SIEMENS

## Data sheet 3RP2005-2AP30


Timing relay, electronic Multifunction, 8 functions 1 change-over contact 24 V AC/DC, 200 to 240 V AC at 50/60 Hz AC 0.05 s to 100 h Overall width 45 mm Spring-type terminal

| | |
|---|---|
| **product brand name** | SIRIUS |
| **product designation** | timing relay |
| **design of the product** | Multifunctional |
| **product type designation** | 3RP20 |
| **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 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** | ±5 % |
| **power supply influence** | ±1 % |
| **Substance Prohibitance (Date)** | 05/01/2012 |
| **SVHC substance name** | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8 |
| **Weight** | 0.12 kg |
| **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 2 at AC** | |
| ● at 50 Hz | 200 ... 240 V |

| | |
|---|---|
| ● at 60 Hz | 200 ... 240 V |
| **control supply voltage frequency 1** | 50 ... 60 Hz |
| **control supply voltage 1 at DC rated value** | 24 V |
| **operating range factor control supply voltage rated value at DC** | |
| ● initial value | 0.7 |
| ● 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 |
| **Switching Function** | |
| **switching function** | |
| ● ON-delay | Yes |
| ● ON-delay/instantaneous contact | No |
| ● passing make contact | Yes |
| ● passing make contact/instantaneous contact | No |
| ● OFF delay | No |
| **switching function** | |
| ● flashing symmetrically with interval start/instantaneous | No |
| ● flashing symmetrically with interval start | Yes |
| ● flashing symmetrically with pulse start/instantaneous | No |
| ● flashing symmetrically with pulse start | No |
| ● flashing asymmetrically with interval start | No |
| ● flashing asymmetrically with pulse start | No |
| **switching function** | |
| ● star-delta circuit with delay time | No |
| ● star-delta circuit | No |
| **switching function with control signal** | |
| ● additive ON-delay | Yes |
| ● passing break contact | Yes |
| ● passing break contact/instantaneous | No |
| ● OFF delay | Yes |
| ● OFF delay/instantaneous | No |
| ● pulse delayed | No |
| ● pulse delayed/instantaneous | No |
| ● pulse-shaping | Yes |
| ● pulse-shaping/instantaneous | No |
| ● additive ON-delay/instantaneous | No |
| ● ON-delay/OFF-delay/instantaneous | No |
| ● passing make contact | No |
| ● passing make contact/instantaneous contact | No |
| **switching function of interval relay with control signal** | |
| ● retrotriggerable with deactivated control signal/instantaneous contact | No |
| ● retrotriggerable with switched-on control signal | No |
| ● retrotriggerable with switched-on control signal/instantaneous contact | No |
| ● retriggerable with deactivated control signal | No |
| **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 |
| ● instantaneous contact | 0 |

| | |
|---|---|
| **number of NO contacts** | |
| ● delayed switching | 0 |
| ● instantaneous contact | 0 |
| **number of CO contacts** | |
| ● delayed switching | 1 |
| ● 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 |
| **Inputs/ Outputs** | |
| **product function** | |
| ● non-volatile | No |
| **Electromagnetic compatibility** | |
| EMC emitted interference according to IEC 61812-1 | EN 61000-6-4(3) |
| EMC immunity according to IEC 61812-1 | EN 61000-6-2 |
| **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** | |
| category according to EN 954-1 | none |
| Electrical Safety | |
| **protection class IP on the front according to IEC 60529** | IP20 |
| **touch protection on the front according to IEC 60529** | finger-safe, for vertical contact from the front |
| **type of insulation** | Basic insulation |
| **Connections/ Terminals** | |
| **product component removable terminal for auxiliary and control circuit** | No |
| type of electrical connection for auxiliary and control circuit | spring-loaded terminals |
| **type of connectable conductor cross-sections** | |
| ● solid | 2x (0,25 ... 2,5 mm²) |
| ● finely stranded with core end processing | 2 x (0.25 ... 1.5 mm²) |
| ● finely stranded without core end processing | 2x (0.25 ... 2.5 mm²) |
| ● for AWG cables solid | 2x (24 ... 14) |
| ● for AWG cables stranded | 2x (24 ... 14) |
| **connectable conductor cross-section** | |
| ● solid | 0.3 ... 2.5 mm² |
| ● finely stranded with core end processing | 0.3 ... 1.5 mm² |
| ● finely stranded without core end processing | 2.5 ... 2.5 mm² |
| **AWG number as coded connectable conductor cross section** | |
| ● solid | 24 ... 14 |
| ● stranded | 24 ... 14 |
| **Installation/ mounting/ dimensions** | |
| **mounting position** | any |
| **fastening method** | screw and snap-on mounting onto 35 mm DIN rail |
| **height** | 57 mm |
| **width** | 45 mm |
| **depth** | 73 mm |
| **required spacing** | |
| ● 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

| | |
|---|---|
| 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** | **EMV**

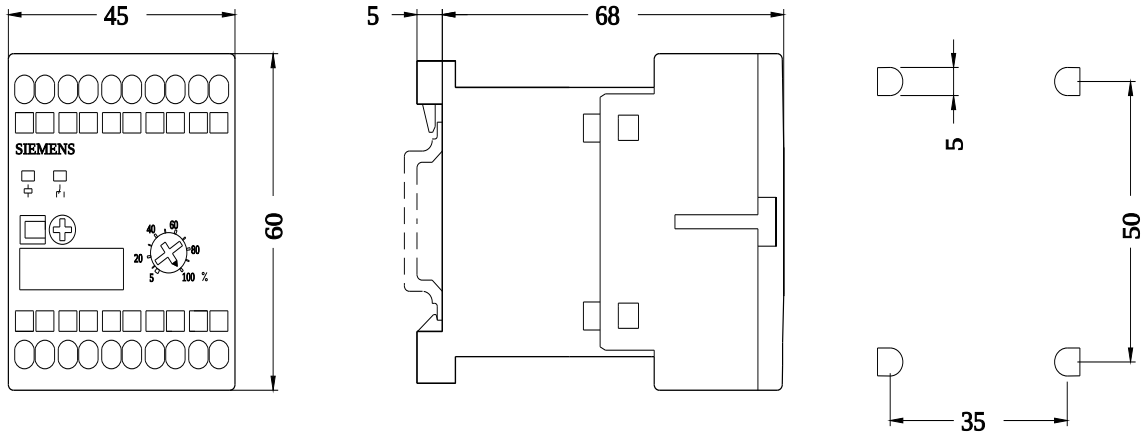
CCC, EG-Konf., UKCA, UL, EAC, RCM

| EMV | Test Certificates | Marine / Shipping |
|---|---|---|
| KC | Type Test Certificates/Test Report | BUREAU VERITAS, DNV, LRS, RINA |

| Marine / Shipping | other | Environment |
|---|---|---|
| RMRS | 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=3RP2005-2AP30
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2005-2AP30
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-2AP30
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2005-2AP30&lang=en
**Characteristic: Derating**
https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-2AP30/manual

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