



SEMICOND. RELAY 3RF2,
1-PHASE WIDTH 22.5 MM,
90 A 24-230 V / 110-230 V AC SPRING-LOADED
TERMINAL

| General technical data: | | |
|--|----|----------------------|
| product brand name | | SIRIUS |
| Product designation | | solid-state relay |
| Product function | | zero-point switching |
| Number of poles / for main current circuit | | 1 |
| Protection class IP | | IP20 |
| Ambient temperature | | |
| • during operating | °C | -25 ... +60 |
| • during storage | °C | -55 ... +80 |
| Installation altitude / at a height over sea level / maximum | m | 1,000 |
| Resistance against vibration / according to IEC 60068-2-6 | | 2g |
| Resistance against shock / according to IEC 60068-2-27 | | 15g / 11 ms |
| Item designation | | |
| • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 | | K |
| • according to DIN EN 61346-2 | | Q |
| Number of NC contacts / for auxiliary contacts | | 0 |
| Number of NO contacts / for auxiliary contacts | | 0 |
| Number of changeover contacts / for auxiliary contacts | | 0 |

Main circuit:

| | | |
|---|-------------------|------------|
| Number of NO contacts / for main contacts | | 1 |
| Number of NC contacts / for main contacts | | 0 |
| Operating current | | |
| • rated value / maximum | A | 88 |
| • at AC-51 / rated value | A | 20 |
| • minimum | mA | 500 |
| Operating voltage | | |
| • at 50 Hz / at AC / rated value | V | 24 ... 230 |
| • at 60 Hz / at AC / rated value | V | 24 ... 230 |
| Working area related to the operating voltage | | |
| • at 50 Hz / for AC | V | 20 ... 253 |
| • at 60 Hz / for AC | V | 20 ... 253 |
| Operating frequency | | |
| • rated value | Hz | 50 ... 60 |
| Relative symmetrical tolerance / of the operation frequency | % | 10 |
| Insulation voltage / rated value | V | 600 |
| Voltage slew rate / at the thyristor / for main contacts / maximum permissible | V/μs | 1,000 |
| Block voltage / at the thyristor / for main contacts / maximum permissible | V | 800 |
| Reverse current / of the thyristor | mA | 10 |
| Derating temperature | °C | 40 |
| Active power loss / total / typical | W | 118 |
| Apparent loss power / maximum | V·A | 118 |
| Resistance against the impulse current / rated value | A | 1,150 |
| I²t-level / maximum | A ² ·s | 6,600 |

Control circuit/ Control:

| | | |
|---|----|-----|
| Control supply voltage frequency | | |
| • 1 / rated value | Hz | 50 |
| • 2 / rated value | Hz | 60 |
| Type of voltage / of the controlled supply voltage | | AC |
| Control supply voltage / 1 | | |
| • at 50 Hz / for AC | | |
| • initial rated value | V | 110 |
| • final rated value | V | 230 |
| • at 60 Hz / for AC | | |
| • initial rated value | V | 110 |
| • final rated value | V | 230 |
| Control supply voltage | | |
| • at 50 Hz / for AC / final value for signal<0>-recognition | V | 40 |






| | | |
|---|---|----|
| • at 60 Hz / for AC / final value for signal<0>-recognition | V | 40 |
| Tolerance of the line frequency | Hz | 5 |
| Relative symmetrical tolerance / of the supply voltage frequency | % | 10 |
| Control current | | |
| • at minimum control supply voltage / for AC | mA | 2 |
| • for AC / rated value | mA | 15 |
| Sicherungszuordnungen | https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf | |

| Installation/ mounting/ dimensions: | | |
|--|-----|--------------|
| Type of mounting | | screw fixing |
| Type of fixing/fixation / series installation | | Yes |
| Design of the thread / of the screw for fastening of the operating resource | | M4 |
| Tightening torque / of the screw for fastening of the operating resource | N·m | 1.5 |
| Width | mm | 22.5 |
| Height | mm | 85 |
| Depth | mm | 48 |

| Connections/ terminals: | | |
|---|-----|-------------------------|
| Design of the electrical connection / for main current circuit | | spring-loaded terminals |
| Tightening torque / for main contacts | | |
| • with screw-type terminals | N·m | 2 ... 2.5 |
| Type of the connectable conductor cross-section | | |
| • for main contacts | | |
| • solid | | 2x (0.5 ... 2.5 mm²) |
| • finely stranded | | |
| • with conductor end processing | | 2x (0.5 ... 1.5 mm²) |
| • without conductor final cutting | | 2x (0.5 ... 2.5 mm²) |
| • for AWG conductors | | |
| • for main contacts | | 2x (18 ... 14) |
| • for auxiliary and control contacts | | 1x (AWG 20 ... 12) |
| • for auxiliary and control contacts | | |
| • solid | | 0.5 ... 1.5 mm² |
| • finely stranded | | |
| • with conductor end processing | | 0.5 ... 2.5 mm² |
| • without conductor final cutting | | 0.5 ... 2.5 mm² |
| Conductor cross section that can be connected | | |
| • for main contacts | | |
| • solid | mm² | 0.5 ... 2.5 |

| | | |
|---|-----------------|-------------------------|
| <ul style="list-style-type: none"> • stranded wire <ul style="list-style-type: none"> • with conductor end processing • without conductor final cutting • for auxiliary and control contacts <ul style="list-style-type: none"> • solid • stranded wire <ul style="list-style-type: none"> • with conductor end processing / • without conductor final cutting | mm ² | 0.5 ... 1.5 |
| | mm ² | 0.5 ... 2.5 |
| | mm ² | 0.5 ... 1.5 |
| | mm ² | 0.5 ... 2.5 |
| | mm ² | 0.5 ... 2.5 |
| AWG number / as coded connectable conductor cross-section / for main contacts | | 18 ... 14 |
| Design of the electrical connection / for auxiliary and control current circuit | | spring-loaded terminals |
| AWG number / as coded connectable conductor cross-section <ul style="list-style-type: none"> • for auxiliary and control contacts | | 20 ... 12 |
| Skinning length / of the cable / for main contacts | mm | 10 |
| Skinning length / of the cable / for auxiliary and control contacts | mm | 10 |

Certificates/ approvals:

| General Product Approval | | EMC | Declaration of Conformity | |
|--|--|--|--|--|
|  |  |  |  |  |
| CSA | | UR | C-TICK | EG-Konf. |
| Test Certificates | | other | | |
| Special Test Certificate | Type Test Certificates/Test Report | Environmental Confirmations | | |

Further information:

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

Cax online generator

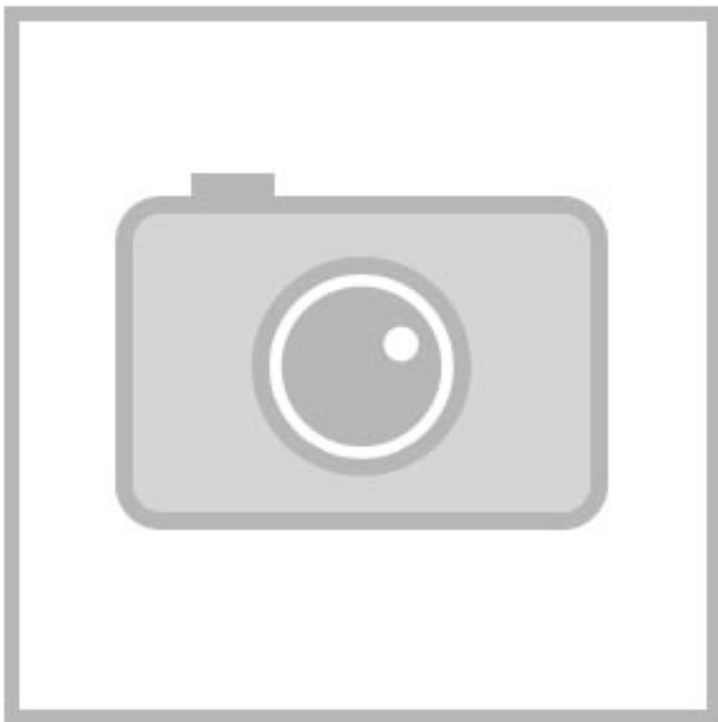
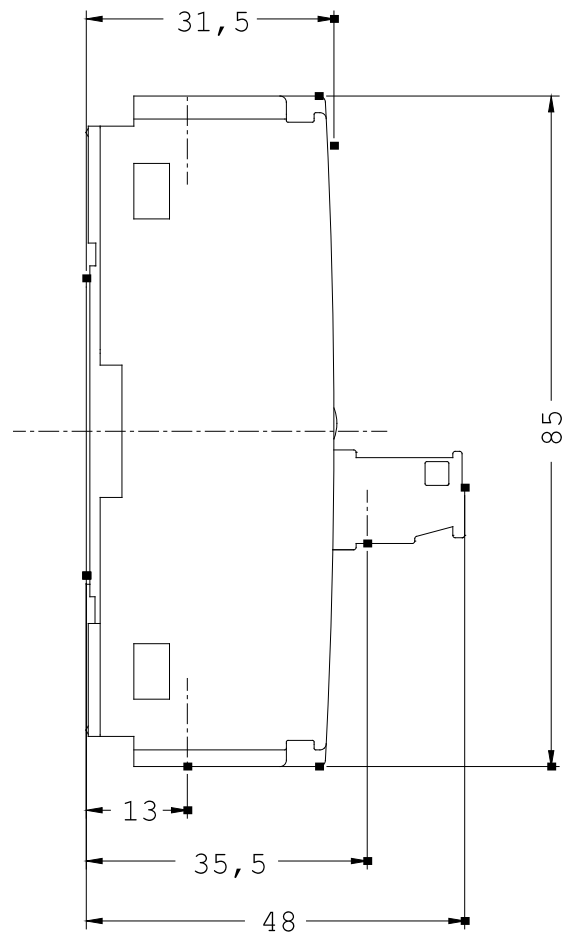
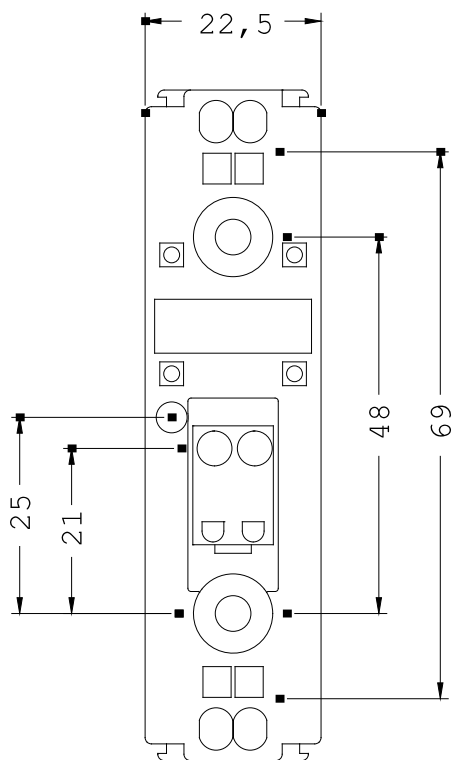
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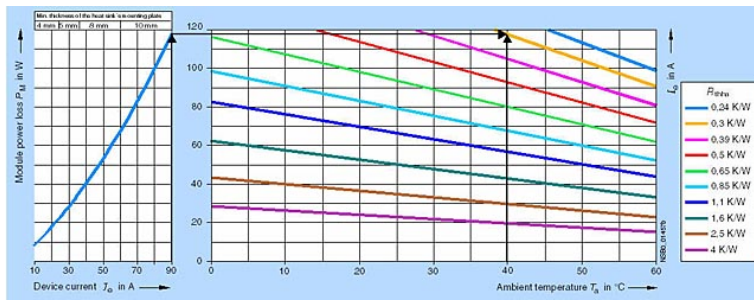
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RF2190-2AA22/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2190-2AA22





last change:

Dec 2, 2013