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Data sheet 3RA2816-0EW20

function module star-delta (wye-delta), consisting of lateral basic module and two coupling modules, time range 0.05-60 s, 24-240 V AC/DC, 50/60 Hz, varistor for attenuation of the contactor coils integrated, for contactors 3RT20



product brand name	SIRIUS
product designation	function module
design of the product	comprising basic module and two coupling modules
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
consumed current	
● at 24 V	24 mA
● at 240 V	7 mA
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	0.5 ... 60 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 %

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influence of the surrounding temperature	±1 %
power supply influence	±2 %
Substance Prohibitance (day/month/year)	10/01/2009
SVHC substance name	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	0.216 kg
Product Function	
product function star-delta circuit	Yes
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	No
● 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	Yes
switching function with control signal	
● additive ON-delay	No
● passing break contact	No

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● 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
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	No
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	AgSnO2
number of NC contacts	
● delayed switching	0
● instantaneous contact	0
number of NO contacts	
● delayed switching	2
● instantaneous contact	0
number of CO contacts	
● delayed switching	0
● instantaneous contact	0
operating frequency with 3RT2 contactor maximum	2 500 1/h
Main circuit	
type of voltage	AC/DC
Inputs/ Outputs	
product function	
● at the relay outputs switchover delayed/without delay	No
● non-volatile	No
Electromagnetic compatibility	
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	No
type of electrical connection	screw terminal

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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	
● 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	

Test Certificates	Maritime application
Type Test Certificates/Test Report	

Maritime application	other			Railway
	Confirmation	Confirmation		Special Test Certificate

Further information

Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875
Information for data generation and storage
https://support.industry.siemens.com/cs/ww/en/view/109995012
Information- and Downloadcenter (Catalogs, Brochures,…)

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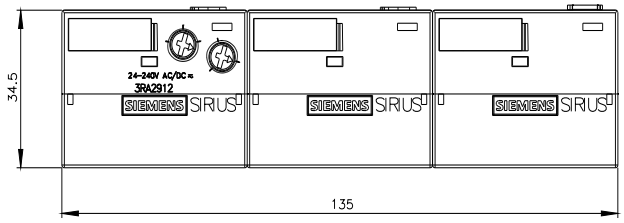
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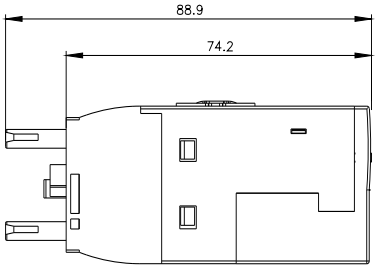
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2816-0EW20

Cax online generator
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2816-0EW20

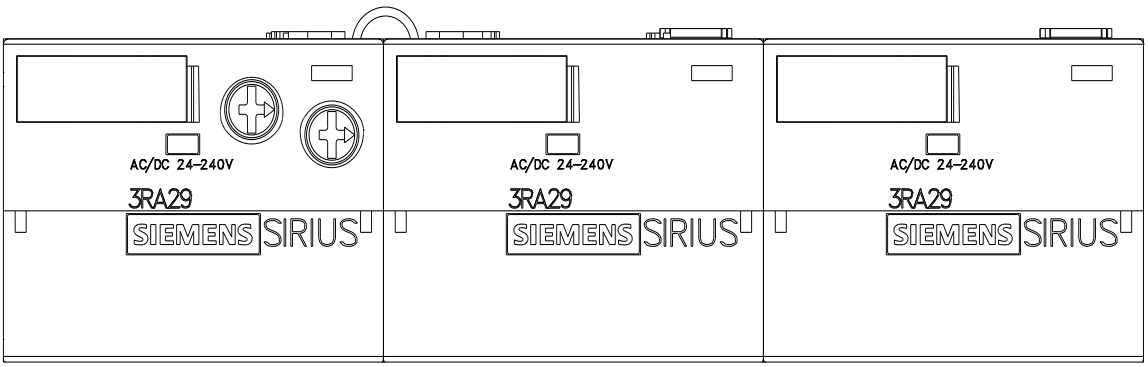
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RA2816-0EW20

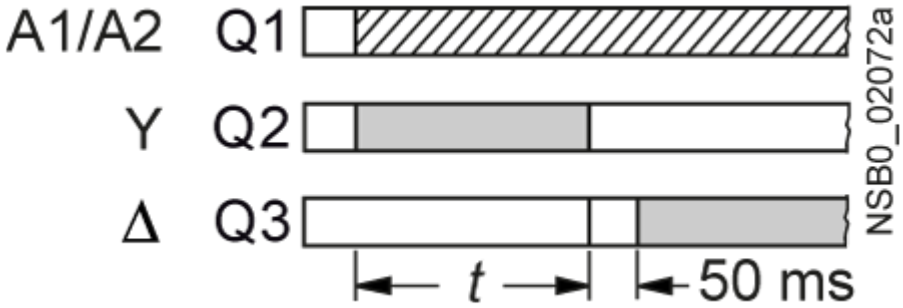
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2816-0EW20&lang=en



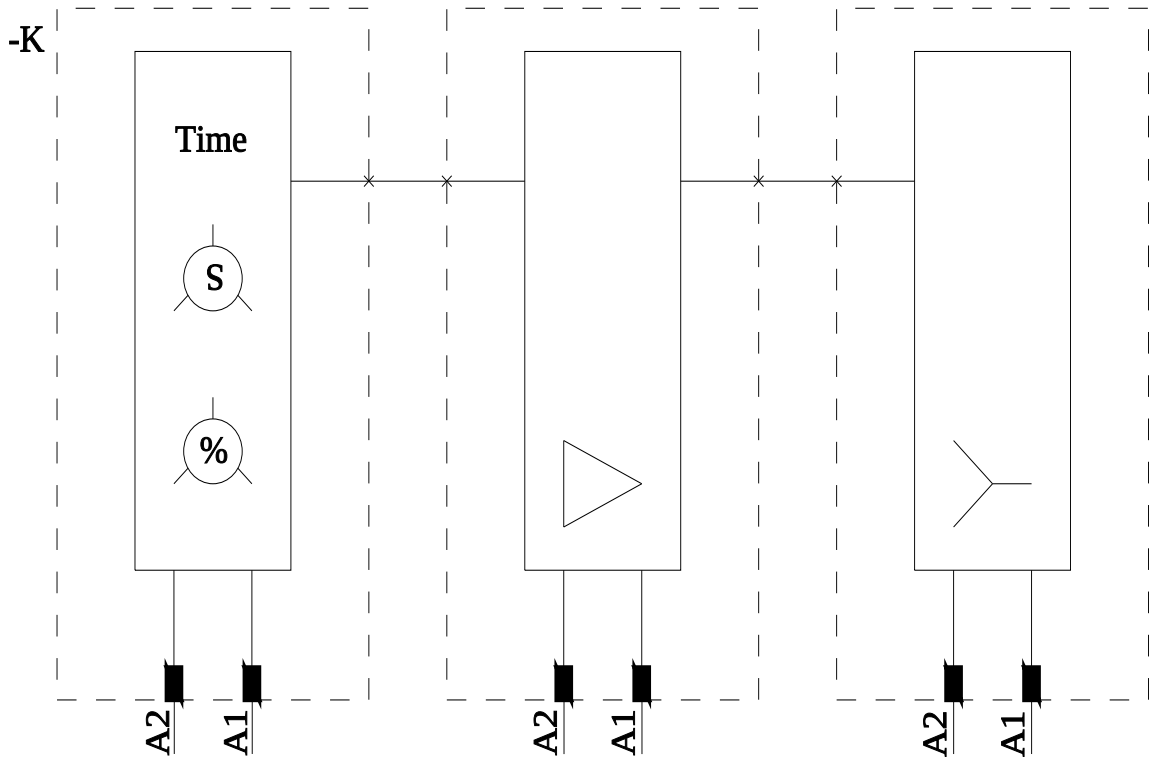


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last modified: 5/29/2026

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