

Timing relay, electronic ansprechverzögert 1 change-over contact 24 V AC/DC, 200 to 240 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

### General technical data

product component	
<ul style="list-style-type: none"> <li>• relay output</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• semi-conductor output</li> </ul>	No
product extension required remote control	No
product extension optional remote control	No
insulation voltage	
<ul style="list-style-type: none"> <li>• for overvoltage category III according to IEC 60664</li> </ul>	
<ul style="list-style-type: none"> <li>— with degree of pollution 3 rated value</li> </ul>	300 V
test voltage for isolation test	2 kV
degree of pollution	3
surge voltage resistance rated value	4 000 V
shock resistance	
<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-27</li> </ul>	11g / 15 ms

<b>vibration resistance</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-6</li> </ul>	10 ... 55 Hz / 0.35 mm
<b>mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	10 000 000
<b>electrical endurance (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• at AC-15 at 230 V typical</li> </ul>	100 000
<b>adjustable time</b>	0.05 s ... 100 h
<b>relative setting accuracy relating to full-scale value</b>	5 %
<b>thermal current</b>	5 A
<b>recovery time</b>	150 ms
<b>reference code acc. to IEC 81346-2</b>	K
<b>relative repeat accuracy</b>	1 %

### Control circuit/ Control

<b>type of voltage of the control supply voltage</b>	AC/DC
<b>control supply voltage 1 at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>	24 V 24 V
<b>control supply voltage 2 at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	200 ... 240 V 200 ... 240 V
<b>control supply voltage frequency 1</b>	50 ... 60 Hz
<b>control supply voltage 1</b>	
<ul style="list-style-type: none"> <li>• at DC rated value</li> </ul>	24 V
<b>operating range factor control supply voltage rated value at DC</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	0.85 1.1
<b>operating range factor control supply voltage rated value at AC at 50 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	0.85 1.1
<b>operating range factor control supply voltage rated value at AC at 60 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	0.85 1.1

### Switching Function

<b>switching function</b>	
<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

<b>switching function</b>	
• 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
<b>switching function</b>	
• star-delta circuit with delay time	No
• star-delta circuit	No
• switching function with control signal additive ON-delay	No
• switching function with control signal passing break contact	No
• switching function with control signal passing break contact/instantaneous	No
• switching function with control signal OFF delay	No
• switching function with control signal OFF delay/instantaneous	No
• switching function with control signal pulse delayed	No
• switching function with control signal pulse delayed/instantaneous	No
• switching function with control signal pulse-shaping	No
• switching function with control signal pulse-shaping/instantaneous	No
• switching function with control signal additive ON-delay/instantaneous	No
• switching function with control signal ON-delay/OFF-delay/instantaneous	No
• switching function with control signal passing make contact	No
• switching function with control signal passing make contact/instantaneous contact	No
<b>switching function of interval relay with control signal</b>	
• 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

AgSnO<sub>2</sub>

### number of NC contacts

- delayed switching

0

### number of NO contacts

- delayed switching

0

### number of CO contacts

- delayed switching

1

### operational current of auxiliary contacts at AC-15

- at 24 V
- at 250 V

3 A

3 A

### operational current of auxiliary contacts at DC-13

- at 24 V
- at 125 V
- at 250 V

1 A

0.2 A

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

### influence of the surrounding temperature

±5 %

### power supply influence

±1 %

## Inputs/ Outputs

### product function

- non-volatile

No

## Electromagnetic compatibility

### EMC immunity

- acc. to IEC 61812-1

EN 61000-6-2

### conducted interference

- due to burst acc. to IEC 61000-4-4
- due to conductor-earth surge acc. to IEC 61000-4-5
- due to conductor-conductor surge acc. to IEC 61000-4-5

2 kV network connection / 1 kV control connection

2 kV

1 kV

### field-based interference acc. to IEC 61000-4-3

10 V/m

### electrostatic discharge acc. to IEC 61000-4-2

4 kV contact discharge / 8 kV air discharge

## Safety related data

### touch protection against electrical shock

finger-safe

<b>type of insulation</b>	Basic insulation
<b>category acc. to EN 954-1</b>	none

### Connections/ Terminals

<b>product function</b>	No
<ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>	
<b>type of electrical connection</b>	screw-type terminals
<ul style="list-style-type: none"> <li>for auxiliary and control circuit</li> </ul>	
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>solid</li> <li>finely stranded with core end processing</li> <li>at AWG cables solid</li> <li>at AWG cables stranded</li> </ul>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ) 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ) 2x (18 ... 14) 2x (18 ... 14)
<b>connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>solid</li> <li>finely stranded with core end processing</li> </ul>	0.5 ... 2.5 mm <sup>2</sup> 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> <li>stranded</li> </ul>	18 ... 14 18 ... 14
<b>tightening torque</b>	0.8 ... 1.2 N·m
<b>design of the thread of the connection screw</b>	M3

### Installation/ mounting/ dimensions






<b>mounting position</b>	any
<b>fastening method</b>	screw and snap-on mounting onto 35 mm standard mounting 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               <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>for grounded parts               <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>for live parts</li> </ul>	0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 0 mm

— 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
<b>relative humidity</b>	
• during operation	10 ... 95 %

### Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
 CCC	 UL	 EAC
	 RCM	 EG-Konf.
		<a href="#">Miscellaneous</a>

Test Certificates	Marine / Shipping
<a href="#">Type Test Certificates/Test Report</a>	 BUREAU VERITAS
	 LRS
	 PRS
	 RINA
	 RMRS

Marine / Shipping	other
 DNV-GL DNVGL.COM/AF	<a href="#">Confirmation</a>

### 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=3RP2025-1AP30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2025-1AP30>

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

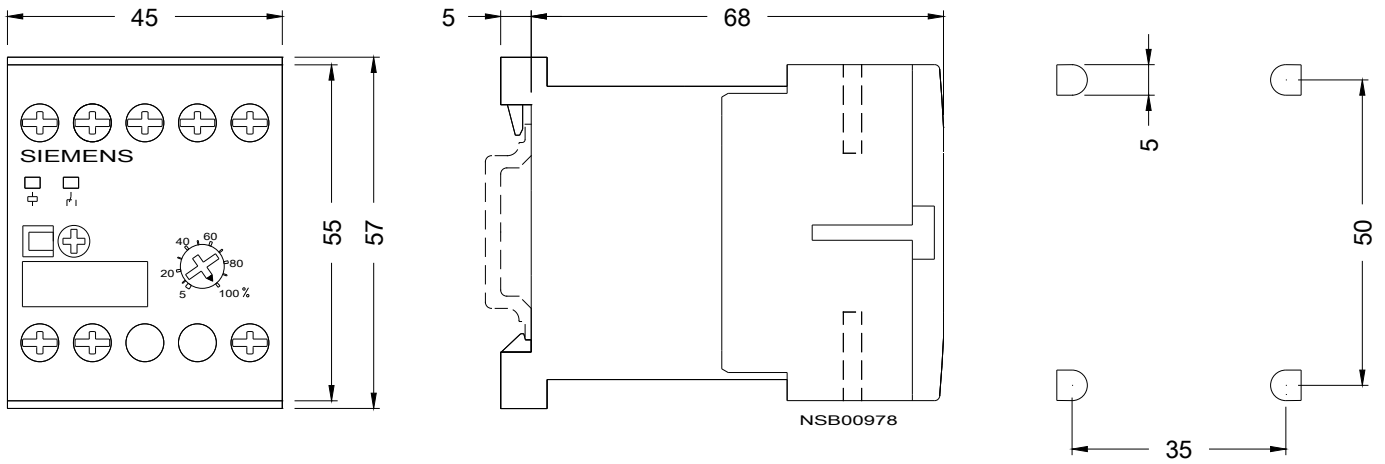
<https://support.industry.siemens.com/cs/ww/en/ps/3RP2025-1AP30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RP2025-1AP30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2025-1AP30&lang=en)

**Characteristic: Derating**

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2025-1AP30/manual>



last modified:

11/23/2020