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Data sheet 3RA2813-1FW10



solid-state time-delayed auxiliary switch, ON-delay, relay 1 NC + 1 NO, time range 0.05-100 s, 24-240 V AC/DC, 50/60 Hz, varistor for attenuation of the contactor coils integrated, screw terminal, can be snapped onto the front on contactors 3RT20 and contactor relays 3RH2

product brand name	SIRIUS
product designation	Solid-state time-delay auxiliary switch
product type designation	3RA28
General technical data	
size of contactor can be combined company-specific	S00, S0, S2, S3
product component semi-conductor output	No
product extension required remote control	No
product extension optional remote control	No
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
protection class IP of the terminal	IP20
shock resistance according to IEC 60068-2-27	15 g / 11 ms
vibration resistance according to IEC 60068-2-6	10 ... 59 Hz: 0.35 mm, 60 ... 150 Hz: 2 g
mechanical service life (operating cycles) typical	10 000 000
mechanical service life (operating 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 (operating cycles) at AC-15 at 230 V typical	100 000
electrical endurance (operating 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 according to IEC 81346-2	K
active principle	electronic
relative repeat accuracy	1 %
influence of the surrounding temperature	±1 %
power supply influence	±1 %
Substance Prohibitance (day/month/year)	10/01/2009
SVHC substance name	Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-

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	10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	94.38 g
Product Function	
product function star-delta circuit	No
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
● at 50 Hz rated value	24 ... 240 V
● at 60 Hz rated value	24 ... 240 V
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 at DC rated value	24 ... 240 V
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
● ON-delay/instantaneous contact	No
● passing make contact	No
● passing make contact/instantaneous contact	No
● OFF delay	No
switching function	
● flashing symmetrically with interval start/instantaneous	No
● flashing symmetrically with interval start	No
● flashing symmetrically with pulse start/instantaneous	No
● flashing symmetrically with pulse start	No
● flashing asymmetrically with interval start	No
● flashing asymmetrically with pulse start	No
switching function	
● constant clock cycle with pulse start	No
● constant clock cycle with interval start	No
switching function	
● variably clocked with pulse start	No
● variably clocked with interval start	No
switching function	
● star-delta circuit with delay time	No
● star-delta circuit	No
switching function with control signal	
● additive ON-delay	No
● passing break contact	No
● passing break contact/instantaneous	No
● OFF delay	No
● OFF delay/instantaneous	No
● pulse delayed	No

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● 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
switching function of interval relay with control signal	
● retrotriggerable with deactivated control signal/instantaneous contact	No
● retrotriggerable with switched-on control signal	No
● retrotriggerable with switched-on control signal/instantaneous contact	No
● retriggerable with deactivated control signal	No
design of the control terminal non-floating	Yes
Short-circuit protection	
design of the fuse link 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	
● delayed switching	1
● instantaneous contact	0
number of NO contacts	
● delayed switching	1
● instantaneous contact	0
number of CO contacts	
● delayed switching	0
● instantaneous contact	0
operational current of auxiliary contacts at AC-15	
● maximum	3 A
● at 24 V	3 A
● at 250 V	3 A
operational current of auxiliary contacts as NC contact at AC-15	
● at 24 V	3 A
● at 250 V	3 A
operational current of auxiliary contacts as NO contact at AC-15	
● at 24 V	3 A
● at 250 V	3 A
operational current of auxiliary contacts at DC-13	1 ... 0.1
operational current of auxiliary contacts at DC-13	
● at 24 V	1 A
● at 125 V	0.2 A
● 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
Main circuit	
type of voltage	AC/DC
Inputs/ Outputs	
product function	
● at the relay outputs switchover delayed/without delay	No
● non-volatile	No
ampacity of the output relay at AC-15 at 250 V at 50/60 Hz	3 A
ampacity of the output relay at DC-13	
● at 24 V	1 A
● at 125 V	0.2 A
Electromagnetic compatibility	

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EMC immunity according to IEC 61812-1	Environment A (industrial area)
conducted interference	
● due to burst according to IEC 61000-4-4	2 kV network connection / 1 kV control connection
● due to conductor-earth surge according to IEC 61000-4-5	2 kV
● due to conductor-conductor surge according to IEC 61000-4-5	1 kV
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	8 kV
Safety related data	
category according to EN 954-1	none
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
type of insulation	Basic insulation
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw terminal
● for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
● solid	0.5 ... 4 mm², 2x (0.5 ... 2.5 mm²)
● finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
● for AWG cables solid	2x (20 ... 14)
● for AWG cables stranded	2x (20 ... 14)
connectable conductor cross-section	
● solid	0.5 ... 4 mm²
● finely stranded with core end processing	0.5 ... 2.5 mm²
● finely stranded without core end processing	0.25 ... 1.5 mm²
AWG number as coded connectable conductor cross section	
● solid	20 ... 14
● stranded	20 ... 14
Installation/ mounting/ dimensions	
mounting position	any (like contactor)
fastening method	clip-on
height	38 mm
width	45 mm
depth	74 mm
required spacing	
● with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
● for grounded parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— at the side	0 mm
— downwards	0 mm
● for live parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	

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● during operation	-25 ... +60 °C
● during storage	-40 ... +85 °C
● during transport	-40 ... +85 °C
relative humidity during operation	0 ... 95 %

Approvals Certificates

Environment	General Product Approval				
Environmental Confirmations	CCC	cULus	UL	EAC	CE EG-Konf.

General Product Approval	Test Certificates		Maritime application		
UKCA	Special Test Certificate	Type Test Certificates/Test Report	ABS	BUREAU VERITAS	DNV

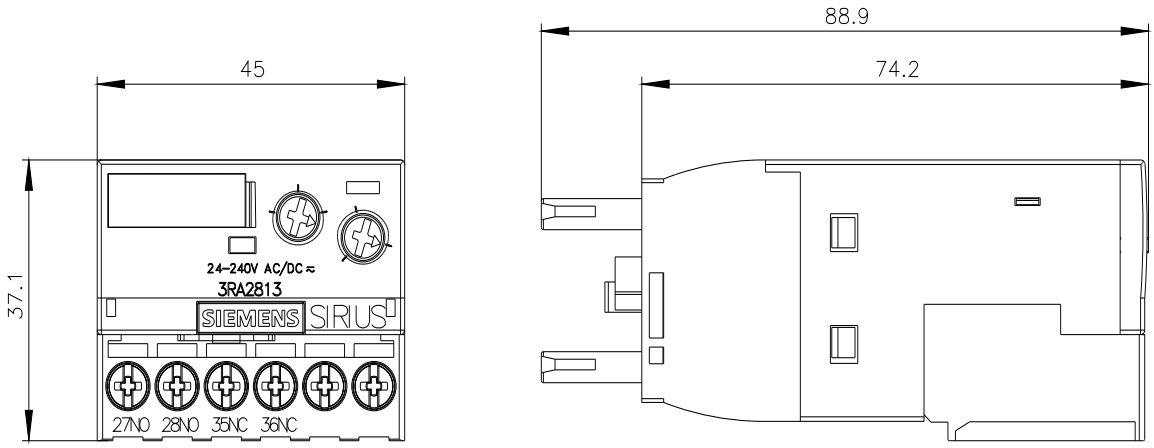
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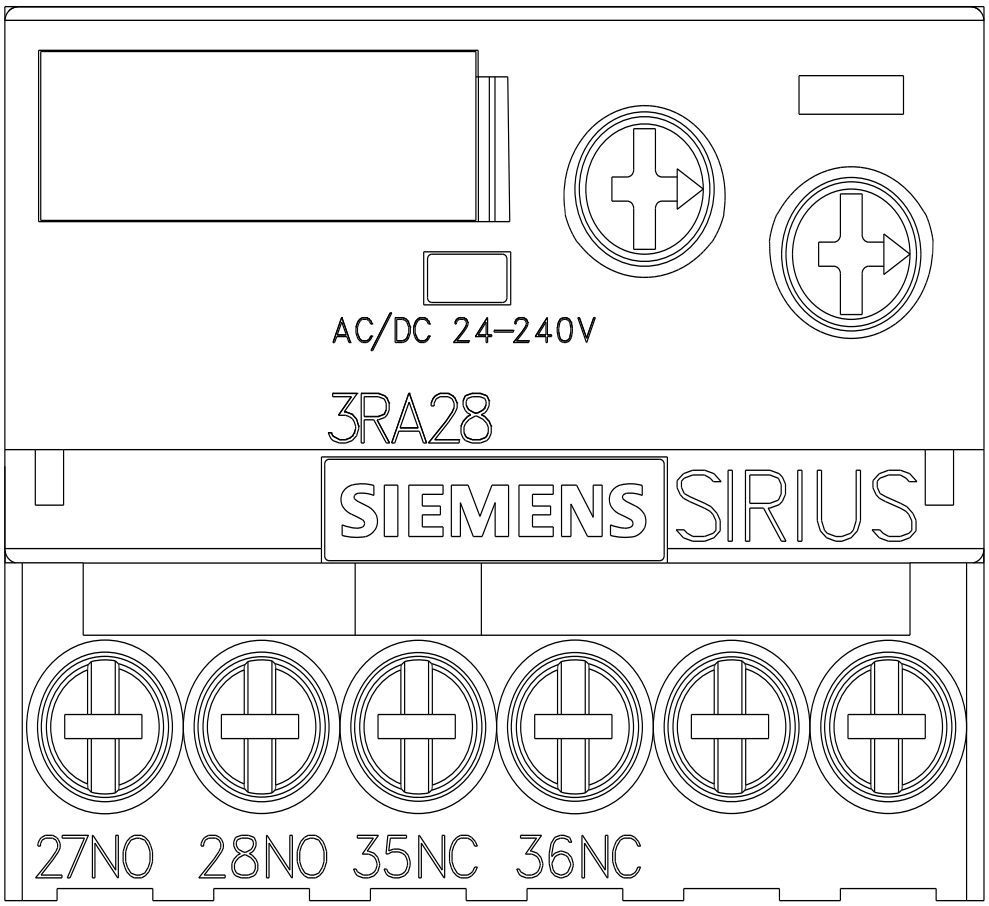
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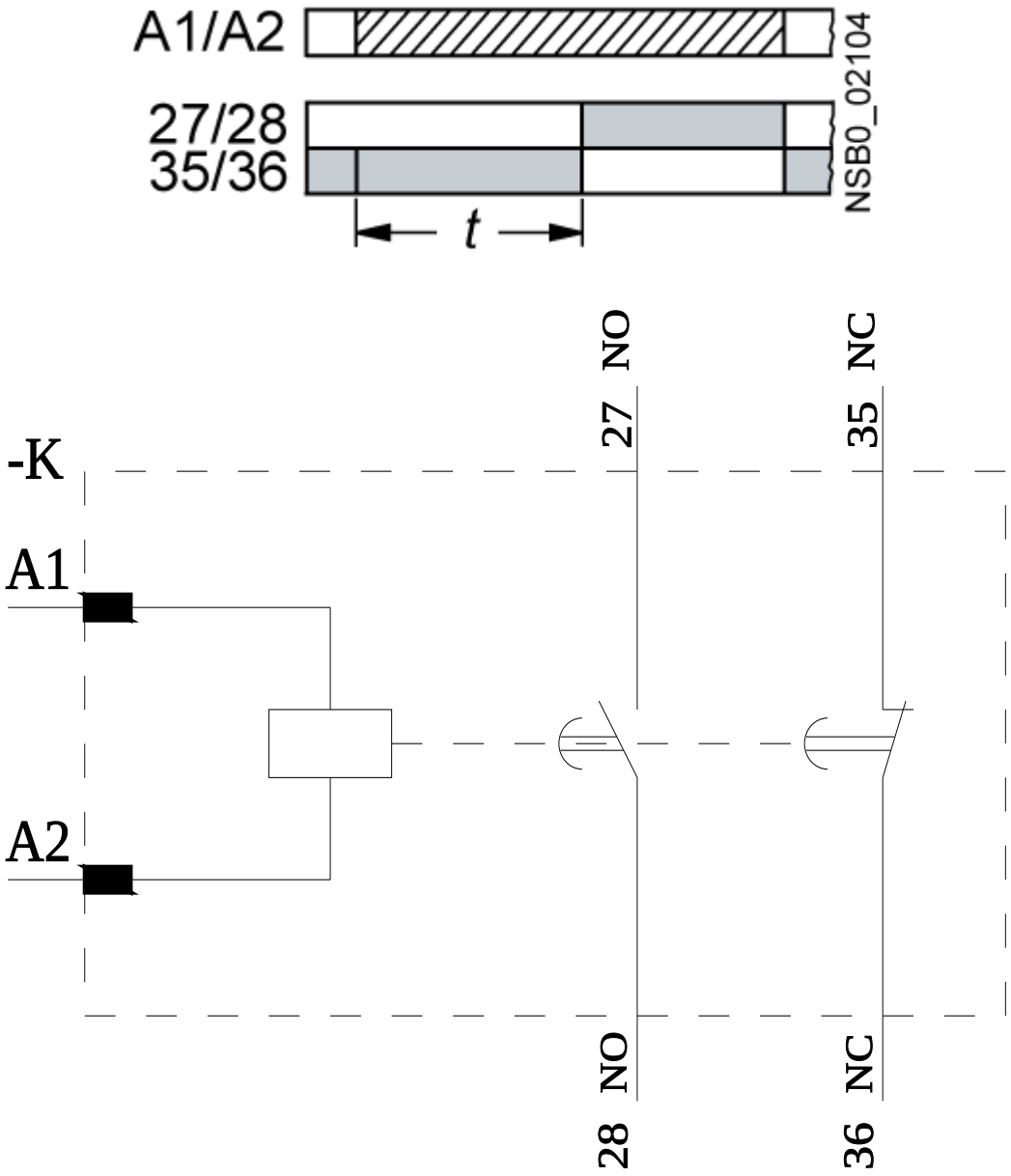
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last modified: 5/29/2026

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