

Power contactor, AC-3 95 A, 45 kW / 400 V 24 V DC, 3-pole, Size S3
Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2
Preferred successor type is >>3RT2046-1KB40<<



| | |
|---|---|
| Product brand name | SIRIUS |
| Product designation | power contactor |
| General technical data | |
| Size of contactor | S3 |
| Insulation voltage | |
| • rated value | 1 000 V |
| Degree of pollution | 3 |
| Surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for safe isolation | |
| • between coil and main contacts acc. to EN 60947-1 | 690 V |
| Protection class IP | |
| • on the front | IP20; IP20 on the front with cover / box terminal |
| • of the terminal | IP00 |
| Shock resistance at rectangular impulse | |
| • at DC | 6,8g / 5 ms, 4g / 10 ms |
| Shock resistance with sine pulse | |
| • at DC | 10,6g / 5 ms, 6,2g / 10 ms |
| Mechanical service life (switching cycles) | |

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| <ul style="list-style-type: none"> • of contactor typical | 10 000 000 |
| <ul style="list-style-type: none"> • of the contactor with added electronics-compatible auxiliary switch block typical | 5 000 000 |
| <ul style="list-style-type: none"> • of the contactor with added auxiliary switch block typical | 10 000 000 |
| Reference code acc. to DIN EN 81346-2 | Q |

| Ambient conditions | |
|--|----------------|
| Installation altitude at height above sea level | |
| <ul style="list-style-type: none"> • maximum | 2 000 m |
| Ambient temperature | |
| <ul style="list-style-type: none"> • during operation | -25 ... +60 °C |
| <ul style="list-style-type: none"> • during storage | -55 ... +80 °C |

| Main circuit | |
|---|--------------------------------|
| Number of poles for main current circuit | 3 |
| Number of NO contacts for main contacts | 3 |
| Number of NC contacts for main contacts | 0 |
| Operating current | |
| <ul style="list-style-type: none"> • at AC-1 at 400 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value | 120 A |
| <ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 1000 V at ambient temperature 40 °C rated value — up to 1000 V at ambient temperature 60 °C rated value | 120 A 100 A 70 A 60 A |
| <ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 690 V rated value — at 1000 V rated value | 95 A 58 A 30 A |
| <ul style="list-style-type: none"> • at AC-4 at 400 V rated value | 80 A |
| Connectable conductor cross-section in main circuit at AC-1 | |
| <ul style="list-style-type: none"> • at 60 °C minimum permissible | 35 mm ² |
| <ul style="list-style-type: none"> • at 40 °C minimum permissible | 50 mm ² |
| Operating current for approx. 200000 operating cycles at AC-4 | |
| <ul style="list-style-type: none"> • at 400 V rated value | 42 A |
| <ul style="list-style-type: none"> • at 690 V rated value | 27 A |
| Operating current | |

| | |
|---|--|
| <ul style="list-style-type: none"> • at 1 current path at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value | <p>100 A</p> <p>9 A</p> <p>100 A</p> <p>100 A</p> <p>100 A</p> <p>100 A</p> |
| <p>Operating current</p> <ul style="list-style-type: none"> • at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value | <p>40 A</p> <p>2.5 A</p> <p>100 A</p> <p>100 A</p> <p>100 A</p> <p>100 A</p> |
| <p>Operating power</p> <ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — at 230 V at 60 °C rated value — at 400 V rated value — at 690 V rated value — at 690 V at 60 °C rated value — at 1000 V at 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 1000 V rated value | <p>38 kW</p> <p>66 kW</p> <p>114 kW</p> <p>114 kW</p> <p>98 W</p> <p>45 kW</p> <p>22 kW</p> <p>45 kW</p> <p>55 kW</p> <p>55 kW</p> <p>37 W</p> |
| <p>Operating power for approx. 200000 operating cycles at AC-4</p> <ul style="list-style-type: none"> • at 400 V rated value • at 690 V rated value | <p>22 kW</p> <p>25.4 kW</p> |
| <p>Thermal short-time current limited to 10 s</p> | <p>760 A</p> |
| <p>No-load switching frequency</p> <ul style="list-style-type: none"> • at DC | <p>1 000 1/h</p> |
| <p>Operating frequency</p> <ul style="list-style-type: none"> • at AC-1 maximum | <p>900 1/h</p> |

| | |
|-------------------|---------|
| • at AC-2 maximum | 350 1/h |
| • at AC-3 maximum | 850 1/h |
| • at AC-4 maximum | 250 1/h |

Control circuit/ Control

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|---|---------------|
| Type of voltage of the control supply voltage | DC |
| Control supply voltage at DC | |
| • rated value | 24 V |
| Operating range factor control supply voltage rated value of magnet coil at DC | |
| • initial value | 0.8 |
| • Full-scale value | 1.1 |
| Closing power of magnet coil at DC | 15 W |
| Holding power of magnet coil at DC | 15 W |
| Closing delay | |
| • at DC | 90 ... 230 ms |
| Opening delay | |
| • at DC | 14 ... 20 ms |
| Arcing time | 10 ... 15 ms |

Auxiliary circuit

| | |
|---|---|
| Number of NC contacts for auxiliary contacts | |
| • instantaneous contact | 0 |
| Number of NO contacts for auxiliary contacts | |
| • instantaneous contact | 0 |
| Operating current at AC-12 maximum | 10 A |
| Operating current at AC-15 | |
| • at 230 V rated value | 6 A |
| • at 400 V rated value | 3 A |
| Operating current at DC-12 | |
| • at 60 V rated value | 6 A |
| • at 110 V rated value | 3 A |
| • at 220 V rated value | 1 A |
| Operating current at DC-13 | |
| • at 24 V rated value | 10 A |
| • at 60 V rated value | 2 A |
| • at 110 V rated value | 1 A |
| • at 220 V rated value | 0.3 A |
| Contact reliability of auxiliary contacts | 1 faulty switching per 100 million (17 V, 1 mA) |

UL/CSA ratings

| | |
|---|-------------|
| Contact rating of auxiliary contacts according to UL | A600 / Q600 |
|---|-------------|

Short-circuit protection

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|--------------------------------|--|
| Design of the fuse link | |
|--------------------------------|--|

- for short-circuit protection of the main circuit
 - with type of coordination 1 required
 - with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

fuse gL/gG: 250 A
 fuse gL/gG: 160 A
 fuse gL/gG: 10 A

Installation/ mounting/ dimensions

| | |
|---|--|
| Mounting type | screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail |
| <ul style="list-style-type: none"> • Side-by-side mounting | Yes |
| Height | 146 mm |
| Width | 70 mm |
| Depth | 152 mm |
| Required spacing | |
| <ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — at the side | 6 mm |

Connections/ Terminals

| | |
|--|---|
| Type of electrical connection | |
| <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit | <p>screw-type terminals</p> <p>screw-type terminals</p> |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — stranded — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing • at AWG conductors for main contacts | <p>2x (2.5 ... 16 mm²)</p> <p>2x (10 ... 50 mm²)</p> <p>2x (2,5 ... 16 mm²)</p> <p>2x (2.5 ... 35 mm²)</p> <p>2x (10 ... 35 mm²)</p> <p>2x (10 ... 1/0)</p> |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing • at AWG conductors for auxiliary contacts | <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 1x 12</p> |

Certificates/ approvals

| | | |
|--------------------------|-----|---------------------------------------|
| General Product Approval | EMC | Functional Safety/Safety of Machinery |
|--------------------------|-----|---------------------------------------|



[Type Examination Certificate](#)

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



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)



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



[Miscellaneous](#)

[Confirmation](#)

[Special Test Certificate](#)

Further information

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

www.siemens.com/ic10

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1046-1BB40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1046-1BB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1046-1BB40>

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

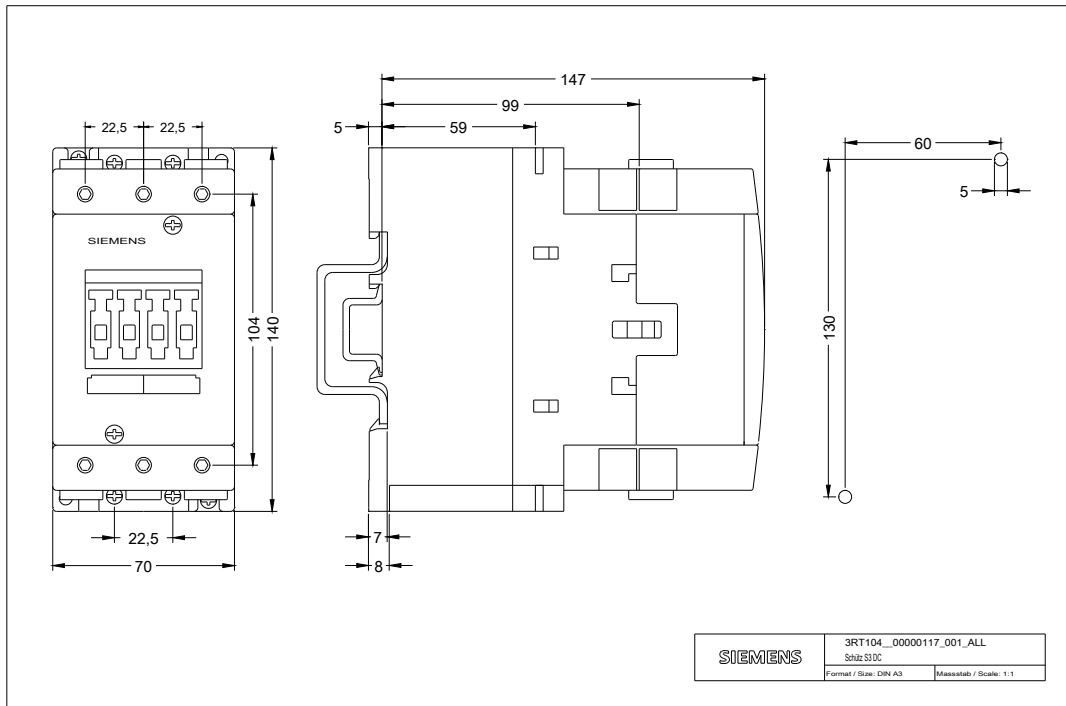
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1046-1BB40&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

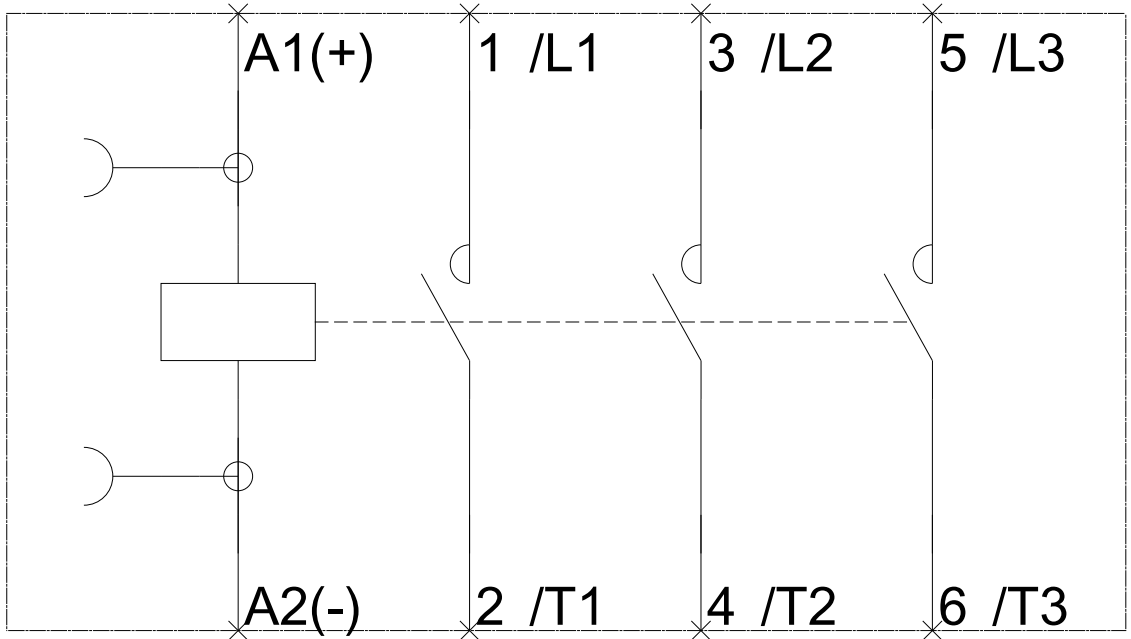
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1046-1BB40/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1046-1BB40&objecttype=14&gridview=view1>



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