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Data sheet 3RP1540-2BB31



Timing relay, Processor basis Phased-out product !!! For further information, please contact our sales department OFF delay 2 change-over contacts, without auxiliary voltage 0.05 s...600 s, 24 V AC/DC Spring-type terminal

product brand name	SIRIUS
product designation	timing relay
product type designation	3RP15
General technical data	
product feature protective coating on printed-circuit board	No
product component	
● relay output	Yes
● semi-conductor output	No
product extension required remote control	No
product extension optional remote control	No
power loss [W] maximum	2 W
insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value	300 V
test voltage for isolation test	2 kV
degree of pollution	3
surge voltage resistance rated value	4 000 V
shock resistance according to IEC 60068-2-27	11 g / 15 ms
vibration resistance according to IEC 60068-2-6	10 ... 55 Hz / 0.35 mm
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
adjustable time	0.05 ... 600 s
relative setting accuracy relating to full-scale value	5 %
thermal current	5 A
ON period/maximum minimum	200 ms
recovery time	150 ms
reference code according to IEC 81346-2	K
relative repeat accuracy	1 %
influence of the surrounding temperature	±5 %
power supply influence	±1 %
Substance Prohibitance (day/month/year)	05/28/2009
SVHC substance name	Lead monoxide (lead oxide) CAS-No. 1317-36-8 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	0.118 kg
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
● at 50 Hz rated value	24 V
● at 60 Hz rated value	24 V
control supply voltage 1 at AC	
● at 50 Hz rated value	24 V

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● at 60 Hz rated value	24 V
control supply voltage frequency 1	50 ... 60 Hz
control supply voltage at DC rated value	24 V
control supply voltage 1 at DC rated value	24 V
operating range factor control supply voltage rated value at DC	
● initial value	0.7
● full-scale value	1.25
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
Switching Function	
switching function	
● ON-delay	No
● ON-delay/instantaneous contact	No
● passing make contact	No
● passing make contact/instantaneous contact	No
● OFF delay	Yes
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	
● 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/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
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	

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● delayed switching	0
● instantaneous contact	0
number of NO contacts	
● delayed switching	0
● instantaneous contact	0
number of CO contacts	
● delayed switching	2
● instantaneous contact	0
operational current of auxiliary contacts at AC-15	
● at 24 V	3 A
● at 250 V	3 A
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	5 000 1/h
contact reliability of auxiliary contacts	one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
contact rating of auxiliary contacts according to UL	R300 / B300
Inputs/ Outputs	
product function	
● non-volatile	No
Electromagnetic compatibility	
EMC emitted interference according to IEC 61812-1	EN 61000-6-4(3)
EMC immunity according to IEC 61812-1	EN 61000-6-2
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	4 kV contact discharge / 8 kV air discharge
Safety related data	
category according to EN 954-1	none
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
type of insulation	Basic insulation
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
● for auxiliary and control circuit	spring-loaded terminals
type of connectable conductor cross-sections	
● solid	2x (0.25 ... 1.5 mm²)
● finely stranded with core end processing	2 x (0.25 ... 1.5 mm²)
● finely stranded without core end processing	2x (0.25 ... 1.5 mm²)
● for AWG cables solid	2x (24 ... 16)
● for AWG cables stranded	2x (24 ... 16)
connectable conductor cross-section	
● solid	0.3 ... 1.5 mm²
● finely stranded with core end processing	0.3 ... 1.5 mm²
● finely stranded without core end processing	0.3 ... 1.5 mm²
AWG number as coded connectable conductor cross section	
● solid	24 ... 16
● stranded	24 ... 16
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail
height	103 mm

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width	22.5 mm
depth	91 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	10 ... 95 %

Approvals Certificates

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

EMV		Test Certificates	Maritime application		other
	RCM	Type Test Certificates/Test Report	RINA	RMRS	Confirmation

other		Railway
产品合格 QC PASS	Miscellaneous	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,…)
https://www.siemens.com/ic10
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RP1540-2BB31
Cax online generator
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP1540-2BB31

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https://support.industry.siemens.com/cs/ww/en/ps/3RP1540-2BB31
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
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