# SIEMENS

| **Data sheet** | **3RP2505-1BB30** |
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Timing relay, Multifunction 2 change-over contacts, 27 functions 7 time ranges (0.05 s...100 h) 24 V AC/DC at 50/60 Hz AC with LED, Screw terminal

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| **product brand name** | SIRIUS |
| **product designation** | timing relay |
| **design of the product** | 27 functions |
| **product type designation** | 3RP25 |
| **General technical data** | |
| **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 | 300 V |
| **test voltage for isolation test** | 2.5 kV |
| **degree of pollution** | 3 |
| **surge voltage resistance rated value** | 4 000 V |
| **protection class IP** | IP20 |
| **shock resistance according to IEC 60068-2-27** | 11g / 15 ms |
| **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** | Blei - 7439-92-1<br>Bleimonoxid (Bleioxid) - 1317-36-8 |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | AC/DC |
| **control supply voltage 1 at AC** | |
| ● at 50 Hz rated value | 24 V |
| ● at 60 Hz rated value | 24 V |
| **control supply voltage frequency 1** | 50 ... 60 Hz |
| **control supply voltage 1** | |
| ● at DC rated value | 24 V |

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| **operating range factor control supply voltage rated value at DC** | |
| ● initial value | 0.85 |
| ● full-scale value | 1.1 |
| **operating range factor control supply voltage rated value at AC at 50 Hz** | |
| ● initial value | 0.85 |
| ● full-scale value | 1.1 |
| **operating range factor control supply voltage rated value at AC at 60 Hz** | |
| ● initial value | 0.85 |
| ● full-scale value | 1.1 |
| **inrush current peak** | |
| ● at 24 V | 2 A |
| **duration of inrush current peak** | |
| ● at 24 V | 1 ms |
| **Switching Function** | |
| **switching function** | |
| ● ON-delay | Yes |
| ● ON-delay/instantaneous contact | Yes |
| ● passing make contact | Yes |
| ● passing make contact/instantaneous contact | Yes |
| ● OFF delay | No |
| **switching function** | |
| ● 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 |
| **switching function** | |
| ● star-delta circuit with delay time | No |
| ● star-delta circuit | Yes |
| **switching function with control signal** | |
| ● 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 |
| **switching function of interval relay with control signal** | |
| ● 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 |
| **design of the control terminal non-floating** | Yes |
| **Short-circuit protection** | |
| design of the fuse link for short-circuit protection of the auxiliary switch required | fuse gL/gG: 4 A |
| **Auxiliary circuit** | |
| **material of switching contacts** | AgSnO2 |
| **number of NC contacts** | |
| ● delayed switching | 0 |

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| ● instantaneous contact | 0 |
| **number of NO contacts** | |
| ● delayed switching | 0 |
| ● instantaneous contact | 0 |
| **number of CO contacts** | |
| ● delayed switching | 2 |
| ● instantaneous contact | 0 |
| **operational current of auxiliary contacts at AC-15** | |
| ● at 24 V | 3 A |
| ● at 250 V | 3 A |
| **operational current of auxiliary contacts at DC-13** | |
| ● at 24 V | 1 A |
| ● at 125 V | 0.2 A |
| ● at 250 V | 0.1 A |
| **operating frequency with 3RT2 contactor maximum** | 5 000 1/h |
| **contact reliability of auxiliary contacts** | one incorrect switching operation of 100 million switching operations (17 V, 5 mA) |
| **contact rating of auxiliary contacts according to UL** | R300 / B300 |
| **switching capacity current with inductive load** | 0.01 ... 3 A |

## Inputs/ Outputs

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| **product function** | |
| ● at the relay outputs switchover delayed/without delay | Yes |
| ● non-volatile | No |

## Electromagnetic compatibility

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|---|---|
| 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 |
| **conducted interference** | |
| ● due to burst according to IEC 61000-4-4 | 2 kV network connection / 1 kV control connection |
| ● due to conductor-earth surge according to IEC 61000-4-5 | 2 kV |
| ● due to conductor-conductor surge according to IEC 61000-4-5 | 1 kV |
| **field-based interference according to IEC 61000-4-3** | 10 V/m |
| **electrostatic discharge according to IEC 61000-4-2** | 4 kV contact discharge / 8 kV air discharge |

## Safety related data

| | |
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| category according to EN 954-1 | none |
| **protection class IP on the front according to IEC 60529** | IP20 |
| **type of insulation** | Basic insulation |

## Connections/ Terminals

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|---|---|
| **product component removable terminal for auxiliary and control circuit** | Yes |
| type of electrical connection for auxiliary and control circuit | screw-type terminals |
| **type of connectable conductor cross-sections** | |
| ● solid | 1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²) |
| ● finely stranded with core end processing | 1x (0.5 ... 4 mm²), 2x (0.5 ... 1.5 mm²) |
| ● for AWG cables solid | 1x (20 ... 12), 2x (20 ... 14) |
| ● for AWG cables stranded | 1x (20 ... 12), 2x (20 ... 14) |
| **connectable conductor cross-section** | |
| ● solid | 0.5 ... 4 mm² |
| ● finely stranded with core end processing | 0.5 ... 4 mm² |
| **AWG number as coded connectable conductor cross section** | |
| ● solid | 20 ... 12 |
| ● stranded | 20 ... 14 |
| **tightening torque** | 0.6 ... 0.8 N·m |
| **design of the thread of the connection screw** | M3 |

## Installation/ mounting/ dimensions

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| **mounting position** | any |
| **fastening method** | screw and snap-on mounting onto 35 mm DIN rail |
| **height** | 100 mm |
| **width** | 22.5 mm |
| **depth** | 90 mm |
| **required spacing** | |

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| ● with side-by-side mounting | |
| — 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

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| installation altitude at height above sea level maximum | 2 000 m |
| **ambient temperature** | |
| ● 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

 UKCA     CE EG-Konf.     CCC    [Confirmation]     UL     EAC

| EMV | Test Certificates | Marine / Shipping | | | |
|---|---|---|---|---|---|
| RCM | [Type Test Certificates/Test Report] | BUREAU VERITAS | DNV | Lloyd's Register LRS | PRS |

| Marine / Shipping | | other |
|---|---|---|
| RINA | RMRS | [Confirmation] |

## Further information

**Siemens has decided to exit the Russian market (see here).**
https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business
**Siemens is working on the renewal of the current EAC certificates.**
Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).
**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)**
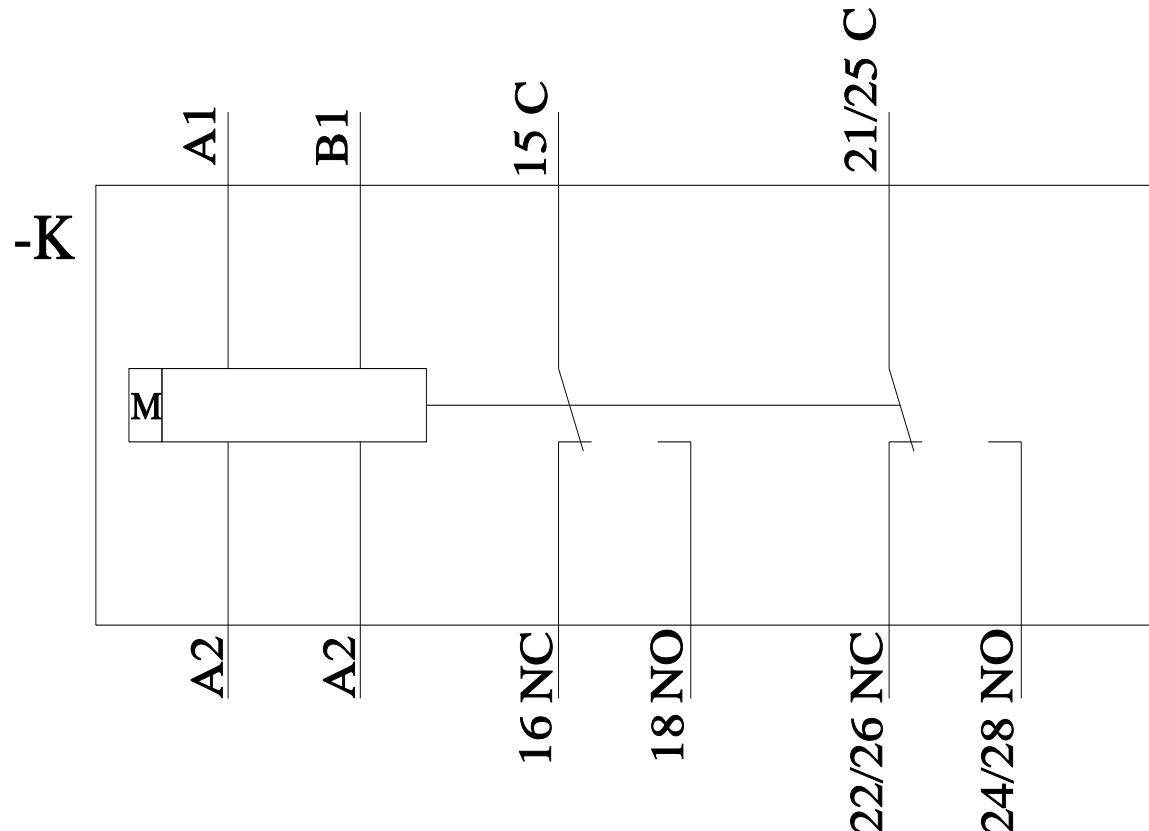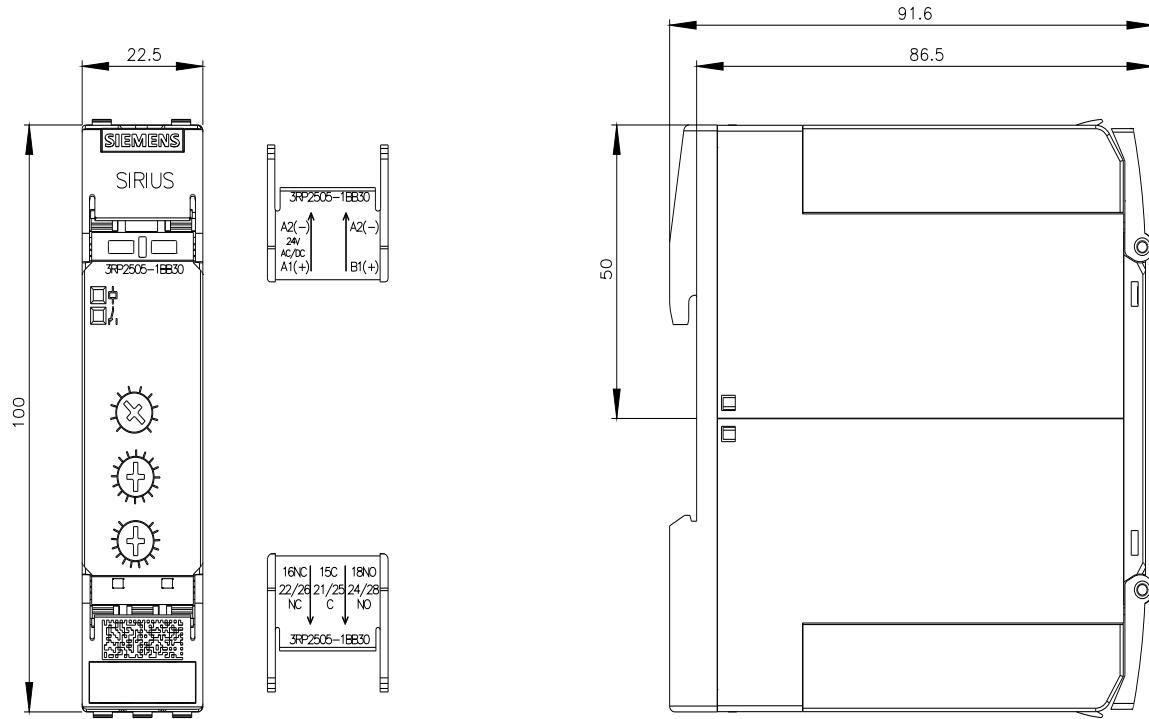https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RP2505-1BB30
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2505-1BB30
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1BB30
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

**last modified:**                                          8/7/2023 ⬈

12/21/2023