

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 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

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

Vibration resistance	
• acc. to IEC 60068-2-6	10 ... 59 Hz: 0.35 mm, 60 ... 150 Hz: 2g
Mechanical service life (switching cycles)	
• typical	10 000 000
Mechanical service life (switching cycles)	
• 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
Electrical endurance (switching cycles)	
• at AC-15 at 230 V typical	100 000
Electrical endurance (switching cycles)	
• 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
adjustable time	0.05 ... 100 s
Relative setting accuracy relating to full-scale value	15 %
• recovery time	150 ms
Reference code acc. to DIN EN 81346-2	K
relative repeat accuracy	1 %

Product Function	
Product function star-delta circuit	No

Control circuit/ Control	
Type of voltage of the control supply voltage	AC/DC
Control supply voltage 1 at AC	
• at 50 Hz	24 ... 240 V
• at 60 Hz	24 ... 240 V
control supply voltage frequency 1	50 ... 60 Hz
Control supply voltage 1	
• at DC	24 ... 240 V
operating range factor control supply voltage rated value at DC	
• initial value	0.85
• full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	0.85
• full-scale value	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value	0.85

• full-scale value	1.1
Design of the surge suppressor	with varistor
Switching Function	
• switching function ON-delay	Yes
• switching function ON-delay/instantaneous contact	No
• switching function passing make contact	No
• switching function passing make contact/instantaneous contact	No
• Switching function OFF delay	No
Switching function	
• 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
Switching function	
• fixed clock cycle beginning with pulse	No
• fixed clock cycle beginning with interval	No
Switching function	
• variably clocked start with impulse	No
• variably clocked start with interval	No
Switching function	
• star-delta circuit with delay time	No
• star-delta circuit	No
• Switching function with control signal additive ON delay	No
• Switching function with control signal passing break contact	No
• Switching function with control signal passing break contact/instantaneous	No
• Switching function with control signal OFF delay	No
• Switching function with control signal OFF delay/instantaneous	No
• Switching function with control signal pulse delayed	No
• Switching function with control signal pulse delayed/instantaneous	No

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

Short-circuit protection

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

Auxiliary circuit

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

<ul style="list-style-type: none"> • at 24 V • at 250 V 	3 A
Operating current of auxiliary contacts at DC-13	3 A
1 ... 0.1	
<ul style="list-style-type: none"> • operating current of auxiliary contacts at DC-13 at 24 V 	1 A
<ul style="list-style-type: none"> • operating current of auxiliary contacts at DC-13 at 125 V 	0.2 A
<ul style="list-style-type: none"> • operating current of auxiliary contacts at DC-13 at 250 V 	0.1 A
operating frequency with 3RT2 contactor maximum	2 500 1/h
Contact rating of auxiliary contacts according to UL	B300 / R300
influence of the surrounding temperature	±1 %
Power supply influence	±1 %

Main circuit	
type of voltage	AC/DC

Inputs/ Outputs	
<ul style="list-style-type: none"> • Product function at the relay outputs Switchover delayed/without delay 	No
<ul style="list-style-type: none"> • Product function non-volatile 	No

Electromagnetic compatibility	
EMI immunity	
<ul style="list-style-type: none"> • acc. to IEC 61812-1 	Environment A (industrial area)
Conducted interference	
<ul style="list-style-type: none"> • due to burst acc. to IEC 61000-4-4 	2 kV network connection / 1 kV control connection
<ul style="list-style-type: none"> • due to conductor-earth surge acc. to IEC 61000-4-5 	2 kV
<ul style="list-style-type: none"> • due to conductor-conductor surge acc. to IEC 61000-4-5 	1 kV
Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
Electrostatic discharge acc. to IEC 61000-4-2	8 kV

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

Connections/ Terminals	
Product function	
<ul style="list-style-type: none"> • removable terminal for auxiliary and control circuit 	Yes
<ul style="list-style-type: none"> • Type of electrical connection for auxiliary and control current circuit 	spring-loaded terminals
<ul style="list-style-type: none"> • type of connectable conductor cross-sections solid 	0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²)

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

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

Ambient conditions

Installation altitude at height above sea level	
<ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +85 °C
<ul style="list-style-type: none"> • during transport 	-40 ... +85 °C
<ul style="list-style-type: none"> • Relative humidity during operation 	0 ... 95 %

Certificates/ approvals

General Product Approval



[Miscellaneous](#)

Test Certificates

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS

BUREAU VERITAS

LRS

PRS

Marine / Shipping



other

[Confirmation](#)

Railway

[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=3RA2813-2FW10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2813-2FW10>

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

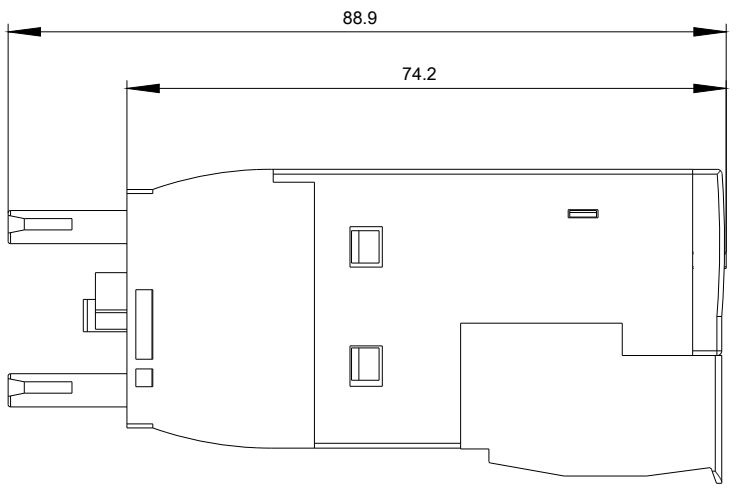
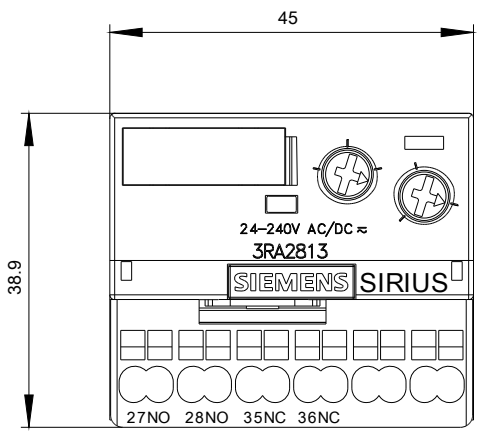
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2813-2FW10>

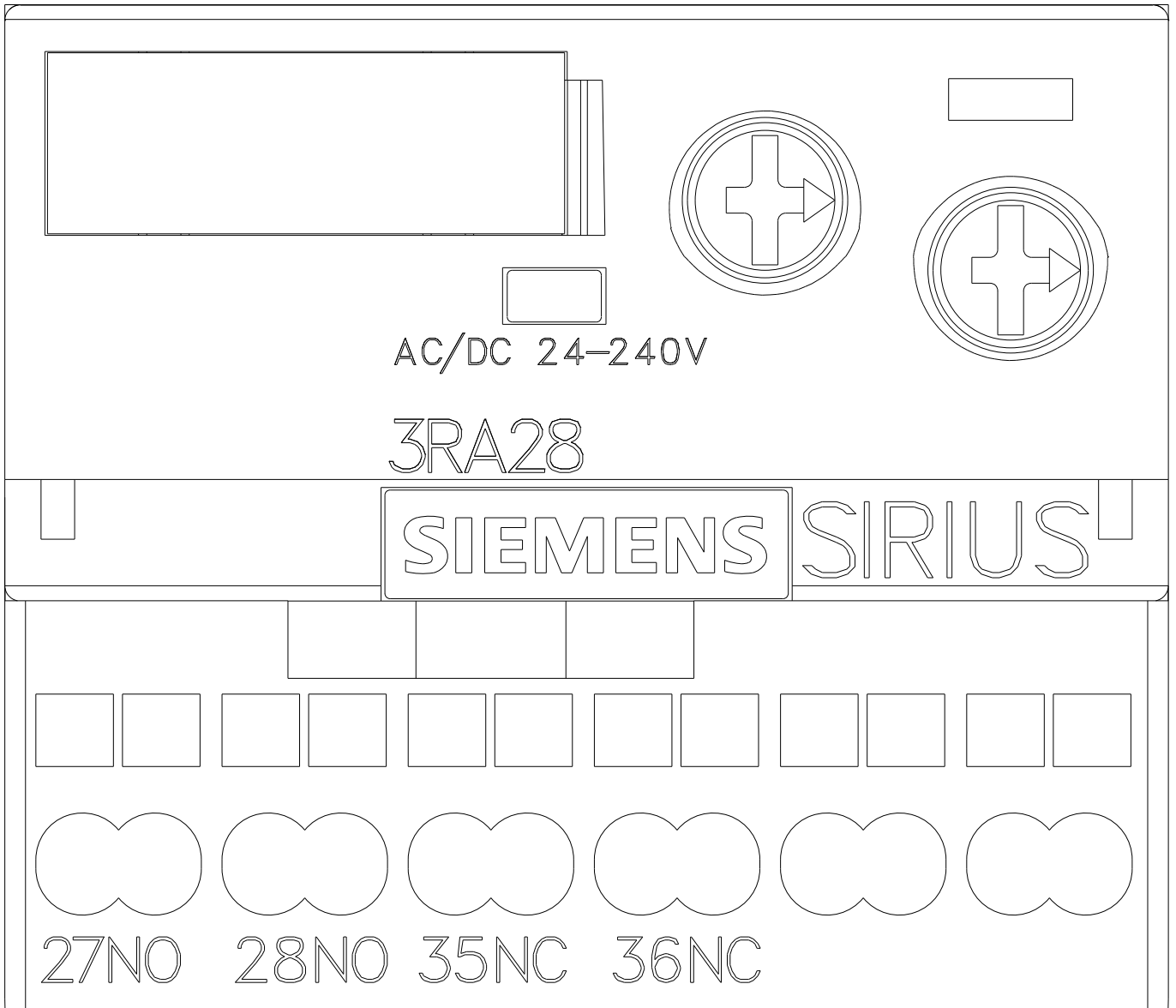
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

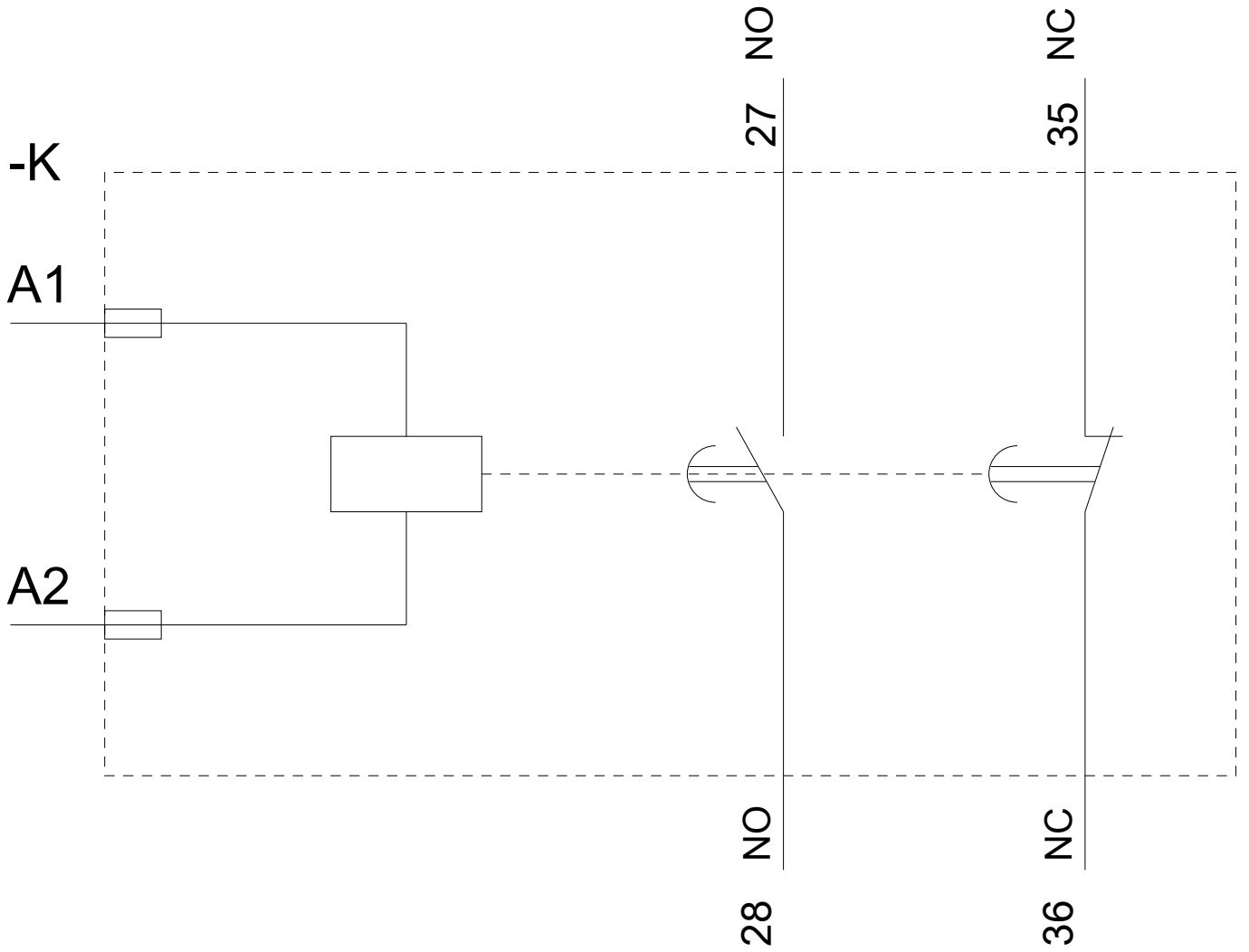
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2813-2FW10&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2813-2FW10/manual>







last modified:

08/14/2020