yes
• Type of electrical connection for auxiliary and control current circuit	spring-loaded terminals
• type of connectable conductor cross-sections solid	0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>• Type of connectable conductor cross-sections finely stranded with core end processing</li> </ul>	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• Type of connectable conductor cross-sections finely stranded without core end processing</li> </ul>	2x (0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• Type of connectable conductor cross-sections at AWG conductors solid</li> </ul>	2x (20 ... 14)
<ul style="list-style-type: none"> <li>• Type of connectable conductor cross-sections at AWG conductors stranded</li> </ul>	2x (20 ... 14)
<ul style="list-style-type: none"> <li>• connectable conductor cross-section solid</li> </ul>	0.5 ... 4 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• connectable conductor cross-section finely stranded with core end processing</li> </ul>	0.5 ... 2.5 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• connectable conductor cross-section finely stranded without core end processing</li> </ul>	0.25 ... 1.5 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	20 ... 14
<ul style="list-style-type: none"> <li>• stranded</li> </ul>	20 ... 14

Installation/ mounting/ dimensions	
<ul style="list-style-type: none"> <li>• <b>mounting position</b></li> </ul>	any (like contactor)
<b>Mounting type</b>	clip-on
<b>Height</b>	38 mm
<b>Width</b>	45 mm
<b>Depth</b>	74 mm
<b>Required spacing</b>	
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	0 mm 0 mm 0 mm 0 mm 0 mm
<ul style="list-style-type: none"> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> </ul>	0 mm 0 mm 0 mm 0 mm 0 mm
<ul style="list-style-type: none"> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	0 mm 0 mm 0 mm 0 mm 0 mm

## Ambient conditions

<b>Installation altitude at height above sea level</b>	
• maximum	2 000 m
<b>Ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
• Relative humidity during operation	0 ... 95 %

## Certificates/ approvals

### General Product Approval



[Miscellaneous](#)

EG-Konf.

### Test Certificates

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS

LRS

PRS

### Marine / Shipping

### other

### Railway



[Confirmation](#)

[Vibration and Shock](#)

RINA

RMRS

DNVGL.COM/AF

## 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=3RA2814-2FW10>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2814-2FW10>

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

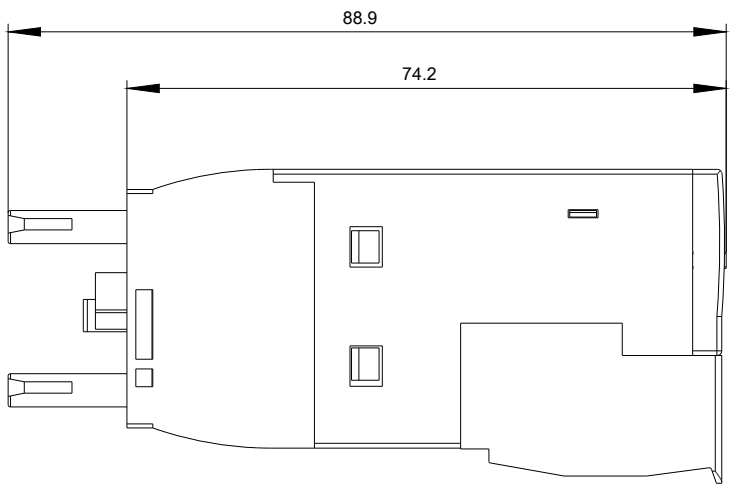
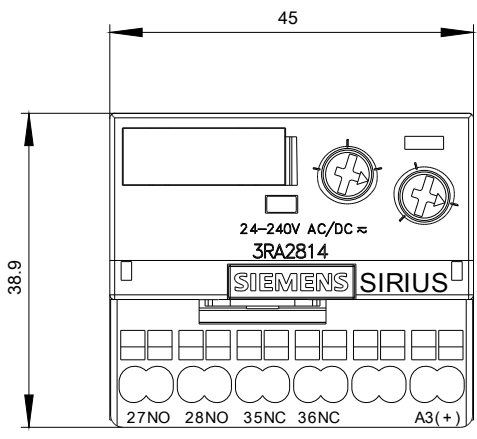
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2814-2FW10>

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

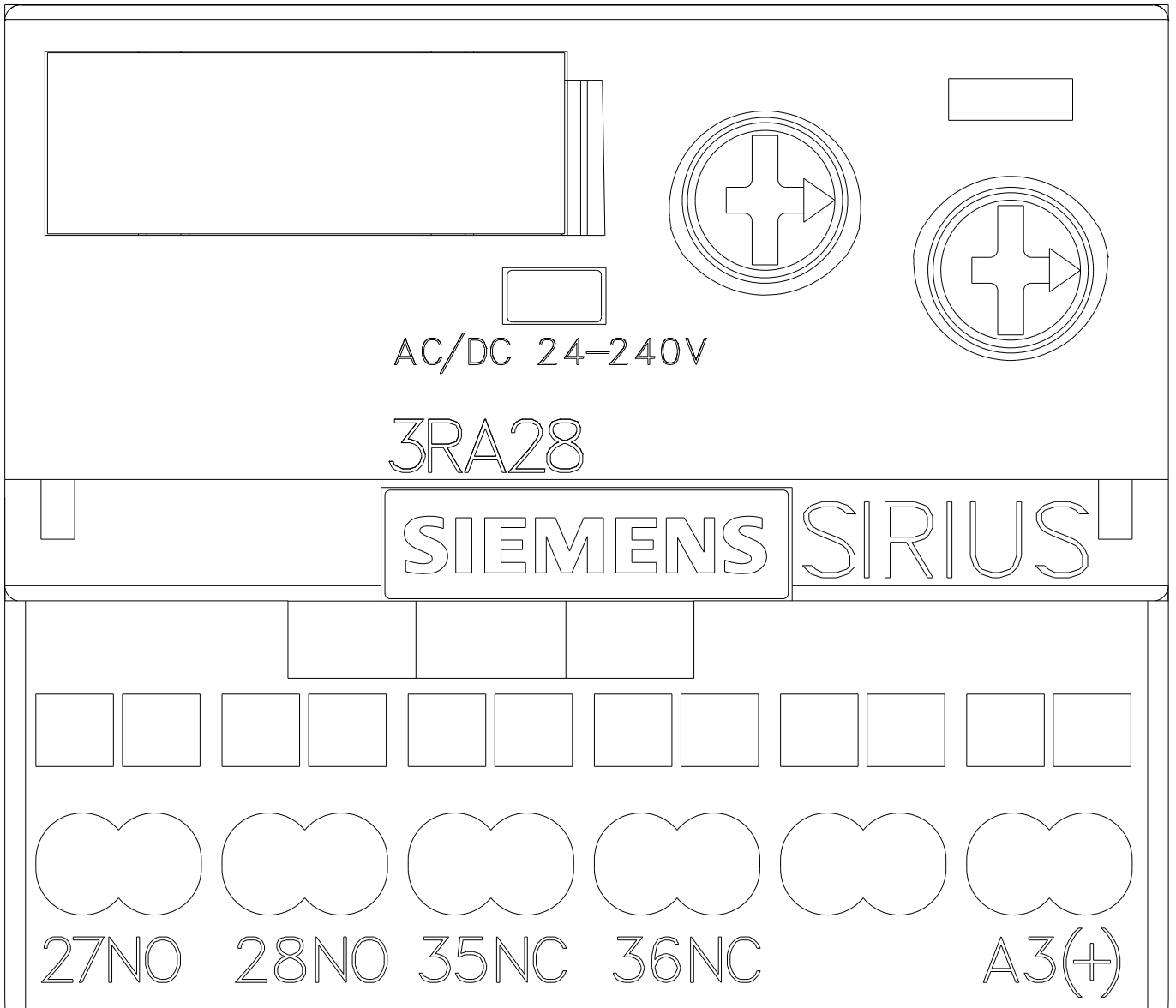
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2814-2FW10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2814-2FW10&lang=en)

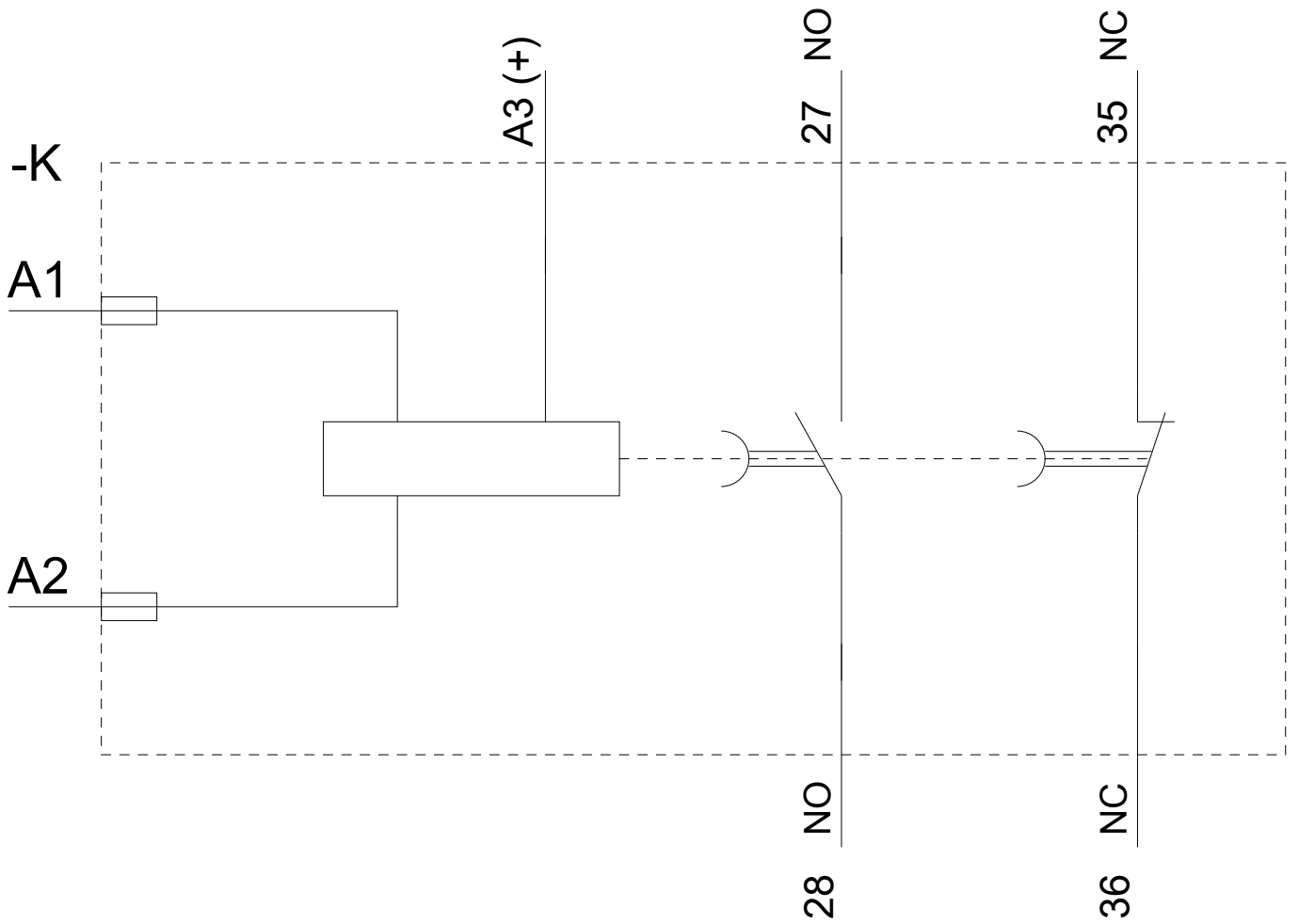
### Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2814-2FW10/manual>









last modified:

08/14/2020