

Solid-state contactor 3-phase 3RF2 AC 51 / 40 A / 40 °C
 48-600 V / 230 V AC 2-phase controlled screw terminal
 Blocking voltage 1200 V



General technical data

| | | |
|---|----|-----------------------|
| product brandname | | 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 operation | °C | -25 ... +60 |
| • during storage | °C | -55 ... +80 |
| Installation altitude at height above sea level maximum | m | 1 000 |
| Vibration resistance acc. to IEC 60068-2-6 | | 2g |
| Shock resistance acc. to IEC 60068-2-27 | | 15g / 11 ms |
| Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 | | K |
| Equipment marking acc. to DIN EN 61346-2 | | Q |
| Number of NC contacts for auxiliary contacts | | 0 |
| Number of NO contacts for auxiliary contacts | | 0 |
| Number of CO contacts for auxiliary contacts | | 0 |

| Main circuit | | |
|---|-------------------|-------------|
| Number of NO contacts for main contacts | | 2 |
| Number of NC contacts for main contacts | | 0 |
| Operating current | | |
| • minimum | mA | 500 |
| • at AC-51 rated value | A | 40 |
| • at AC-51 according to IEC 60947-4-3 | A | 30 |
| Derating temperature | °C | 40 |
| Power loss [W] total typical | W | 80 |
| Reverse current of the thyristor | mA | 10 |
| Surge current resistance rated value | A | 1 150 |
| I ² t value maximum | A ² ·s | 6 600 |
| Operating voltage at AC | | |
| • at 50 Hz rated value | V | 48 ... 600 |
| • at 60 Hz rated value | V | 48 ... 600 |
| Operating range relative to the operating voltage at AC | | |
| • at 50 Hz | V | 40 ... 660 |
| • at 60 Hz | V | 40 ... 660 |
| Operating frequency rated value | Hz | 50 ... 60 |
| Relative symmetrical tolerance of the operating frequency | % | 10 |
| Insulation voltage rated value | V | 600 |
| Rate of voltage rise at the thyristor for main contacts maximum permissible | V/μs | 1 000 |
| Blocking voltage at the thyristor for main contacts maximum permissible | V | 1 600 |
| Short-circuit protection, design of the fuse link | | |
| Control circuit/ Control | | |
| Type of voltage of the control supply voltage | | AC |
| Control supply voltage 1 | | |
| • at AC | | |
| — at 50 Hz | V | 180 ... 230 |
| — at 60 Hz | V | 180 ... 230 |
| Control supply voltage frequency | | |
| • 1 rated value | Hz | 45 |
| • 2 rated value | Hz | 66 |
| Control supply voltage | | |
| • at AC | | |
| — initial value for signal <1> detection | V | 180 |
| — at 50 Hz Full-scale value for signal <0> recognition | V | 40 |

| | | |
|---|----|-----|
| — at 60 Hz Full-scale value for signal<0> recognition | V | 180 |
| Symmetrical line frequency tolerance | Hz | 5 |
| Relative symmetrical tolerance of the supply voltage frequency | % | 10 |
| Control current | | |
| <ul style="list-style-type: none"> • at minimum control supply voltage <ul style="list-style-type: none"> — at AC • at AC rated value | mA | 2 |
| | mA | 15 |

Installation/ mounting/ dimensions





| | | |
|---|-----|--------------|
| Mounting type | | screw fixing |
| Mounting type Side-by-side mounting | | Yes |
| Design of the thread of the screw for securing the equipment | | M4 |
| Tightening torque of the screw for securing the equipment | N·m | 1.5 |
| Width | mm | 113.5 |
| Height | mm | 100 |
| Depth | mm | 121 |

Connections/Terminals

| | | |
|--|-----------------|---|
| Type of electrical connection for main current circuit | | screw-type terminals |
| Design of the thread of the connection screw for main contacts | | M4 |
| Tightening torque for main contacts with screw-type terminals | N·m | 2 ... 2.5 |
| Tightening torque [lbf·in] for main contacts with screw-type terminals | lbf·in | 18 ... 22 |
| Type of connectable conductor cross-sections | | |
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — finely stranded — with core end processing • at AWG conductors <ul style="list-style-type: none"> — for main contacts — for auxiliary and control contacts • for auxiliary and control contacts <ul style="list-style-type: none"> — solid — finely stranded <ul style="list-style-type: none"> — with core end processing — without core end processing | | 2x (1.5 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (14 ... 10) 1x (AWG 20 ... 12) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) |
| Connectable conductor cross-section | | |
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — single or multi-stranded | mm ² | 1.5 ... 6 |

| | | |
|--|-----------------|----------------------|
| — finely stranded | mm ² | 1 ... 10 |
| — with core end processing | | |
| • for auxiliary and control contacts | mm ² | 0.5 ... 2.5 |
| — solid | | |
| — finely stranded | mm ² | 0.5 ... 2.5 |
| — with core end processing | | |
| — without core end processing | mm ² | 0.5 ... 2.5 |
| AWG number as coded connectable conductor cross section | | |
| • for main contacts | | 14 ... 10 |
| • for auxiliary and control contacts | | 20 ... 12 |
| Type of electrical connection for auxiliary and control current circuit | | screw-type terminals |
| Design of the thread of the connection screw of the auxiliary and control contacts | | M3 |
| Wire stripping length of the cable | | |
| • for main contacts | mm | 7 |
| • 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 | EMC | Declaration of Conformity | Test Certificates | other |
|--|---|---|---|--|
|  CSA |  UL |  C-Tick |  EG-Konf. | Type Test Certificates/Test Report Confirmation |

Further information

Short-circuit protection, design of the fuse link

https://www.automation.siemens.com/cd-static/material/info/3RF24_eng.pdf

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2440-1AB55>

Cax online generator

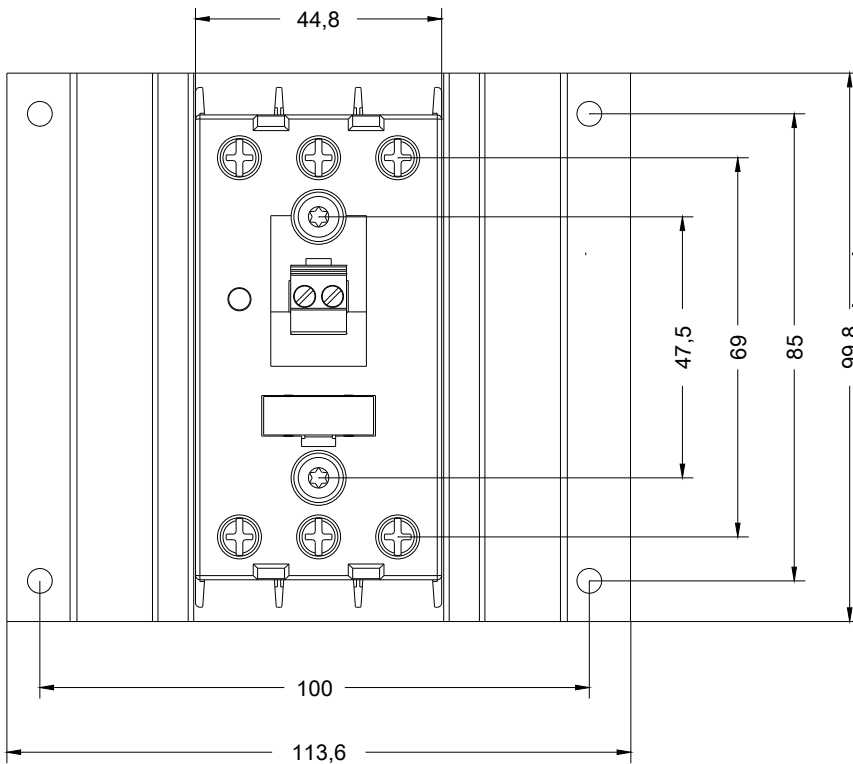
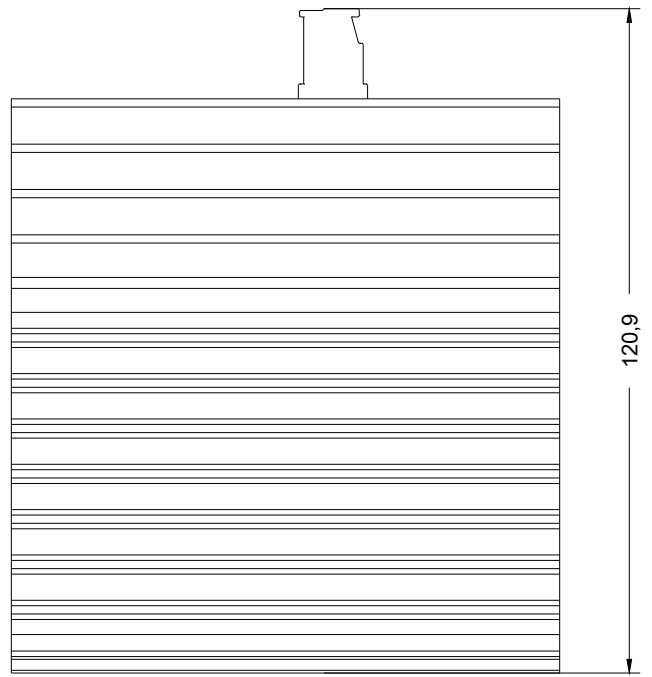
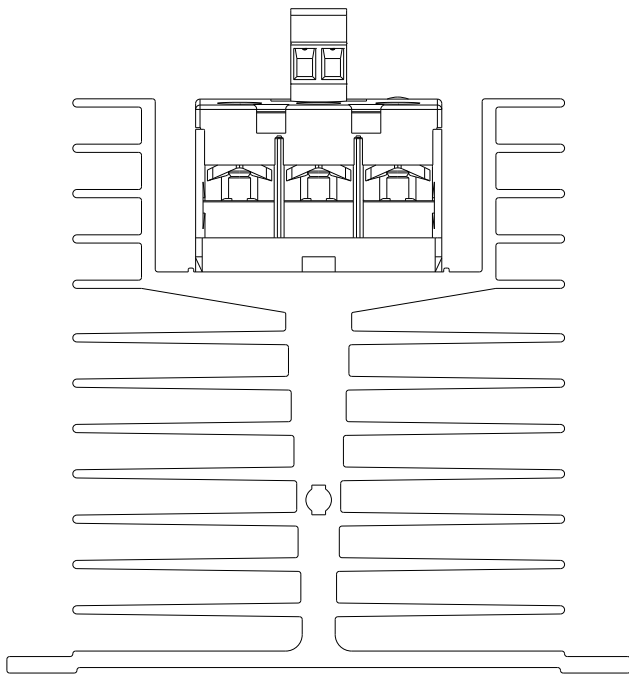
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2440-1AB55>

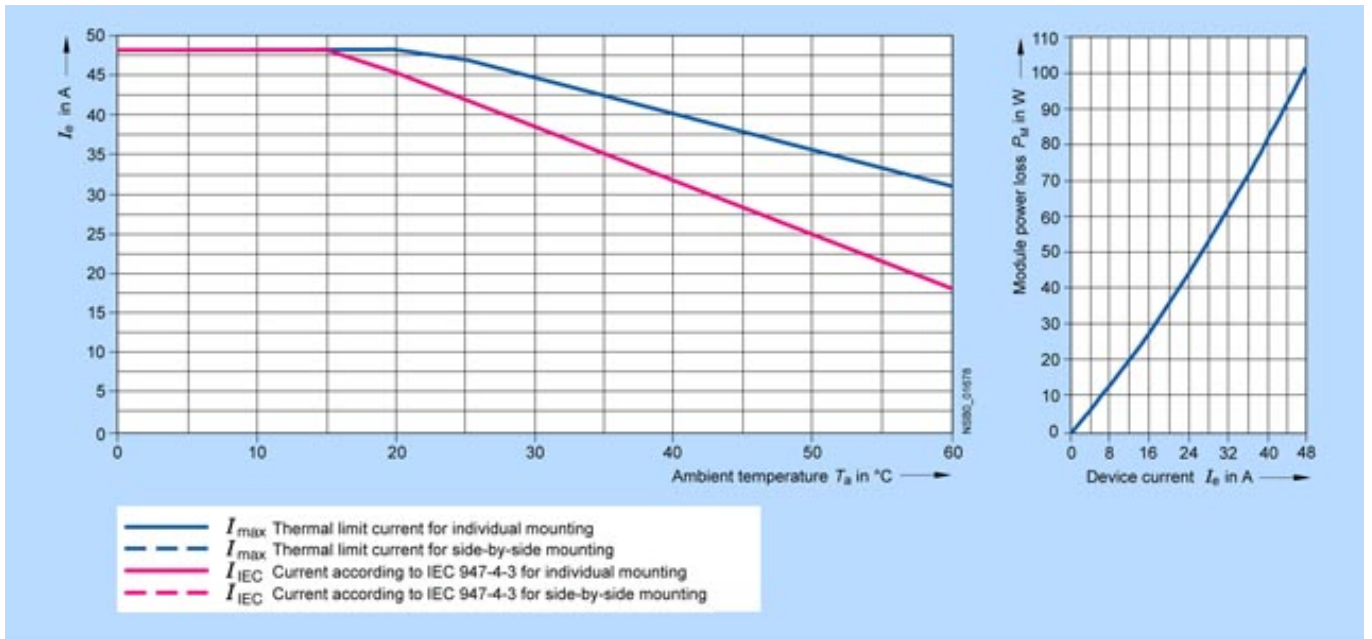
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2440-1AB55>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2440-1AB55&lang=en





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