



Timing relay, electronic Multifunction, 8 functions 1 change-over contact 24 V AC/DC, 100 to 127 V AC at 50/60 Hz AC 0.05 s to 100 h Overall width 45 mm screw terminal

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| 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 Lead monoxide (lead oxide) - 1317-36-8 |
| Weight | 0.121 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 | 100 ... 127 V |

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| • at 60 Hz | 100 ... 127 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 | 0.85 |
| • 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 |
| 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 |

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| 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 | screw-type terminals |
| type of connectable conductor cross-sections | |
| • solid | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| • finely stranded with core end processing | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| • for AWG cables solid | 2x (18 ... 14) |
| • for AWG cables stranded | 2x (18 ... 14) |
| connectable conductor cross-section | |
| • solid | 0.5 ... 2.5 mm ² |
| • finely stranded with core end processing | 0.5 ... 2.5 mm ² |
| AWG number as coded connectable conductor cross section | |
| • solid | 18 ... 14 |
| • stranded | 18 ... 14 |
| tightening torque | 0.8 ... 1.2 N·m |
| design of the thread of the connection screw | M3 |
| 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 | |

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| — 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

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| General Product Approval | EMV |
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| EMV | Test Certificates | Marine / Shipping |
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[KC](#)

[Type Test Certificates/Test Report](#)



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|-------------------|-------|
| Marine / Shipping | other |
|-------------------|-------|



[Confirmation](#)

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=3RP2005-1AQ30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2005-1AQ30>

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

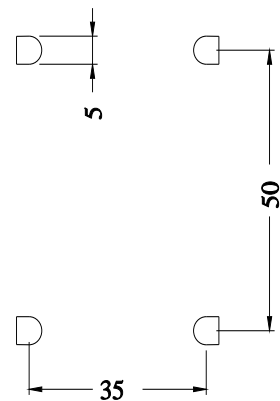
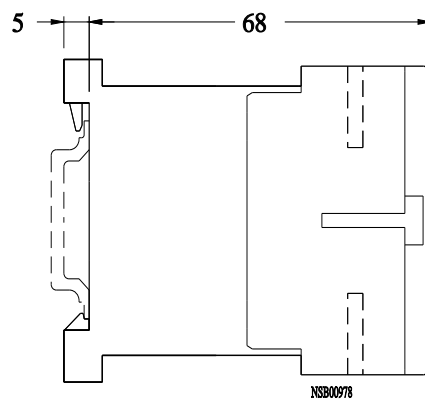
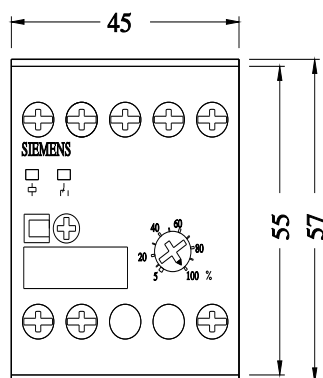
<https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-1AQ30>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2005-1AQ30&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-1AQ30/manual>



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