SIEMENS

Product data sheet

3RF2440-1AB55



SEMI-CONDUCTOR CONTAC.3-PH.3RF2 AC51 40A 40 DEG. C 48-600V / 230V AC 2-PHASE CONTROLLED SCREW TERMINAL BLOCKING VOLTAGE 1200V

| General technical data: | | |
|--|----|-----------------------|
| Product brand name | | SIRIUS |
| product designation | | solid-state contactor |
| Product function | | zero-point switching |
| Number of poles / for main current circuit | | 3 |
| 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 | | к |
| 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 change-over switches / for auxiliary contacts | | 0 |
| Main circuit: | | |

| Number of NO contacts / for main contacts | | 2 |
|--|------|--|
| Number of NC contacts / for main contacts | - | 0 |
| Operating current / at AC-1 / at 400 V / rated value | А | 40 |
| Operating current / at AC-51 / rated value | А | 40 |
| Reverse current / of the thyristor | mA | 10 |
| Derating temperature | °C | 40 |
| Operating current / minimum | mA | 500 |
| Resistance against the impulse current / rated value | А | 1,150 |
| I2t-level / maximum | A²·s | 6,600 |
| Operating voltage | - | |
| • at 50 Hz / at AC / rated value | V | 48 600 |
| • at 60 Hz / at AC / rated value | V | 48 600 |
| Working area related to the operating voltage | - | |
| • at 50 Hz / for AC | V | 40 660 |
| • at 60 Hz / for AC | V | 40 660 |
| 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 | 1,600 |
| Fuse assignments | | https://www.automation.siemens.com/cd- static/material/info/3RF24_eng.pdf |

Control circuit:

| Type of voltage / of the controlled supply voltage | | AC |
|--|----|---------|
| Control supply voltage / 1 | | |
| • at 50 Hz | | |
| • for AC | V | 180 230 |
| • at 60 Hz | | |
| • for AC | V | 180 230 |
| Control supply voltage frequency | | |
| •1 | Hz | 45 |
| • 2 | Hz | 66 |
| Control supply voltage / at 50 Hz / for AC / final value for signal<0>-recognition | V | 180 |
| Control supply voltage / at 60 Hz / for AC / final value for signal<0>-recognition | V | 180 |
| 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 |

| 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 | 113.5 |
| Height | mm | 100 |
| Depth | mm | 121 |

| Design of the electrical connection / for main current circuitIcrew-type terminalsM4Design of the thread / of the connection screw / for main contactsM4Tightening torque / for main contactsN-m22.5with screw-type terminalsN-m22.5Tightening torque (lbf-in) / for main contactsIbf-in1822with screw-type terminalsIbf-in1822Type of the connectable conductor cross-section22.5 mm2), 2x (2.5 6 mm2)• for main contacts2.x (1 2.5 mm2), 2x (2.5 6 mm2)• solid2.x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for AWG conductors2.x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for auxiliary and control contacts2.x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for auxiliary and control contacts2.x (1 2.5 mm2), 2x (0.5 1, 0 mm2)• for auxiliary and control contacts1.x (AWG 20 12)• for auxiliary and control contacts1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• finely stranded1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• finely stranded1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• finely stranded1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• with conductor final cutting1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• with conductor final cutting1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• for main contacts1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• for auxiliary and control contacts1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• with conductor final cutting1.x (| Connections: | | |
|---|--|--------|---|
| contactsIITightening torque / for main contactsN-m22.5with screw-type terminalsN-m22.5Tightening torque (lbf-in) / for main contactsIbf-in1822with screw-type terminalsIbf-in1822Type of the connectable conductor cross-section2x (1.5 2.5 mm2), 2x (2.5 6 mm2)• for main contacts2x (1 2.5 mm2), 2x (2.5 6 mm2)• solid2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for AWG conductors2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for AWG conductors2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for auxiliary and control contacts2x (1 10)• for auxiliary and control contacts1x (AWG 20 12)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• for auxiliary and control contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• for main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• for main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• for main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• for | Design of the electrical connection / for main current circuit | | screw-type terminals |
| • with screw-type terminalsN·m2 2.5Tightening torque (lbf-in) / for main contacts • with screw-type terminalsIbf-in18 22Type of the connectable conductor cross-section • for main contacts • solid • finely stranded • with conductor end processingZx (1.5 2.5 mm2), 2x (2.5 6 mm2)• for AWG conductors • for main contacts • for main contacts • solid • for auxiliary and control contacts • solid • for auxiliary and control contacts • solid • finely stranded • for auxiliary and control contacts • solid • finely stranded • for auxiliary and control contacts • solid • for auxiliary and control contacts • solid • finely stranded • for auxiliary and control contacts • solid • finely stranded • with conductor end processing • for auxiliary and control contacts • solid • finely stranded • with conductor final cuttingIx (0.5 2.5 mm2), 2x (0.5 1.0 mm2) tx (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor ross section that can be connected • for main contactsIx (0.5 2.5 mm2), 2x (0.5 1.0 mm2) tx (0.5 2.5 mm2), 2x (0.5 1.0 mm2) | - | | M4 |
| Tightening torque (lbf-in) / for main contactsIbf-inIs 22Type of the connectable conductor cross-sectionIbf-in18 22• for main contacts2x (1.5 2.5 mm2), 2x (2.5 6 mm2)• finely stranded2x (1 2.5 mm2), 2x (2.5 6 mm2)• with conductor end processing2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for AWG conductors2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for auxiliary and control contacts2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for auxiliary and control contacts2x (1 2.5 mm2), 2x (0.5 10 mm2)• for auxiliary and control contacts1x (AWG 20 12)• for auxiliary and control contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• tor main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with out conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with out conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• tor main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• tor main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) | Tightening torque / for main contacts | | |
| • with screw-type terminalsIbf-in18 22Type of the connectable conductor cross-section • for main contacts • solid • solid • finely stranded • with conductor end processing • for main contacts2x (1.5 2.5 mm2), 2x (2.5 6 mm2)• for AWG conductors • for main contacts • for auxiliary and control contacts • solid • for auxiliary and control contacts2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for auxiliary and control contacts • for auxiliary and control contacts • solid2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for auxiliary and control contacts • for auxiliary and control contacts • solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded • with conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• tor main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• tor main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) | with screw-type terminals | N∙m | 2 2.5 |
| Type of the connectable conductor cross-sectionImage: solidSolid </td <td>Tightening torque (Ibf·in) / for main contacts</td> <td></td> <td></td> | Tightening torque (Ibf·in) / for main contacts | | |
| for main contacts solid 2x (1.52.5 mm2), 2x (2.56 mm2)• finely stranded 2x (12.5 mm2), 2x (2.56 mm2), 1x 10 mm2• with conductor end processing 2x (12.5 mm2), 2x (2.56 mm2), 1x 10 mm2• for AWG conductors 2x (1410)• for main contacts 2x (1410)• for auxiliary and control contacts 1x (AWG 2012)• for auxiliary and control contacts 1x (0.52.5 mm2), 2x (0.51.0 mm2)• solid1x (0.52.5 mm2), 2x (0.51.0 mm2)• with conductor end processing 1x (0.52.5 mm2), 2x (0.51.0 mm2)• with conductor final cutting1x (0.52.5 mm2), 2x (0.51.0 mm2)Conductor cross section that can be connected • for main contacts Lot Lot Lot Lot Lot Lot Lot Lot Lot Lot | with screw-type terminals | lbf∙in | 18 22 |
| • solid2x (1.5 2.5 mm2), 2x (2.5 6 mm2)• finely stranded2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• with conductor end processing2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for AWG conductors2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for main contacts2x (1 4 10)• for auxiliary and control contacts1x (AWG 20 12)• for auxiliary and control contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connectedIs (Is (Is (Is (Is (Is (Is (Is (Is (Is (| Type of the connectable conductor cross-section | | |
| • finely strandedImage: stranded• with conductor end processing $2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2$ • for AWG conductors $2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2$ • for main contacts $2x (14 10)$ • for auxiliary and control contacts $1x (AWG 20 12)$ • for auxiliary and control contacts $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ • for auxiliary and control contacts $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ • for hely stranded $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ • with conductor end processing $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ • with conductor final cutting $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ Conductor cross section that can be connected $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ • for main contacts $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ | for main contacts | | |
| • with conductor end processing $2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2$ • for AWG conductors $2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2$ • for main contacts $2x (14 10)$ • for auxiliary and control contacts $1x (AWG 20 12)$ • for auxiliary and control contacts $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ • finely stranded $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ • with conductor end processing $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ • without conductor final cutting $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ Conductor cross section that can be connected $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ • for main contacts $1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)$ | • solid | | 2x (1.5 2.5 mm2), 2x (2.5 6 mm2) |
| • for AWG conductorsImage: conductors• for main contacts2x (14 10)• for auxiliary and control contacts1x (AWG 20 12)• for auxiliary and control contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connectedImage: conductor final cutting• for main contactsImage: conductor final cutting | finely stranded | | |
| • for main contacts2x (14 10)• for auxiliary and control contacts1x (AWG 20 12)• for auxiliary and control contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connected1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• for main contactsImage: Conductor final cutting | with conductor end processing | | 2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2 |
| • for auxiliary and control contacts1x (AWG 20 12)• for auxiliary and control contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing • without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connected • for main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) | for AWG conductors | | |
| • for auxiliary and control contactsImage: Solid• solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connectedImage: Solid• for main contactsImage: Solid | for main contacts | | 2x (14 10) |
| • solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connected1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• for main contactsImage: Conductor conductor final cutting | for auxiliary and control contacts | | 1x (AWG 20 12) |
| finely stranded with conductor end processing without conductor final cutting 1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) 1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) 1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) for main contacts | for auxiliary and control contacts | | |
| • with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connected• for main contacts | • solid | | 1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) |
| without conductor final cutting 1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) Conductor cross section that can be connected for main contacts | finely stranded | | |
| Conductor cross section that can be connected • for main contacts | with conductor end processing | | 1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) |
| for main contacts | without conductor final cutting | | 1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2) |
| | Conductor cross section that can be connected | | |
| • solid mm ² 1.5 6 | for main contacts | | |
| | • solid | mm² | 1.5 6 |
| stranded wire | stranded wire | | |

| with conductor end processing | mm² | 1 10 |
|--|--------|----------------------|
| for auxiliary and control contacts | | |
| • solid | mm² | 0.5 2.5 |
| stranded wire | | |
| with conductor end processing / minimum | mm² | 0.5 2.5 |
| without conductor final cutting | mm² | 0.5 2.5 |
| AWG number / as coded connectable conductor cross-section / for main contacts | | 14 10 |
| Design of the electrical connection / for auxiliary and control current circuit | | screw-type terminals |
| Design of the thread / of the connection screw / of the auxiliary and control pins | | M3 |
| AWG number / as coded connectable conductor cross-section | | |
| for auxiliary and control contacts | | 20 12 |
| Skinning length / of the cable / for main contacts | mm | 7 |
| Skinning length / of the cable / for auxiliary and control contacts | mm | 7 |
| Tightening torque / for auxiliary and control contacts | | |
| with screw-type terminals | N∙m | 0.5 0.6 |
| Tightening torque (lbf·in) / for auxiliary and control contacts | | |
| with screw-type terminals | lbf-in | 7.5 5.3 |

Certificates/approvals:

General Product Approval

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s other Manufacturer

Test Certificates

Manufacturer

Further information:

Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/industrial-controls/catalogs

ROSTEST

Industry Mall (Online ordering system)

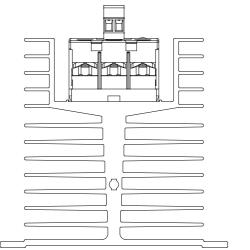
http://www.siemens.com/industrial-controls/mall

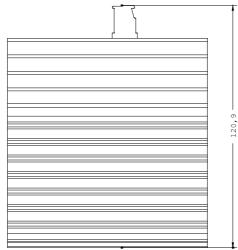
Cax online generator:

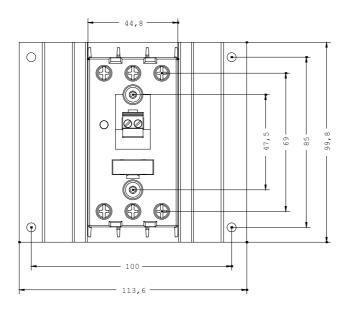
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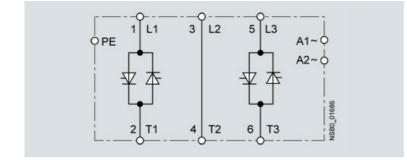
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RF2440-1AB55/all

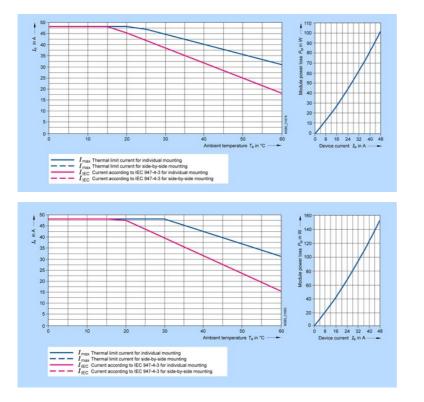
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2440-1AB55

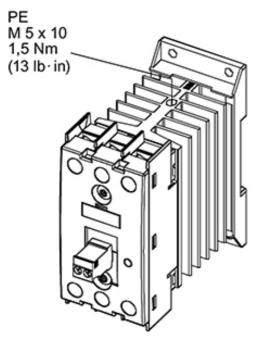












last change:

Aug 22, 2011