



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

|   |                        |
|---|------------------------|
| <b>product brand name</b>   | SIRIUS                 |
| <b>product designation</b>  | timing relay           |
| <b>design of the product</b>  | 27 functions           |
| <b>product type designation</b>   | 3RP25                  |
| <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                     |
| 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>  | 2.5 kV                 |
| <b>degree of pollution</b>  | 3                      |
| <b>surge voltage resistance rated value</b>   | 4 000 V                |
| <b>protection class IP</b>  | IP20                   |
| shock resistance acc. to IEC 60068-2-27   | 11g / 15 ms            |
| vibration resistance acc. 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 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 IEC 81346-2</b>   | K                      |
| <b>relative repeat accuracy</b>   | 1 %                    |
| <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  | 12 ... 240 V           |
| • at 60 Hz  | 12 ... 240 V           |
| <b>control supply voltage frequency 1</b>   | 50 ... 60 Hz           |
| • control supply voltage 1 at DC  | 12 ... 240 V           |
| <b>operating range factor control supply voltage rated value at DC</b>  |                        |
| • initial value   | 0.8                    |

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| <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> <li>• full-scale value</li> </ul>  | 0.8<br>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<br>1.1  |
| <b>inrush current peak</b> <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 240 V</li> </ul>   | 0.3 A<br>5 A  |
| <b>duration of inrush current peak</b> <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 240 V</li> </ul>   | 0.3 ms<br>0.5 ms  |
| <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<br>Yes<br>Yes<br>Yes<br>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<br>Yes<br>Yes<br>Yes<br>No<br>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<br>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<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>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>  | Yes<br>Yes<br>Yes<br>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>   |   |

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| <b>material of switching contacts</b>  | AgSnO <sub>2</sub>   |
| number of NC contacts delayed switching  | 0  |
| number of NO contacts delayed switching  | 0  |
| number of CO contacts delayed switching  | 2  |
| <b>operational current of auxiliary contacts at AC-15</b>                      |  |
| • at 24 V  | 3 A  |
| • at 250 V   | 3 A  |
| <b>operational current of auxiliary contacts at DC-13</b>                      |  |
| • at 24 V  | 1 A  |
| • at 125 V   | 0.2 A  |
| • at 250 V   | 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   |
| <b>Inputs/ Outputs</b>   |  |
| <b>product function</b>  |  |
| • at the relay outputs switchover delayed/without delay                        | Yes  |
| • non-volatile   | No   |
| <b>Electromagnetic compatibility</b>   |  |
| EMC immunity acc. to IEC 61812-1   | EN 61000-6-2   |
| <b>conducted interference</b>  |  |
| • due to burst acc. to IEC 61000-4-4   | 2 kV network connection / 1 kV control connection                                  |
| • due to conductor-earth surge acc. to IEC 61000-4-5                           | 2 kV   |
| • due to conductor-conductor surge acc. to IEC 61000-4-5                       | 1 kV   |
| <b>field-based interference 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  |
| <b>Safety related data</b>   |  |
| <b>touch protection against electrical shock</b>                               | finger-safe  |
| <b>type of insulation</b>  | Basic insulation   |
| <b>category acc. to EN 954-1</b>   | none   |
| <b>Connections/ Terminals</b>  |  |
| product function removable terminal for auxiliary and control circuit          | Yes  |
| type of electrical connection for auxiliary and control circuit                | screw-type terminals   |
| <b>type of connectable conductor cross-sections</b>                            |  |
| • solid  | 1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )               |
| • finely stranded with core end processing                                     | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )                 |
| • at AWG cables solid  | 1x (20 ... 12), 2x (20 ... 14)   |
| • at AWG cables stranded   | 1x (20 ... 12), 2x (20 ... 14)   |
| • connectable conductor cross-section solid                                    | 0.5 ... 4 mm <sup>2</sup>  |
| • connectable conductor cross-section finely stranded with core end processing | 0.5 ... 4 mm <sup>2</sup>  |
| • AWG number as coded connectable conductor cross section solid                | 20 ... 12  |
| • AWG number as coded connectable conductor cross section stranded             | 20 ... 14  |
| <b>tightening torque</b>   | 0.6 ... 0.8 N·m  |
| <b>design of the thread of the connection screw</b>                            | M3   |
| <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>  | 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 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— at the side 0 mm</li> <li>— downwards 0 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 0 mm</li> </ul> </li> </ul> |       |

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|---|-------------|
| <b>Ambient conditions</b>   |             |
| installation altitude at height above sea level maximum   | 2 000 m     |
| <ul style="list-style-type: none"> <li>• ambient temperature during operation -25 ... +60 °C</li> <li>• ambient temperature during storage -40 ... +85 °C</li> <li>• ambient temperature during transport -40 ... +85 °C</li> </ul> |             |
| relative humidity during operation  | 10 ... 95 % |

**Certificates/ approvals**

|                                 |            |                                  |
|---------------------------------|------------|----------------------------------|
| <b>General Product Approval</b> | <b>EMC</b> | <b>Declaration of Conformity</b> |
|---------------------------------|------------|----------------------------------|



[Miscellaneous](#)

|                                  |                          |                          |
|----------------------------------|--------------------------|--------------------------|
| <b>Declaration of Conformity</b> | <b>Test Certificates</b> | <b>Marine / Shipping</b> |
|----------------------------------|--------------------------|--------------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



|                          |              |
|--------------------------|--------------|
| <b>Marine / Shipping</b> | <b>other</b> |
|--------------------------|--------------|



[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=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,...)

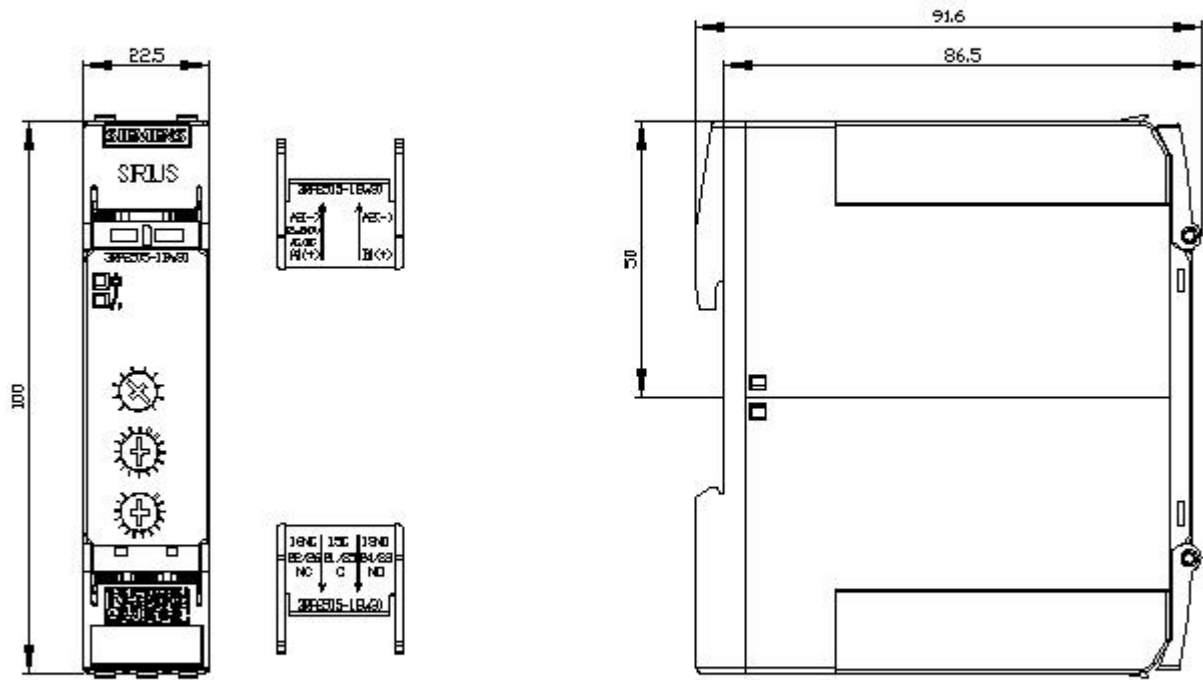
<https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1BW30>

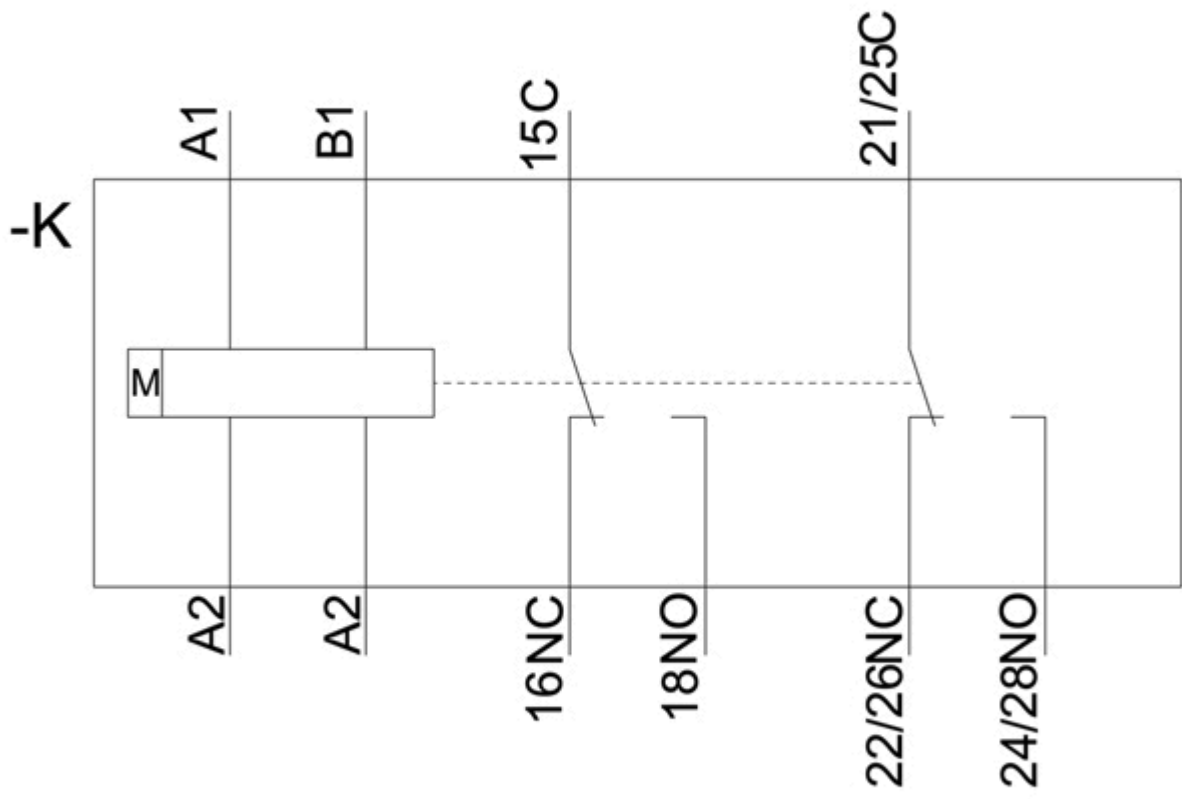
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RP2505-1BW30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2505-1BW30&lang=en)

Characteristic: Derating

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





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