



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 Screw terminal

product brand name	SIRIUS
product designation	function module
product type designation	3RA28
General technical data	
size of contactor can be combined company-specific	S2, S3
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 IEC 81346-2	K
relative repeat accuracy	1 %
influence of the surrounding temperature	±1 %
power supply influence	±1 %
Substance Prohibitance (Date)	01.10.2009
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

<ul style="list-style-type: none"> • at 60 Hz 	24 ... 90 V
control supply voltage frequency 1	50 ... 60 Hz
control supply voltage 1	
<ul style="list-style-type: none"> • at DC 	24 ... 90 V
operating range factor control supply voltage rated value at DC	
<ul style="list-style-type: none"> • initial value 	0.85
<ul style="list-style-type: none"> • full-scale value 	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
<ul style="list-style-type: none"> • initial value 	0.85
<ul style="list-style-type: none"> • full-scale value 	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
<ul style="list-style-type: none"> • initial value 	0.85
<ul style="list-style-type: none"> • full-scale value 	1.1
design of the surge suppressor	with varistor
Switching Function	
switching function	
<ul style="list-style-type: none"> • ON-delay 	Yes
<ul style="list-style-type: none"> • ON-delay/instantaneous contact 	No
<ul style="list-style-type: none"> • passing make contact 	No
<ul style="list-style-type: none"> • passing make contact/instantaneous contact 	No
<ul style="list-style-type: none"> • OFF delay 	No
switching function	
<ul style="list-style-type: none"> • flashing symmetrically with interval start/instantaneous 	No
<ul style="list-style-type: none"> • flashing symmetrically with interval start 	No
<ul style="list-style-type: none"> • flashing symmetrically with pulse start/instantaneous 	No
<ul style="list-style-type: none"> • flashing symmetrically with pulse start 	No
<ul style="list-style-type: none"> • flashing asymmetrically with interval start 	No
<ul style="list-style-type: none"> • flashing asymmetrically with pulse start 	No
switching function	
<ul style="list-style-type: none"> • constant clock cycle with pulse start 	No
<ul style="list-style-type: none"> • constant clock cycle with interval start 	No
switching function	
<ul style="list-style-type: none"> • variably clocked with pulse start 	No
<ul style="list-style-type: none"> • variably clocked with interval start 	No
switching function	
<ul style="list-style-type: none"> • star-delta circuit with delay time 	No
<ul style="list-style-type: none"> • star-delta circuit 	No
switching function with control signal	
<ul style="list-style-type: none"> • additive ON-delay 	No
<ul style="list-style-type: none"> • passing break contact 	No
<ul style="list-style-type: none"> • passing break contact/instantaneous 	No
<ul style="list-style-type: none"> • OFF delay 	No
<ul style="list-style-type: none"> • OFF delay/instantaneous 	No
<ul style="list-style-type: none"> • pulse delayed 	No
<ul style="list-style-type: none"> • pulse delayed/instantaneous 	No
<ul style="list-style-type: none"> • pulse-shaping 	No
<ul style="list-style-type: none"> • pulse-shaping/instantaneous 	No
<ul style="list-style-type: none"> • additive ON-delay/instantaneous 	No
<ul style="list-style-type: none"> • ON-delay/OFF-delay 	No
<ul style="list-style-type: none"> • ON-delay/OFF-delay/instantaneous 	No
<ul style="list-style-type: none"> • passing make contact 	No
<ul style="list-style-type: none"> • 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 switched-on control signal 	No



<ul style="list-style-type: none"> ● retrotriggerable with switched-on 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
Auxiliary circuit	
number of NO contacts	
<ul style="list-style-type: none"> ● delayed switching 	1
operating frequency with 3RT2 contactor maximum	2 500 1/h
Main circuit	
type of voltage	AC/DC
Inputs/ Outputs	
product function	
<ul style="list-style-type: none"> ● non-volatile 	No
Electromagnetic compatibility	
EMC immunity 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-based interference acc. to IEC 61000-4-3	10 V/m
electrostatic discharge acc. to IEC 61000-4-2	8 kV
Safety related data	
protection class IP on the front acc. to IEC 60529	IP20
type of insulation	Basic insulation
category acc. to EN 954-1	none
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> ● solid 	0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> ● 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"> ● finely stranded without core end processing 	2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> ● at AWG cables solid 	2x (20 ... 14)
<ul style="list-style-type: none"> ● at AWG cables stranded 	2x (20 ... 14)
connectable conductor cross-section	
<ul style="list-style-type: none"> ● solid 	0.5 ... 4 mm ²
<ul style="list-style-type: none"> ● finely stranded with core end processing 	0.5 ... 2.5 mm ²
<ul style="list-style-type: none"> ● 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	
mounting position	any (like contactor)
fastening method	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 ● for grounded parts <ul style="list-style-type: none"> — forwards — backwards 	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 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 %

Certificates/ approvals

General Product Approval	Declaration of Conformity	Test Certificates	Marine / Shipping
 UL		 EG-Konf.	UK Declaration of Conformity Type Test Certificates/Test Report  ABS

Marine / Shipping



other

[Confirmation](#)

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=3RA2831-1DG10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2831-1DG10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2831-1DG10>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2831-1DG10&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2831-1DG10/manual>

