

Solid-state time-delayed auxiliary switch ON delay 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 Screw 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>	
• semi-conductor output	No
<b>Product extension required remote control</b>	No
<b>Product extension optional remote control</b>	No
<b>Power loss [W] total typical</b>	1 W
<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
<b>Protection class IP</b>	
• of the terminal	IP20
<b>Shock resistance</b>	
• acc. to IEC 60068-2-27	15g / 11 ms
<b>Mechanical service life (switching cycles)</b>	
• typical	10 000 000

<b>Mechanical service life (switching cycles)</b>	
• with contactor 3R.2 of frame size S00	10 000 000
• with contactor 3R.2 of frame size S0	10 000 000
• with contactor 3R.2 of frame size S2	10 000 000
• with contactor 3R.2 of frame size S3	10 000 000
<b>Electrical endurance (switching cycles)</b>	
• at AC-15 at 230 V typical	100 000
<b>Electrical endurance (switching cycles)</b>	
• with contactor 3R.2 of frame size S00	100 000
• with contactor 3R.2 of frame size S0	100 000
• with contactor 3R.2 of frame size S2	100 000
• with contactor 3R.2 of frame size S3	100 000
<b>Adjustable time</b>	0.05 ... 100 s
<b>Relative setting accuracy relating to full-scale value</b>	15 %
<b>Recovery time</b>	150 ms
<b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>	K
<b>Reference code acc. to DIN EN 81346-2</b>	K
<b>Reference code acc. to DIN EN 61346-2</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>	
• at 50 Hz	24 ... 240 V
• at 60 Hz	24 ... 240 V
<b>Control supply voltage frequency 1</b>	50 ... 60 Hz
<b>Control supply voltage 1</b>	
• at DC	24 ... 240 V
<b>Operating range factor control supply voltage rated value at DC</b>	
• initial value	0.85
• Full-scale value	1.1
<b>Operating range factor control supply voltage rated value at AC at 50 Hz</b>	
• initial value	0.85
• Full-scale value	1.1
<b>Operating range factor control supply voltage rated value at AC at 60 Hz</b>	
• initial value	0.85
• Full-scale value	1.1

## Switching Function

<b>Switching function</b>	
• ON-delay	Yes
• ON-delay/instantaneous contact	No
• passing make contact	No
• passing make contact/instantaneous contact	No
• OFF delay	No
<b>Switching function</b>	
• flashing symmetrically starting with interval/instantaneous	No
• flashing symmetrically starting with interval	No
• flashing symmetrically starting with pulse/instantaneous	No
• flashing symmetrically starting with pulse	No
• flashing asymmetrically starting with interval	No
• flashing asymmetrically starting with pulse	No
<b>Switching function</b>	
• fixed clock cycle beginning with pulse	No
• fixed clock cycle beginning with interval	No
<b>Switching function</b>	
• variably clocked start with impulse	No
• variably clocked start with interval	No
<b>Switching function</b>	
• star-delta circuit with delay time	No
• star-delta circuit	No
<b>Switching function with control signal</b>	
• additive ON delay	No
• passing break contact	No
• passing break contact/instantaneous	No
• OFF delay	No
• OFF delay/instantaneous	No
• pulse delayed	No
• pulse delayed/instantaneous	No
• pulse-shaping	No
• pulse-shaping/instantaneous	No
• additive ON delay/instantaneous	No
• ON-delay/OFF-delay	No
• ON-delay/OFF-delay/instantaneous	No
• passing make contact	No
• passing make contact/instantaneous contact	No

<b>Switching function of interval relay with control signal</b>	
• retrotriggerable with deactivated control signal/instantaneous contact	No
• retrotriggerable with activated control signal	No
• retrotriggerable with activated control signal/instantaneous contact	No
• retriggerable with deactivated control signal	No
<b>Design of the control terminal non-floating</b>	Yes

### Short-circuit protection

<b>Design of the fuse link</b>	
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 4 A

### Auxiliary circuit

<b>Material of switching contacts</b>	AgNi
<b>Number of NC contacts</b>	
• delayed switching	1
<b>Number of NO contacts</b>	
• delayed switching	1
<b>Operating current of auxiliary contacts at AC-15</b>	
• maximum	3 A
• at 24 V	3 A
• at 250 V	3 A
<b>Operating current of auxiliary contacts as NC contact at AC-15</b>	
• at 24 V	3 A
• at 250 V	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
<b>Operating current of auxiliary contacts at DC-13</b>	
• at 24 V	1 A
• at 125 V	0.2 A
• 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 %

### Main circuit

<b>Type of voltage</b>	AC/DC
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Inputs/ Outputs	
<b>Product function</b>	
<ul style="list-style-type: none"> <li>• at the relay outputs Switchover delayed/without delay</li> <li>• non-volatile</li> </ul>	No  No
Electromagnetic compatibility	
<b>EMI immunity</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 61812-1</li> </ul>	Environment A (industrial area)
<b>Conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to burst acc. to IEC 61000-4-4</li> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	2 kV network connection / 1 kV control connection  2 kV  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
Safety related data	
<b>Protection against electrical shock</b>	finger-safe
<b>Type of insulation</b>	Basic insulation
<b>Category acc. to EN 954-1</b>	none
Connections/ Terminals	
<b>Product function</b>	
<ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>	Yes
<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for auxiliary and control current circuit</li> </ul>	screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• at AWG conductors solid</li> <li>• at AWG conductors stranded</li> </ul>	0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> ) 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ) 2x (20 ... 14) 2x (20 ... 14)
<b>Connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> </ul>	0.5 ... 4 mm <sup>2</sup> 0.5 ... 2.5 mm <sup>2</sup> 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> <li>• stranded</li> </ul>	20 ... 14 20 ... 14
Installation/ mounting/ dimensions	
<b>Mounting position</b>	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 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— at the side 0 mm</li> <li>— downwards 0 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 0 mm</li> </ul> </li> </ul>	

**Ambient conditions**

<b>Installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>• maximum 2 000 m</li> </ul>	
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>• during operation 0 ... 95 %</li> </ul>	

**Certificates/ approvals**

General Product Approval	Declaration of Conformity
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[Miscellaneous](#)

Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other	Railway
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[Confirmation](#)

[Vibration and Shock](#)

Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2813-1FW10>

**Cax online generator**

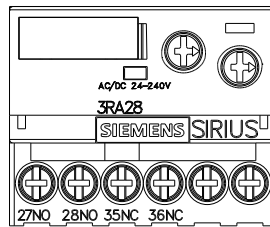
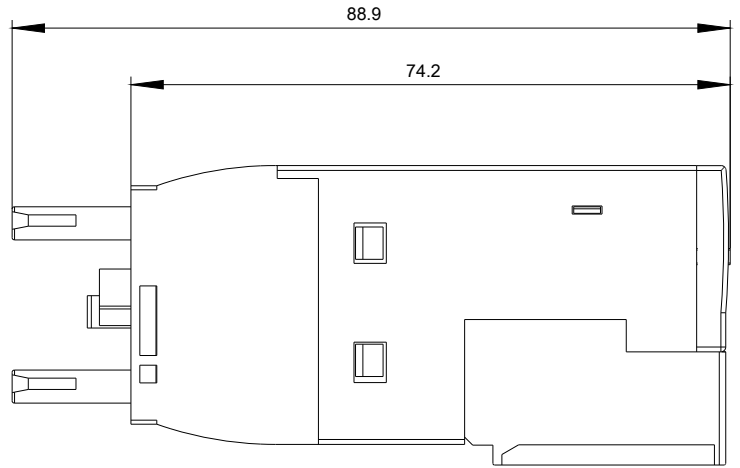
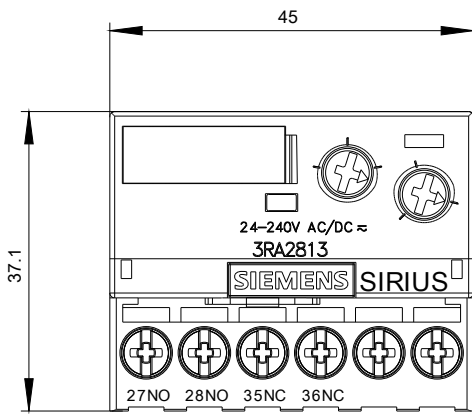
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2813-1FW10>

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

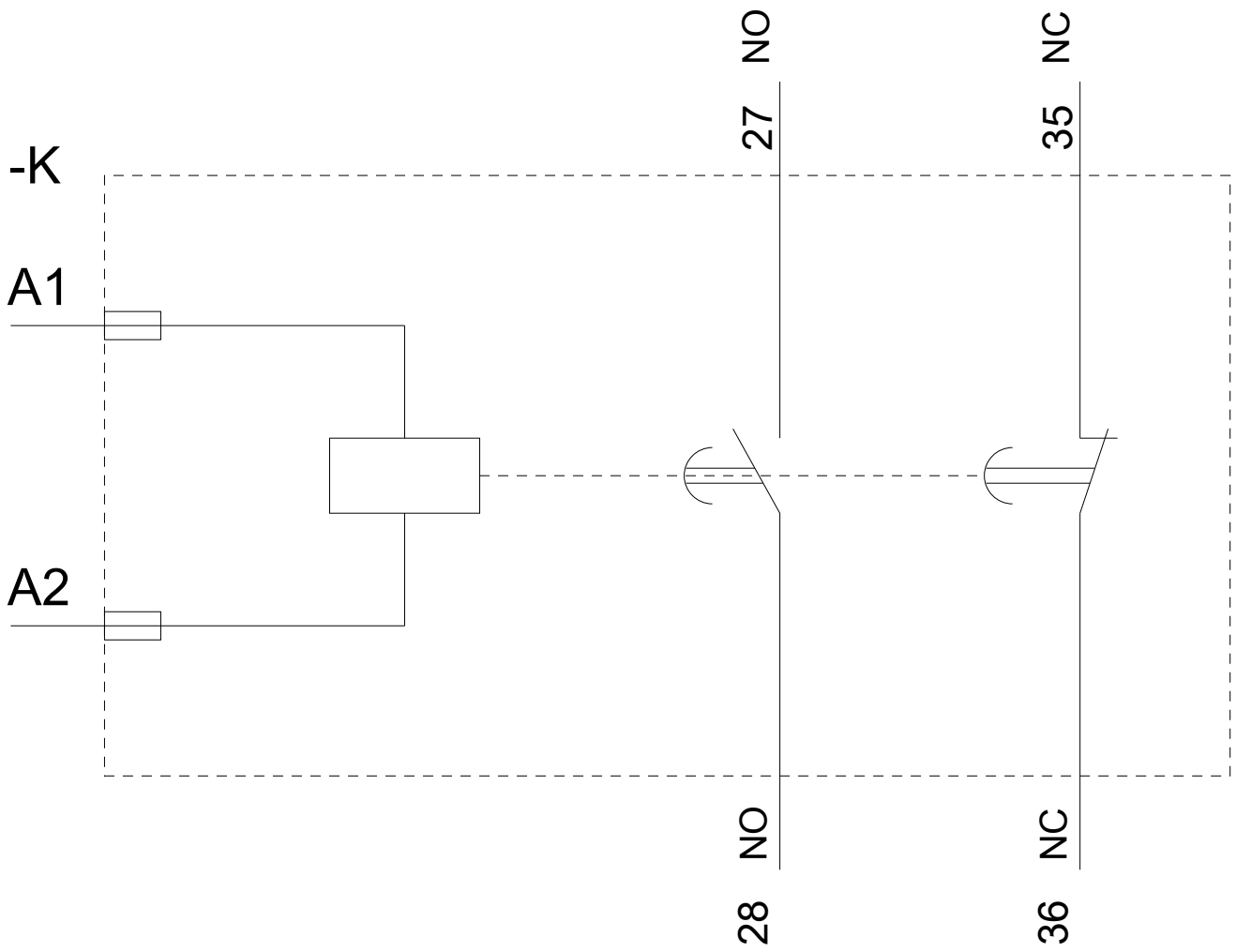
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2813-1FW10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2813-1FW10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2813-1FW10&lang=en)







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