



Timing relay, electronic Multifunction, 16 functions 2 change-over contacts  
24 to 240 V AC/DC at 50/60 Hz AC 0.05 s to 100 h Overall width 45 mm  
Spring-type terminal

<b>product brand name</b>	SIRIUS
<b>product designation</b>	timing relay
<b>design of the product</b>	Multifunctional
<b>product type designation</b>	3RP20
<b>General technical data</b>	
<b>product component</b>	
• relay output	Yes
• semi-conductor output	No
<b>product extension required remote control</b>	No
<b>product extension optional remote control</b>	No
<b>power loss [W] maximum</b>	2 W
insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value	300 V
<b>test voltage for isolation test</b>	2 kV
<b>degree of pollution</b>	3
<b>surge voltage resistance rated value</b>	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 (switching cycles) typical	10 000 000
electrical endurance (switching cycles) at AC-15 at 230 V typical	100 000
<b>adjustable time</b>	0.05 ... 100 s
<b>relative setting accuracy relating to full-scale value</b>	5 %; +/-
<b>thermal current</b>	5 A
<b>minimum ON period</b>	35 ms
<b>recovery time</b>	150 ms
<b>reference code according to IEC 81346-2</b>	K
<b>relative repeat accuracy</b>	1 %; +/-
influence of the surrounding temperature	±5 %
power supply influence	±1 %
<b>Substance Prohibitance (Date)</b>	05/01/2012
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC/DC
<b>control supply voltage 1 at AC</b>	
• at 50 Hz	24 ... 240 V
• at 60 Hz	24 ... 240 V
<b>control supply voltage frequency 1</b>	50 ... 60 Hz
<b>control supply voltage 1</b>	
• at DC	24 ... 240 V
<b>operating range factor control supply voltage rated</b>	

<b>value at DC</b>	
<ul style="list-style-type: none"> <li>initial value</li> <li>full-scale value</li> </ul>	0.7 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>	0.8 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>	0.8 1.1
<b>Switching Function</b>	
<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 Yes Yes Yes No
<b>switching function</b>	
<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>	Yes Yes No No No No
<b>switching function</b>	
<ul style="list-style-type: none"> <li>star-delta circuit with delay time</li> <li>star-delta circuit</li> </ul>	No Yes
<b>switching function with control signal</b>	
<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>	Yes Yes Yes Yes Yes No No Yes Yes Yes Yes No Yes
<b>switching function of interval relay with control signal</b>	
<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>	
<b>material of switching contacts</b>	AgSnO <sub>2</sub>
<b>number of NC contacts</b>	
<ul style="list-style-type: none"> <li>delayed switching</li> <li>instantaneous contact</li> </ul>	0 0
<b>number of NO contacts</b>	
<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>	2
<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>	
<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>category according to EN 954-1</b>	none
<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	spring-loaded terminals
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>solid</li> </ul>	2x (0,25 ... 2,5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>	2 x (0.25 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>finely stranded without core end processing</li> </ul>	2x (0.25 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>at AWG cables solid</li> </ul>	2x (24 ... 14)
<ul style="list-style-type: none"> <li>at AWG cables stranded</li> </ul>	2x (24 ... 14)
<b>connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>solid</li> </ul>	0.3 ... 2.5 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>	0.3 ... 1.5 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>finely stranded without core end processing</li> </ul>	2.5 ... 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>	24 ... 14
<ul style="list-style-type: none"> <li>stranded</li> </ul>	24 ... 14
<b>Installation/ mounting/ dimensions</b>	
<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</li> </ul>	

— 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
<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 %

#### Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
--------------------------	-----	---------------------------

[Confirmation](#)



Declaration of Conformity	Test Certificates	Marine / Shipping
---------------------------	-------------------	-------------------



[Type Test Certificates/Test Report](#)



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=3RP2005-2BW30>

Cax online generator

<http://support.automation.siemens.com/WWW/CAXorder/default.aspx?lang=en&mlfb=3RP2005-2BW30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-2BW30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RP2005-2BW30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2005-2BW30&lang=en)

Characteristic: Derating

last modified:

12/9/2021 