



Timing relay, electronic ansprechverzögert 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 screw terminal

| | |
|---|------------------------|
| product brand name | SIRIUS |
| product designation | timing relay |
| design of the product | slow-operating |
| 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 (switching cycles) typical | 10 000 000 |
| electrical endurance (switching cycles) at AC-15 at 230 V typical | 100 000 |
| adjustable time | 0.05 ... 100 s |
| relative setting accuracy relating to full-scale value | 5 %; +/- |
| thermal current | 5 A |
| 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 |
| 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 | |

| | |
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| <ul style="list-style-type: none"> • at DC rated value | 24 V |
| operating range factor control supply voltage rated value at DC <ul style="list-style-type: none"> • initial value • full-scale value | 0.85 1.1 |
| operating range factor control supply voltage rated value at AC at 50 Hz <ul style="list-style-type: none"> • initial value • full-scale value | 0.85 1.1 |
| operating range factor control supply voltage rated value at AC at 60 Hz <ul style="list-style-type: none"> • initial value • full-scale value | 0.85 1.1 |

Switching Function

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| switching function <ul style="list-style-type: none"> • ON-delay • ON-delay/instantaneous contact • passing make contact • passing make contact/instantaneous contact • OFF delay | Yes No No No No |
| switching function <ul style="list-style-type: none"> • flashing symmetrically with interval start/instantaneous • flashing symmetrically with interval start • flashing symmetrically with pulse start/instantaneous • flashing symmetrically with pulse start • flashing asymmetrically with interval start • flashing asymmetrically with pulse start | No No No No No No |
| switching function <ul style="list-style-type: none"> • star-delta circuit with delay time • star-delta circuit | No No |
| switching function with control signal <ul style="list-style-type: none"> • additive ON-delay • passing break contact • passing break contact/instantaneous • OFF delay • OFF delay/instantaneous • pulse delayed • pulse delayed/instantaneous • pulse-shaping • pulse-shaping/instantaneous • additive ON-delay/instantaneous • ON-delay/OFF-delay/instantaneous • passing make contact • passing make contact/instantaneous contact | No No No No No No No No No No No No No No |
| switching function of interval relay with control signal <ul style="list-style-type: none"> • retrotriggerable with deactivated control signal/instantaneous contact • retrotriggerable with switched-on control signal • retrotriggerable with switched-on control signal/instantaneous contact • retriggerable with deactivated control signal | No No No No |

Short-circuit protection

| | |
|---|-----------------|
| design of the fuse link for short-circuit protection of the auxiliary switch required | fuse gL/gG: 4 A |
|---|-----------------|

Auxiliary circuit

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|---|--------|
| material of switching contacts | AgSnO2 |
| number of NC contacts <ul style="list-style-type: none"> • delayed switching • instantaneous contact | 0 0 |
| number of NO contacts | |

| | |
|---|--|
| <ul style="list-style-type: none"> • delayed switching • instantaneous contact | 0 |
| number of CO contacts | |
| <ul style="list-style-type: none"> • delayed switching • instantaneous contact | 1 |
| operational current of auxiliary contacts at AC-15 | |
| <ul style="list-style-type: none"> • at 24 V • at 250 V | 3 A |
| operational current of auxiliary contacts at DC-13 | |
| <ul style="list-style-type: none"> • at 24 V • at 125 V • at 250 V | 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 | |
| <ul style="list-style-type: none"> • 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 | |
| <ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 | 2 kV network connection / 1 kV control connection |
| 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 | |
| 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 |
| category according to EN 954-1 | none |
| 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 | |
| <ul style="list-style-type: none"> • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| connectable conductor cross-section | |
| <ul style="list-style-type: none"> • solid • finely stranded with core end processing | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| AWG number as coded connectable conductor cross section | |
| <ul style="list-style-type: none"> • solid • stranded | 2x (18 ... 14) |
| tightening torque | 2x (18 ... 14) |
| design of the thread of the connection screw | 0.8 ... 1.2 N·m |
| | M3 |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | screw and snap-on mounting onto 35 mm standard mounting 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

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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 % |

Certificates/ approvals

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|--------------------------|-----|---------------------------|
| General Product Approval | EMC | Declaration of Conformity |
|--------------------------|-----|---------------------------|

[Confirmation](#)



| | | |
|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|

[Type Test Certificates/Test Report](#)



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



[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?mfb=3RP2025-1AP30>

Cax online generator

<http://support.automation.siemens.com/WWW/CAXorder/default.aspx?lang=en&mfb=3RP2025-1AP30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2025-1AP30>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2025-1AP30&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2025-1AP30/manual>

last modified:

12/9/2021 