

Timing relay, Multifunction 2 change-over contacts, 13 functions  
Positively driven Relay contacts 24...240 V AC/DC at 50/60 Hz AC 7  
time ranges (0.05 s...100 h) with LED, Screw terminal



Product brand name	SIRIUS
Product designation	timing relay
Design of the product	13 functions, suitable for railway applications
Product type designation	3RP25

General technical data	
<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>Test voltage for isolation test</b>	2.5 kV
<b>Degree of pollution</b>	3
<b>Surge voltage resistance rated value</b>	4 000 V
<b>Protection class IP</b>	IP20
<b>Shock resistance</b>	
• acc. to IEC 60068-2-27	11g / 15 ms
<b>Mechanical service life (switching cycles)</b>	
• typical	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>Minimum ON period</b>	35 ms
<b>Recovery time</b>	250 ms
<b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>	K
<b>Reference code acc. to DIN EN 81346-2</b>	K
<b>Reference code acc. to DIN EN 61346-2</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</li> </ul>	24 ... 240 V
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	24 ... 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</li> </ul>	24 ... 240 V
<b>Operating range factor control supply voltage rated value at DC</b>	
<ul style="list-style-type: none"> <li>• initial value</li> </ul>	0.7
<ul style="list-style-type: none"> <li>• Full-scale value</li> </ul>	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> </ul>	0.7
<ul style="list-style-type: none"> <li>• Full-scale value</li> </ul>	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> </ul>	0.7
<ul style="list-style-type: none"> <li>• Full-scale value</li> </ul>	1.1
<b>Inrush current peak</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> </ul>	0.5 A
<ul style="list-style-type: none"> <li>• at 240 V</li> </ul>	5 A
<b>Duration of inrush current peak</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> </ul>	0.4 ms
<ul style="list-style-type: none"> <li>• at 240 V</li> </ul>	0.5 ms

### Switching Function

<b>Switching function</b>	
<ul style="list-style-type: none"> <li>• ON-delay</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• ON-delay/instantaneous contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• passing make contact</li> </ul>	Yes

<ul style="list-style-type: none"> <li>• passing make contact/instantaneous contact</li> <li>• OFF delay</li> </ul>	No
<ul style="list-style-type: none"> <li>• OFF delay</li> </ul>	No
<b>Switching function</b>	
<ul style="list-style-type: none"> <li>• flashing symmetrically starting with interval/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• flashing symmetrically starting with interval</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• flashing symmetrically starting with pulse/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• flashing symmetrically starting with pulse</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• flashing asymmetrically starting with interval</li> </ul>	No
<ul style="list-style-type: none"> <li>• flashing asymmetrically starting with pulse</li> </ul>	No
<b>Switching function</b>	
<ul style="list-style-type: none"> <li>• star-delta circuit with delay time</li> </ul>	No
<ul style="list-style-type: none"> <li>• star-delta circuit</li> </ul>	No
<b>Switching function with control signal</b>	
<ul style="list-style-type: none"> <li>• additive ON delay</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• passing break contact</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• passing break contact/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• OFF delay</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• OFF delay/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• pulse delayed</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• pulse delayed/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• pulse-shaping</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• pulse-shaping/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• additive ON delay/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• ON-delay/OFF-delay/instantaneous</li> </ul>	No
<ul style="list-style-type: none"> <li>• passing make contact</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• passing make contact/instantaneous contact</li> </ul>	No
<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> </ul>	No
<ul style="list-style-type: none"> <li>• retrotriggerable with activated control signal</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• retrotriggerable with activated control signal/instantaneous contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• retriggerable with deactivated control signal</li> </ul>	Yes
<b>Design of the control terminal non-floating</b>	Yes
<b>Short-circuit protection</b>	
<b>Design of the fuse link</b>	
<ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gL/gG: 4 A
<b>Auxiliary circuit</b>	
<b>Material of switching contacts</b>	AgSnO2

<b>Number of CO contacts</b>	
<ul style="list-style-type: none"> <li>• delayed switching</li> </ul>	2
<b>Operating 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>Operating 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>Influence of the surrounding temperature</b>	1% in the whole temperature range to the set runtime
<b>Power supply influence</b>	1% in the whole voltage range to the set runtime
<b>Switching capacity current with inductive load</b>	0.01 ... 3 A

#### Inputs/ Outputs

<b>Product function</b>	
<ul style="list-style-type: none"> <li>• at the relay outputs Switchover delayed/without delay</li> </ul>	No
<ul style="list-style-type: none"> <li>• non-volatile</li> </ul>	No

#### Electromagnetic compatibility

<b>EMI immunity</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 61812-1</li> </ul>	EN 61000-6-2
<b>Conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to burst acc. 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 acc. to IEC 61000-4-5</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	1 kV
<b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>	10 V/m
<b>Electrostatic discharge acc. to IEC 61000-4-2</b>	4 kV contact discharge / 8 kV air discharge

#### Safety related data

<b>Protection against electrical shock</b>	finger-safe
<b>Type of insulation</b>	Basic insulation
<b>Category acc. to EN 954-1</b>	none

#### Connections/ Terminals

<b>Product function</b>	
<ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>	Yes
<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for auxiliary and control current circuit</li> </ul>	screw-type terminals

<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 conductors solid</li> <li>• at AWG conductors stranded</li> </ul>	<p>1x (0.5 ... 4.0 mm<sup>2</sup>), 2x (0.5 ... 2.5 mm<sup>2</sup>)</p> <p>1x (0.5 ... 4 mm<sup>2</sup>), 2x (0.5 ... 1.5 mm<sup>2</sup>)</p> <p>1x (20 ... 12), 2x (20 ... 14)</p> <p>1x (20 ... 12), 2x (20 ... 14)</p>
<b>Connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>	<p>0.5 ... 4 mm<sup>2</sup></p> <p>0.5 ... 4 mm<sup>2</sup></p>
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> </ul>	<p>20 ... 12</p> <p>20 ... 14</p>
<b>Tightening torque</b>	0.6 ... 0.8 N·m
<b>Design of the thread of the connection screw</b>	M3

### Installation/ mounting/ dimensions

<b>Mounting position</b>	any
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail
<b>Height</b>	100 mm
<b>Width</b>	22.5 mm
<b>Depth</b>	90 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 <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> </ul>	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p>










### Ambient conditions

<b>Relative humidity</b>	
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• during operation

10 ... 95 %

## Certificates/ approvals

General Product Approval			EMC	Declaration of Conformity	
 CCC	 CSA	 UL		 RCM	 EG-Konf.
Declaration of Conformity	Test Certificates		Marine / Shipping		
<a href="#">Miscellaneous</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</a>	 LRS	 RINA	 RMRS
Marine / Shipping	other				



[Confirmation](#)

## Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RP2505-1RW30>

**Cax online generator**

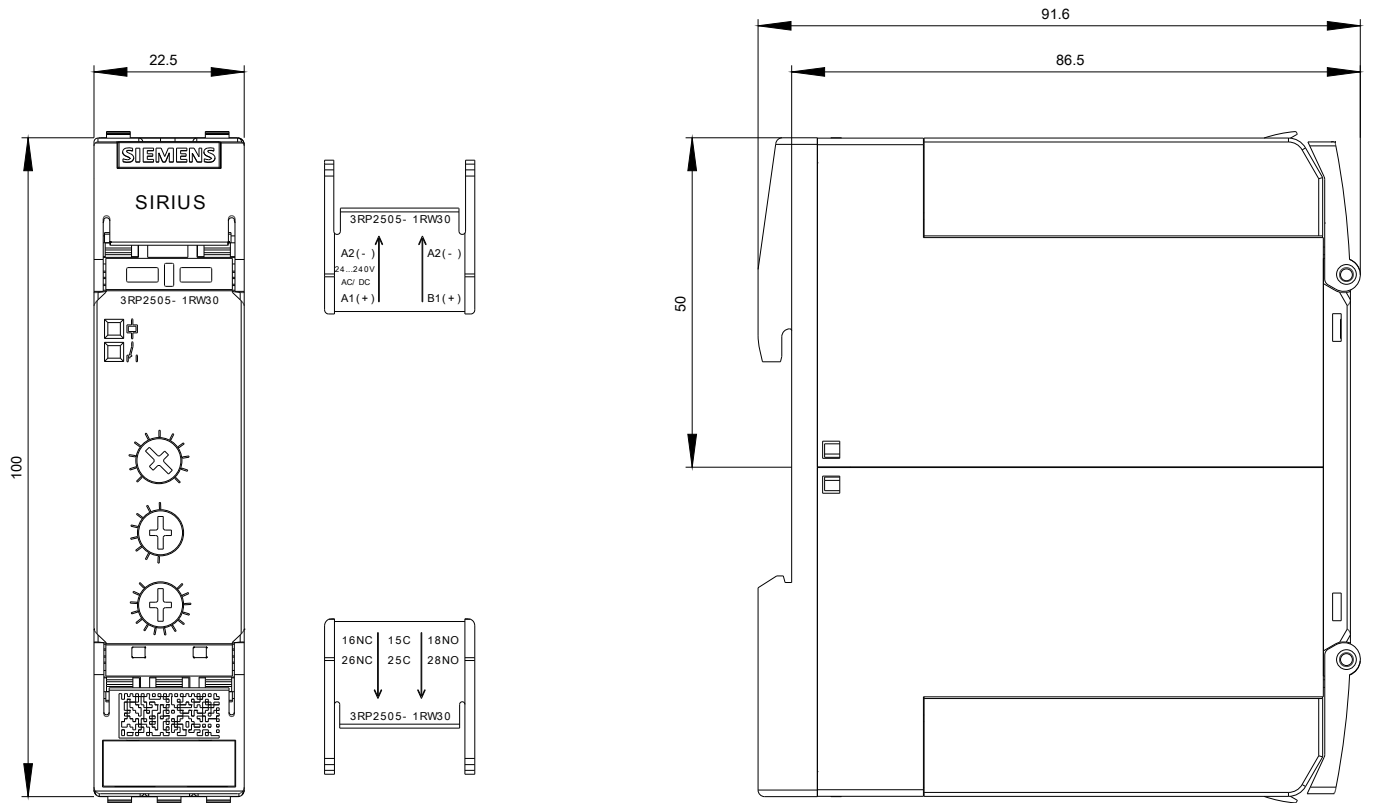
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2505-1RW30>

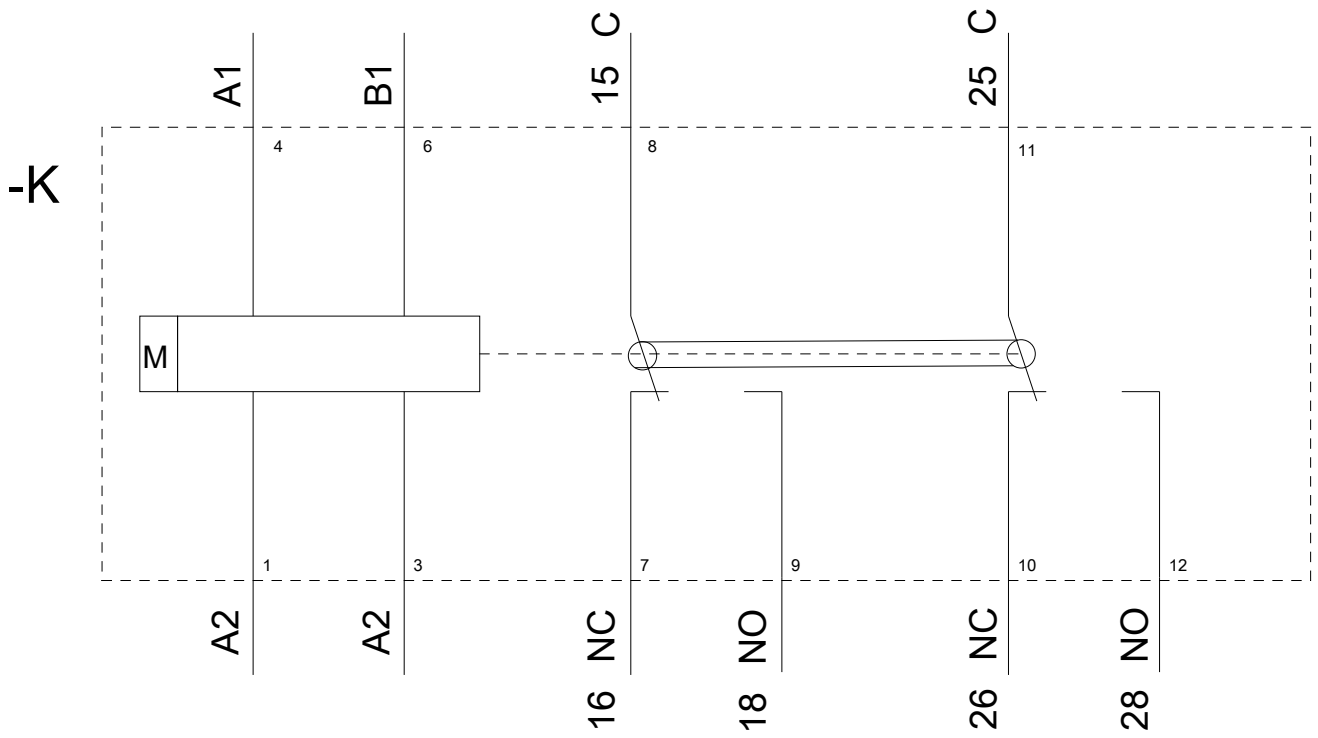
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1RW30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RP2505-1RW30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2505-1RW30&lang=en)





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