

Timing relay, Multifunction 2 change-over contacts, 27 functions 7 time ranges (0.05 s...100 h) 12-240 V AC/DC at 50/60 Hz AC with LED, Screw terminal



Product brand name	SIRIUS
Product designation	timing relay
Design of the product	27 functions
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>Power loss [W] total typical</b>	2 W
<b>Insulation voltage</b>	
• for overvoltage category III according to IEC 60664	
— with degree of pollution 3 rated value	300 V
<b>Test voltage for isolation test</b>	2.5 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>	
• at AC-15 at 230 V typical	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>	
• at 50 Hz	12 ... 240 V
• at 60 Hz	12 ... 240 V
<b>Control supply voltage frequency 1</b>	50 ... 60 Hz
<b>Control supply voltage 1</b>	
• at DC	12 ... 240 V
<b>Operating range factor control supply voltage rated value at DC</b>	
• initial value	0.85
• Full-scale value	1.1
<b>Operating range factor control supply voltage rated value at AC at 50 Hz</b>	
• initial value	0.85
• Full-scale value	1.1
<b>Operating range factor control supply voltage rated value at AC at 60 Hz</b>	
• initial value	0.85
• Full-scale value	1.1
<b>Inrush current peak</b>	
• at 24 V	0.3 A
• at 240 V	5 A
<b>Duration of inrush current peak</b>	
• at 24 V	0.3 ms
• at 240 V	0.5 ms

## Switching Function

<b>Switching function</b>	
• ON-delay	Yes
• ON-delay/instantaneous contact	Yes
• passing make contact	Yes
• passing make contact/instantaneous contact	Yes
• OFF delay	No
<b>Switching function</b>	
• flashing symmetrically starting with interval/instantaneous	Yes
• flashing symmetrically starting with interval	Yes
• flashing symmetrically starting with pulse/instantaneous	Yes
• flashing symmetrically starting with pulse	Yes
• flashing asymmetrically starting with interval	No
• flashing asymmetrically starting with pulse	No
<b>Switching function</b>	
• star-delta circuit with delay time	No
• star-delta circuit	Yes
<b>Switching function with control signal</b>	
• additive ON delay	Yes
• passing break contact	Yes
• passing break contact/instantaneous	Yes
• OFF delay	Yes
• OFF delay/instantaneous	Yes
• pulse delayed	Yes
• pulse delayed/instantaneous	Yes
• pulse-shaping	Yes
• pulse-shaping/instantaneous	Yes
• additive ON delay/instantaneous	Yes
• ON-delay/OFF-delay/instantaneous	Yes
• passing make contact	Yes
• passing make contact/instantaneous contact	Yes
<b>Switching function of interval relay with control signal</b>	
• retrotriggerable with deactivated control signal/instantaneous contact	Yes
• retrotriggerable with activated control signal	Yes
• retrotriggerable with activated control signal/instantaneous contact	Yes
• retriggerable with deactivated control signal	Yes
<b>Design of the control terminal non-floating</b>	Yes

## Short-circuit protection

<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

### Auxiliary circuit

<b>Material of switching contacts</b>	AgSnO2
<b>Number of CO contacts</b>	2
<ul style="list-style-type: none"> <li>delayed switching</li> </ul>	
<b>Operating current of auxiliary contacts at AC-15</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> <li>at 250 V</li> </ul>	3 A 3 A
<b>Operating current of auxiliary contacts at DC-13</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> <li>at 125 V</li> <li>at 250 V</li> </ul>	1 A 0.2 A 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> <li>non-volatile</li> </ul>	Yes 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> <li>due to conductor-earth surge acc. to IEC 61000-4-5</li> <li>due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	2 kV network connection / 1 kV control connection 2 kV 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>	1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> ) 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ) 1x (20 ... 12), 2x (20 ... 14) 1x (20 ... 12), 2x (20 ... 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 ... 4 mm <sup>2</sup> 0.5 ... 4 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>	20 ... 12 20 ... 14
<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> </ul> </li> </ul>	0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm

— upwards	0 mm
— downwards	0 mm
— at the side	0 mm


### Ambient conditions

<b>Installation altitude at height above sea level</b>	
• 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

<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>
 CCC	 EAC	 EG-Konf.
 CSA	 UL	 C-Tick

<b>Test Certificates</b>	<b>Marine / Shipping</b>
<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</a>
 LRS	 PRS
	 RINA
	 RMRS

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

### Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

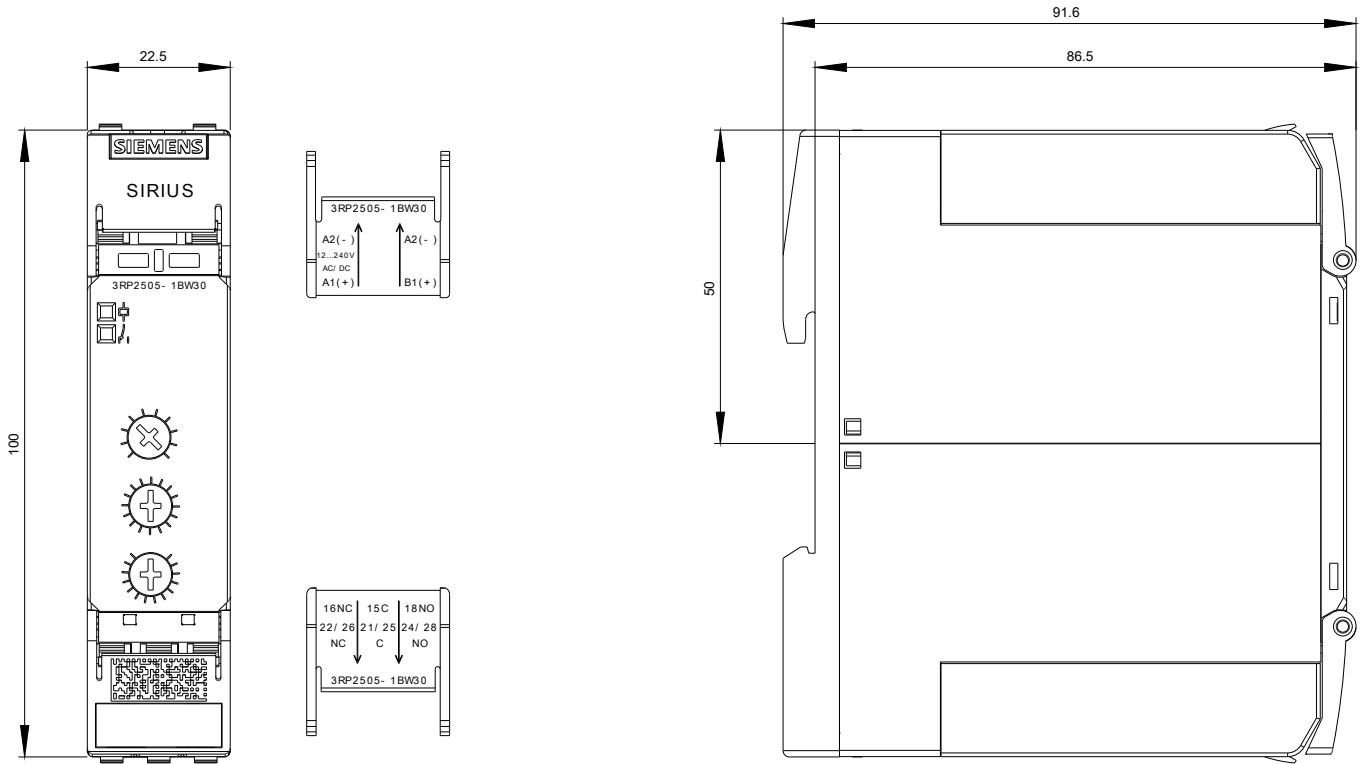
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RP2505-1BW30>

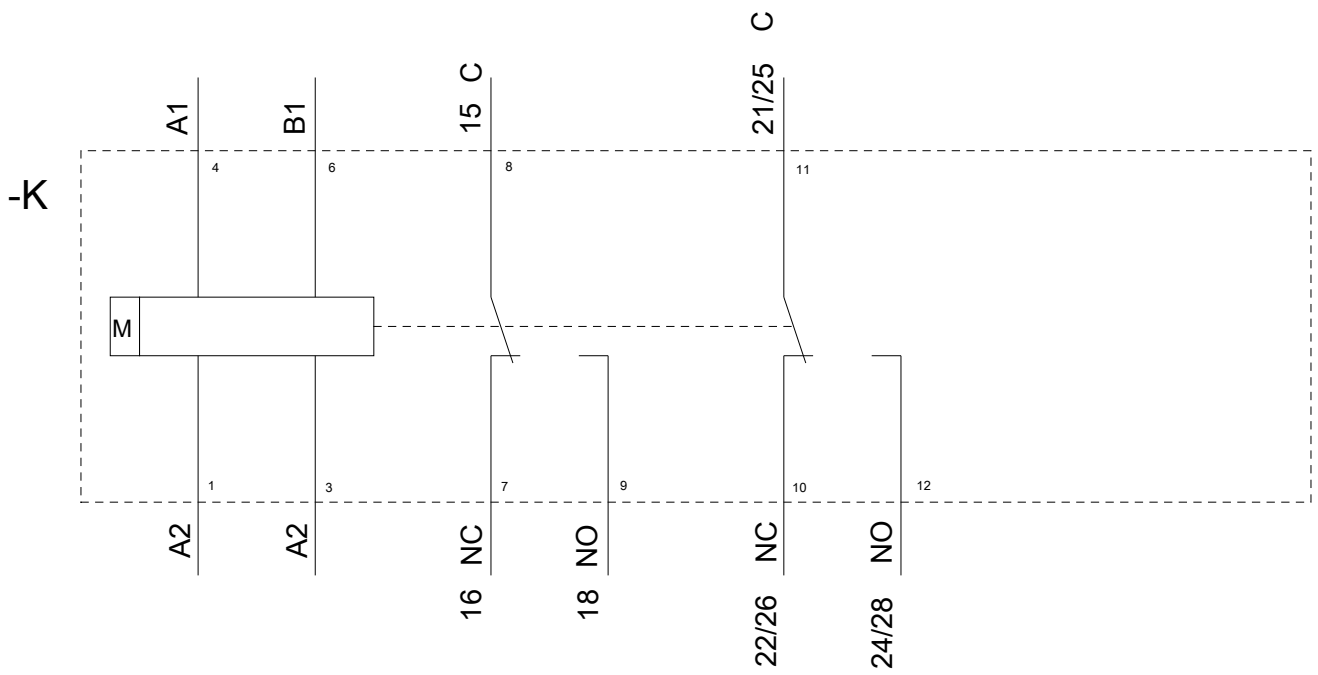
**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2505-1BW30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1BW30>





last modified:

02/15/2019