



Timing relay, Multifunction 2 change-over contacts, 27 functions 7 time ranges (0.05 s...100 h) 400-440 V AC 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
<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	500 V
test voltage for isolation test	2.5 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
minimum ON period	35 ms
recovery time	150 ms
reference code according to IEC 81346-2	K
relative repeat accuracy	1 %; +/-
influence of the surrounding temperature	1% in the whole temperature range to the set runtime
power supply influence	1% in the whole voltage range to the set runtime
Substance Prohibitance (Date)	09/12/2014
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	0.174 kg
<b>Control circuit/ Control</b>	
type of voltage of the control supply voltage	AC
control supply voltage 1 at AC	
• at 50 Hz	400 ... 440 V
• at 60 Hz	400 ... 440 V
control supply voltage frequency 1	50 ... 60 Hz
operating range factor control supply voltage rated value at	

<b>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 440 V	1.5 A
<b>duration of inrush current peak</b>	
• at 440 V	0.1 ms
<b>Switching Function</b>	
<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 with interval start/instantaneous	Yes
• flashing symmetrically with interval start	Yes
• flashing symmetrically with pulse start/instantaneous	Yes
• flashing symmetrically with pulse start	Yes
• 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	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 switched-on control signal	Yes
• retrotriggerable with switched-on control signal/instantaneous contact	Yes
• retriggerable with deactivated control signal	Yes
<b>design of the control terminal non-floating</b>	Yes
<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>	AgSnO2
<b>number of NC contacts</b>	
• delayed switching	0
• instantaneous contact	0
<b>number of NO contacts</b>	
• delayed switching	0
• instantaneous contact	0
<b>number of CO contacts</b>	

<ul style="list-style-type: none"> <li>• delayed switching</li> <li>• instantaneous contact</li> </ul>	2 0
<b>operational current of auxiliary contacts at AC-15</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 250 V</li> <li>• at 400 V</li> </ul>	3 A 3 A 3 A
<b>operational 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>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

EMC emitted interference according to IEC 61812-1	ambience A (industrial sector)
EMC immunity according to IEC 61812-1	corresponds to degree of severity 3
<b>conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to burst according to IEC 61000-4-4</li> <li>• due to conductor-earth surge according to IEC 61000-4-5</li> <li>• due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	2 kV network connection / 1 kV control connection 2 kV 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

### Safety related data

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>type of insulation</b>	Basic insulation

### Connections/ Terminals

<b>product component removable terminal for auxiliary and control circuit</b>	Yes
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> <li>• finely stranded with core end processing</li> <li>• for AWG cables solid</li> <li>• for AWG cables 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>fastening method</b>	screw and snap-on mounting onto 35 mm DIN 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> </ul> </li> </ul>	0 mm 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



[Confirmation](#)



#### EMV Test Certificates Marine / Shipping



[KC](#)

[Type Test Certificates/Test Report](#)



#### Marine / Shipping other Environment



[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=3RP2505-1BT20>

#### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2505-1BT20>

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

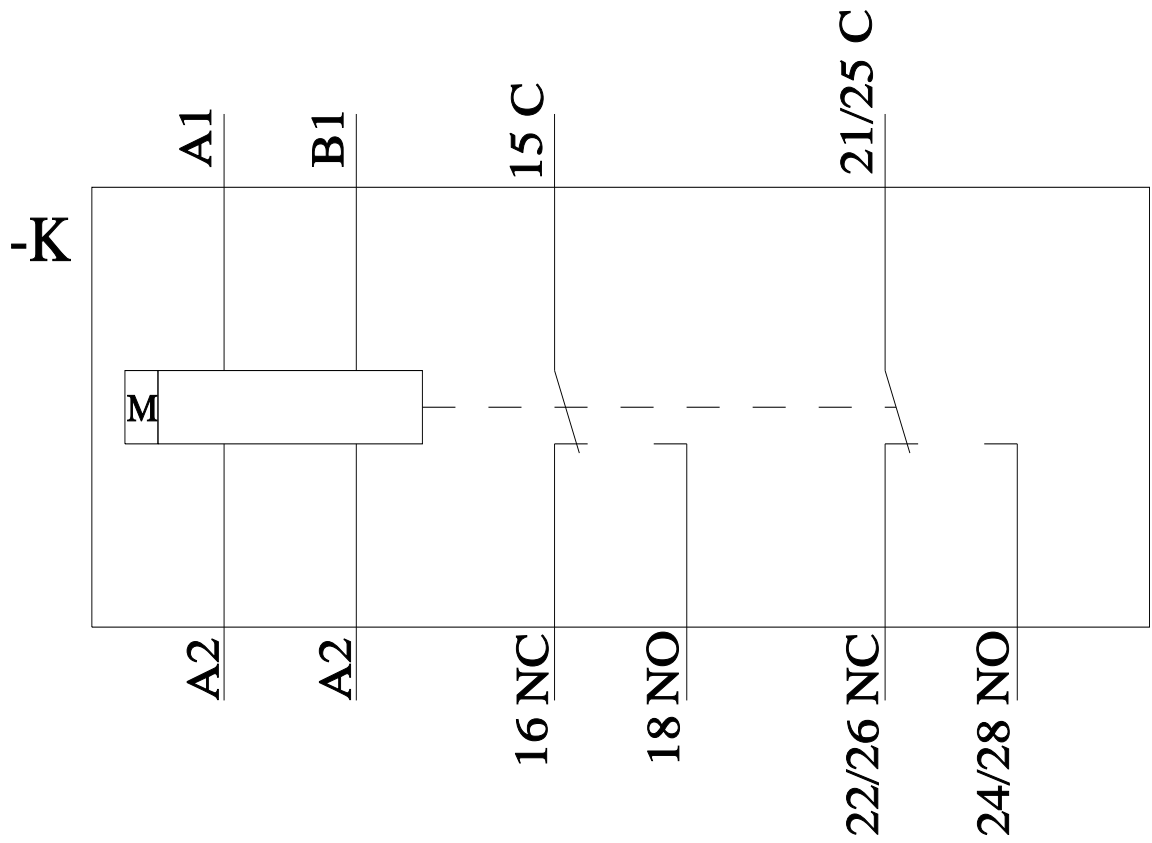
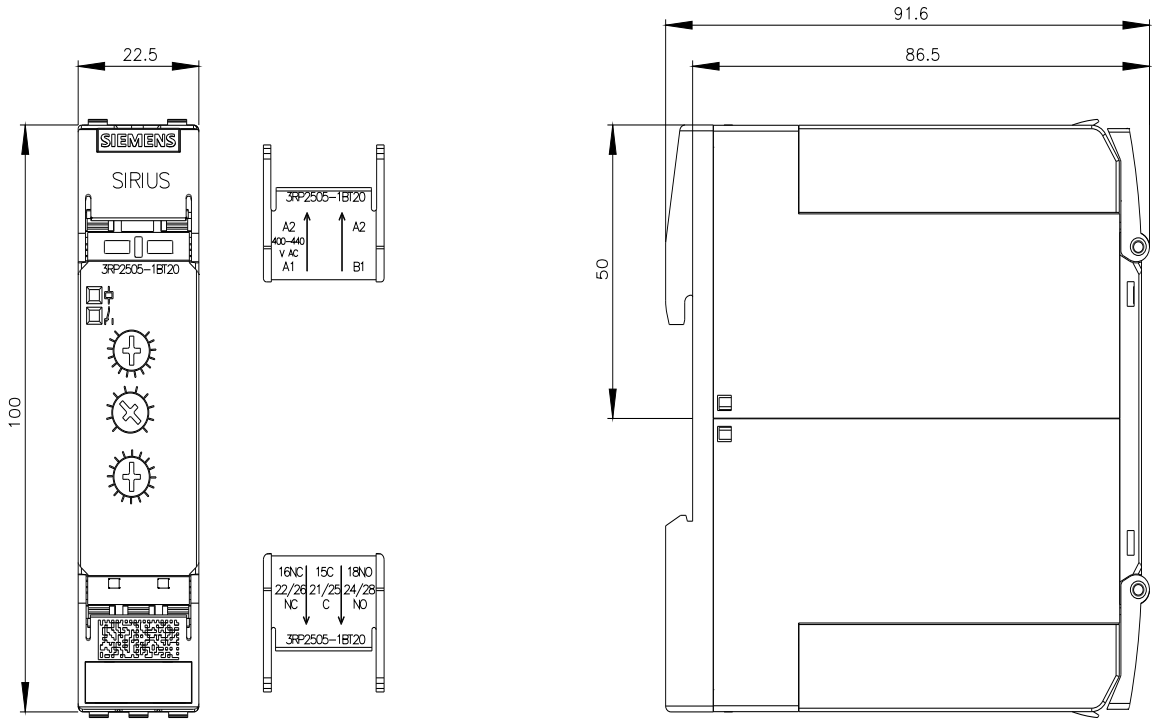
<https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1BT20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RP2505-1BT20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2505-1BT20&lang=en)

#### Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1BT20/manual>



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