

Electronic timing relay ON delay With semiconductor output 24-90 V AC/DC Time range 0.05...100 s Can be snapped on at the front For contactors 3RT2, S2, S3 and 3RH2 S00 contactor relays Spring-type terminal



Product brand name	SIRIUS
Product designation	function module
Product type designation	3RA28
General technical data	
Product component	
• semi-conductor output	Yes
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	

• 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	100 000 000
Mechanical service life (switching cycles)	
• with contactor 3R.2 of frame size S2	5 000 000
• with contactor 3R.2 of frame size S3	3 000 000
Electrical endurance (switching cycles)	
• at AC-15 at 230 V typical	10 000 000
Electrical endurance (switching cycles)	
• with contactor 3R.2 of frame size S2	5 000 000
• with contactor 3R.2 of frame size S3	3 000 000
Adjustable time	0.05 ... 100 s
Relative setting accuracy relating to full-scale value	15 %
Recovery time	50 ms
Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	K
Reference code acc. to DIN EN 81346-2	K
Reference code acc. to DIN EN 61346-2	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 ... 90 V
• at 60 Hz	24 ... 90 V
Control supply voltage frequency 1	50 ... 60 Hz
Control supply voltage 1	
• at DC	24 ... 90 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 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
• 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
Switching function of interval relay with control signal	
• 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
Design of the control terminal non-floating	Yes

Auxiliary circuit

Number of NO contacts	
• delayed switching	1
Operating frequency with 3RT2 contactor maximum	2 500 1/h
Influence of the surrounding temperature	±1 %
Power supply influence	±1 %

Main circuit

Type of voltage	AC/DC
------------------------	-------

Inputs/ Outputs

Product function	
• non-volatile	No

Electromagnetic compatibility

EMI immunity	
• acc. to IEC 61812-1	Environment A (industrial area)
Conducted interference	
• 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
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	
• 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 ² , 2x (0.5 ... 2.5 mm ²)
• finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• finely stranded without core end processing	2x (0.5 ... 1.5 mm ²)
• at AWG conductors solid	2x (20 ... 14)
• at AWG conductors stranded	2x (20 ... 14)
Connectable conductor cross-section	
• solid	0.5 ... 4 mm ²
• finely stranded with core end processing	0.5 ... 2.5 mm ²
• finely stranded without core end processing	0.25 ... 1.5 mm ²
AWG number as coded connectable conductor cross section	
• solid	20 ... 14
• stranded	20 ... 14

Installation/ mounting/ dimensions	
Mounting position	any (like contactor)
Mounting type	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

Relative humidity

- during operation

0 ... 95 %

Certificates/ approvals

General Product Approval



Test Certificates

[Type Test Certificates/Test Report](#)



LRS

Marine / Shipping



other

[Confirmation](#)

Further information

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

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2831-2DG10>

Cax online generator

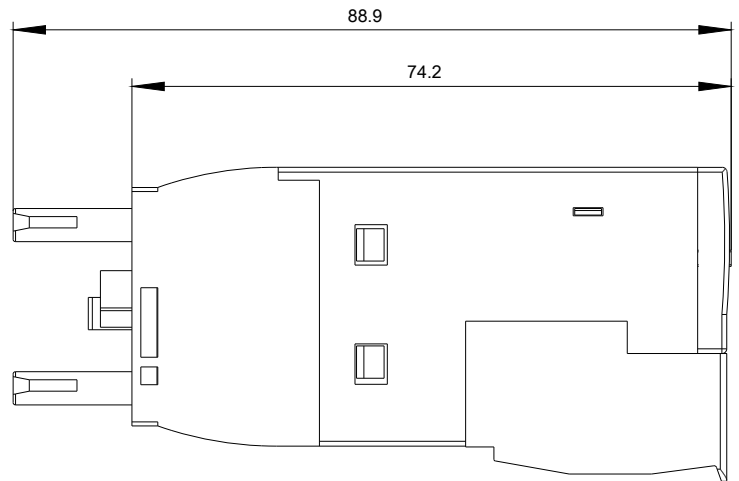
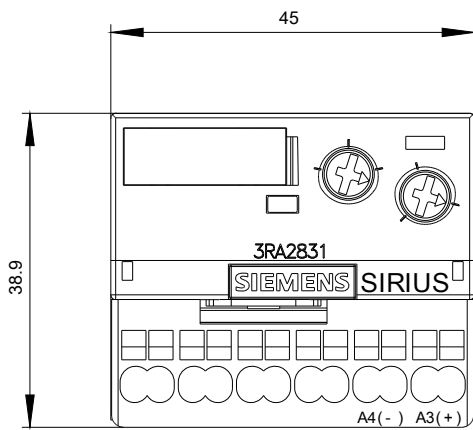
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2831-2DG10>

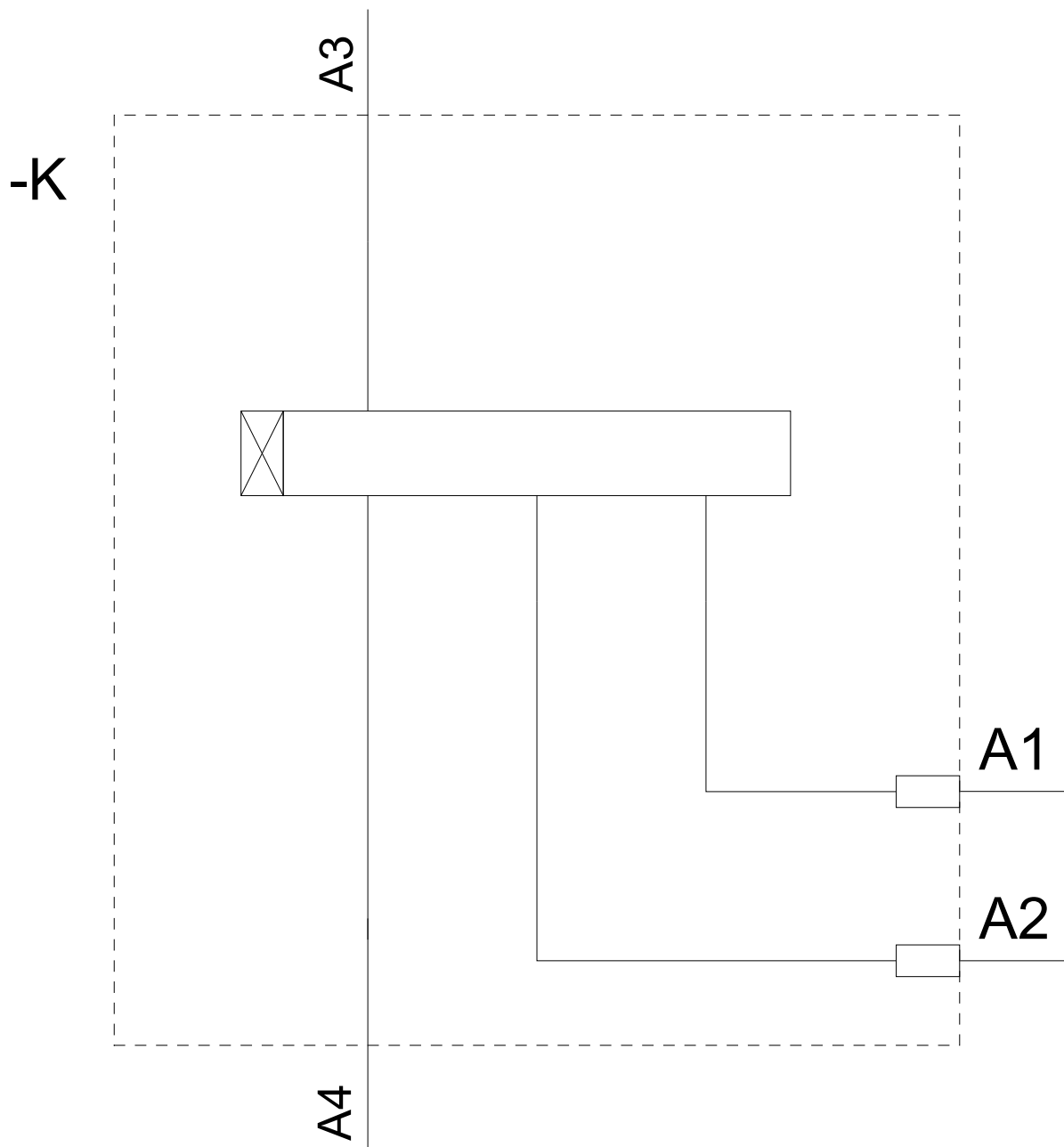
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2831-2DG10>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2831-2DG10&lang=en





last modified:

11/20/2019