



Timing relay, electronic slow-operating 1 change-over contact 24 V AC/DC, 200 to 127 V AC at 50/60 Hz AC 0.05 s to 100 h Overall width 45 mm screw terminal

product brand name	SIRIUS
product designation	timing relay
design of the product	slow-operating
product type designation	3RP20
<b>General technical data</b>	
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	11g / 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 s ... 100 h
relative setting accuracy relating to full-scale value	5 %; +/-
thermal current	5 A
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 (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	0.11 kg
<b>Control circuit/ Control</b>	
type of voltage of the control supply voltage	AC/DC
control supply voltage 1 at AC	
• at 50 Hz rated value	24 V
• at 60 Hz rated value	24 V
control supply voltage 2 at AC	
• at 50 Hz	100 ... 127 V
• at 60 Hz	100 ... 127 V

control supply voltage frequency 1	50 ... 60 Hz
control supply voltage 1 at DC rated value	24 V
operating range factor control supply voltage rated value at DC <ul style="list-style-type: none"> <li>initial value</li> <li>full-scale value</li> </ul>	0.85 1.1
operating range factor control supply voltage rated value at AC at 50 Hz <ul style="list-style-type: none"> <li>initial value</li> <li>full-scale value</li> </ul>	0.85 1.1
operating range factor control supply voltage rated value at AC at 60 Hz <ul style="list-style-type: none"> <li>initial value</li> <li>full-scale value</li> </ul>	0.85 1.1
<b>Switching Function</b>	
switching function <ul style="list-style-type: none"> <li>ON-delay</li> <li>ON-delay/instantaneous contact</li> <li>passing make contact</li> <li>passing make contact/instantaneous contact</li> <li>OFF delay</li> </ul>	Yes No No No No
switching function <ul style="list-style-type: none"> <li>flashing symmetrically with interval start/instantaneous</li> <li>flashing symmetrically with interval start</li> <li>flashing symmetrically with pulse start/instantaneous</li> <li>flashing symmetrically with pulse start</li> <li>flashing asymmetrically with interval start</li> <li>flashing asymmetrically with pulse start</li> </ul>	No No No No No No
switching function <ul style="list-style-type: none"> <li>star-delta circuit with delay time</li> <li>star-delta circuit</li> </ul>	No No
switching function with control signal <ul style="list-style-type: none"> <li>additive ON-delay</li> <li>passing break contact</li> <li>passing break contact/instantaneous</li> <li>OFF delay</li> <li>OFF delay/instantaneous</li> <li>pulse delayed</li> <li>pulse delayed/instantaneous</li> <li>pulse-shaping</li> <li>pulse-shaping/instantaneous</li> <li>additive ON-delay/instantaneous</li> <li>ON-delay/OFF-delay/instantaneous</li> <li>passing make contact</li> <li>passing make contact/instantaneous contact</li> </ul>	No No No No No No No No No No No No No No
switching function of interval relay with control signal <ul style="list-style-type: none"> <li>retrotriggerable with deactivated control signal/instantaneous contact</li> <li>retrotriggerable with switched-on control signal</li> <li>retrotriggerable with switched-on control signal/instantaneous contact</li> <li>retriggerable with deactivated control signal</li> </ul>	No No No No
<b>Short-circuit protection</b>	
design of the fuse link for short-circuit protection of the auxiliary switch required	fuse gL/gG: 4 A
<b>Auxiliary circuit</b>	
material of switching contacts	AgSnO <sub>2</sub>
number of NC contacts <ul style="list-style-type: none"> <li>delayed switching</li> <li>instantaneous contact</li> </ul>	0 0
number of NO contacts <ul style="list-style-type: none"> <li>delayed switching</li> </ul>	0

<ul style="list-style-type: none"> <li>instantaneous contact</li> </ul>	0
<b>number of CO contacts</b>	
<ul style="list-style-type: none"> <li>delayed switching</li> </ul>	1
<ul style="list-style-type: none"> <li>instantaneous contact</li> </ul>	0
<b>operational current of auxiliary contacts at AC-15</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> </ul>	3 A
<ul style="list-style-type: none"> <li>at 250 V</li> </ul>	3 A
<b>operational current of auxiliary contacts at DC-13</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> </ul>	1 A
<ul style="list-style-type: none"> <li>at 125 V</li> </ul>	0.2 A
<ul style="list-style-type: none"> <li>at 250 V</li> </ul>	0.1 A
<b>operating frequency with 3RT2 contactor maximum</b>	5 000 1/h
<b>contact reliability of auxiliary contacts</b>	one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
<b>contact rating of auxiliary contacts according to UL</b>	R300 / B300
<b>Inputs/ Outputs</b>	
<b>product function</b>	
<ul style="list-style-type: none"> <li>non-volatile</li> </ul>	No
<b>Electromagnetic compatibility</b>	
EMC emitted interference according to IEC 61812-1	EN 61000-6-4(3)
EMC immunity according to IEC 61812-1	EN 61000-6-2
<b>conducted interference</b>	
<ul style="list-style-type: none"> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV network connection / 1 kV control connection
<ul style="list-style-type: none"> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	1 kV
<b>field-based interference according to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge according to IEC 61000-4-2</b>	4 kV contact discharge / 8 kV air discharge
<b>Safety related data</b>	
category according to EN 954-1	none
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front
<b>type of insulation</b>	Basic insulation
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	No
type of electrical connection for auxiliary and control circuit	screw-type terminals
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>solid</li> </ul>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>for AWG cables solid</li> </ul>	2x (18 ... 14)
<ul style="list-style-type: none"> <li>for AWG cables stranded</li> </ul>	2x (18 ... 14)
<b>connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>solid</li> </ul>	0.5 ... 2.5 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>	0.5 ... 2.5 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>solid</li> </ul>	18 ... 14
<ul style="list-style-type: none"> <li>stranded</li> </ul>	18 ... 14
<b>tightening torque</b>	0.8 ... 1.2 N·m
<b>design of the thread of the connection screw</b>	M3
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN rail
<b>height</b>	57 mm
<b>width</b>	45 mm
<b>depth</b>	73 mm
<b>required spacing</b>	
<ul style="list-style-type: none"> <li>with side-by-side mounting</li> </ul>	
<ul style="list-style-type: none"> <li>— forwards</li> </ul>	0 mm
<ul style="list-style-type: none"> <li>— backwards</li> </ul>	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
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
relative humidity during operation	10 ... 95 %

#### Approvals Certificates

General Product Approval	EMV
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EMV	Test Certificates	Marine / Shipping
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[KC](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other	Environment
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[Confirmation](#)

[Environmental Confirmations](#)

#### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3RP2025-1AQ30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2025-1AQ30>

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

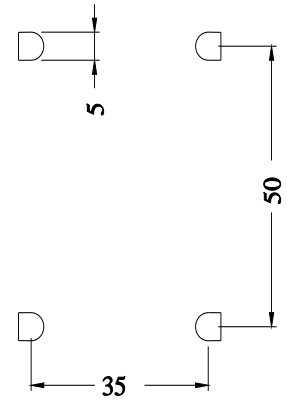
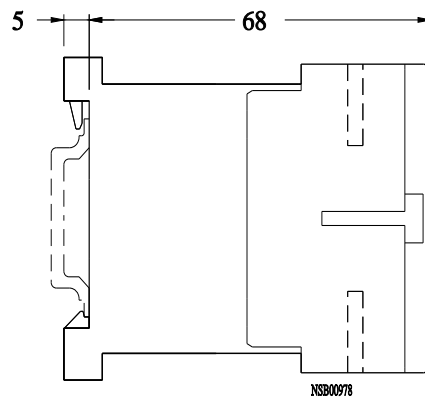
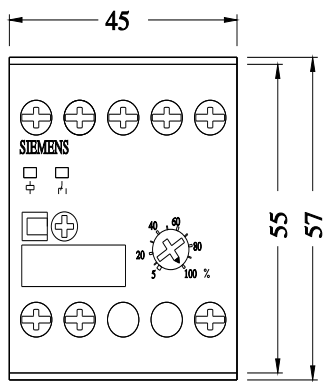
<https://support.industry.siemens.com/cs/ww/en/ps/3RP2025-1AQ30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RP2025-1AQ30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2025-1AQ30&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2025-1AQ30/manual>



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