

CONTACTOR, 55KW/400V/AC-3, AC(50...60HZ)/DC OPERATION
 UC 96...127V AUXIL. CONTACTS 2NO+2NC 3-POLE, SIZE S6 BAR
 CONNECTIONS ELECTRONIC OPERATING MECHANISM WITH
 PLC INTERFACE 24V DC SCREW TERMINAL



Figure similar

| | |
|---|-----------------|
| Product brand name | SIRIUS |
| Product designation | Power contactor |
| Product type designation | 3RT1 |
| General technical data | |
| Size of contactor | S6 |
| Product extension | |
| • function module for communication | No |
| • Auxiliary switch | Yes |
| Insulation voltage | |
| • rated value | 1 000 V |
| Degree of pollution | 3 |
| Surge voltage resistance rated value | 8 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 | IP00 |

| | |
|---|--|
| <ul style="list-style-type: none"> • of the terminal | IP00 |
| Shock resistance at rectangular impulse <ul style="list-style-type: none"> • at AC • at DC | 8,5g / 5 ms, 4,2g / 10 ms 8,5g / 5 ms, 4,2g / 10 ms |
| Shock resistance with sine pulse <ul style="list-style-type: none"> • at AC • at DC | 13,4g / 5 ms, 6,5g / 10 ms 13,4g / 5 ms, 6,5g / 10 ms |
| Mechanical service life (switching cycles) <ul style="list-style-type: none"> • of contactor typical • of the contactor with added electronics-compatible auxiliary switch block typical • of the contactor with added auxiliary switch block typical | 10 000 000 5 000 000 10 000 000 |

Ambient conditions

| | |
|---|----------------------------------|
| Ambient temperature <ul style="list-style-type: none"> • during operation • during storage | -25 ... +60 °C -55 ... +80 °C |
|---|----------------------------------|

Main circuit

| | |
|--|--|
| Number of poles for main current circuit | 3 |
| Number of NO contacts for main contacts | 3 |
| Operating voltage <ul style="list-style-type: none"> • at AC-3 rated value maximum | 1 000 V |
| 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 • 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 • at AC-2 at 400 V rated value • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 1000 V rated value | 160 A 160 A 140 A 80 A 80 A 115 A 115 A 115 A 53 A |
| Connectable conductor cross-section in main circuit at AC-1 | |

| | |
|--|--|
| <ul style="list-style-type: none"> • at 60 °C minimum permissible • at 40 °C minimum permissible | 50 mm ² 70 mm ² |
| Operating current for approx. 200000 operating cycles at AC-4 | |
| <ul style="list-style-type: none"> • at 400 V rated value • at 690 V rated value | 54 A 48 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 — at 220 V rated value — at 440 V rated value — at 600 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 — at 220 V rated value — at 440 V rated value — at 600 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 — at 220 V rated value — at 440 V rated value — at 600 V rated value | 160 A 18 A 3.4 A 0.8 A 0.5 A 160 A 160 A 20 A 3.2 A 1.6 A 160 A 160 A 160 A 11.5 A 4 A |
| Operating current | |
| <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 — at 220 V rated value — at 440 V rated value — at 600 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 — at 220 V rated value — at 440 V rated value — at 600 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 | 160 A 2.5 A 0.6 A 0.17 A 0.12 A 160 A 160 A 2.5 A 0.65 A 0.37 A 160 A 160 A |

| | |
|---|--------------|
| — at 220 V rated value | 160 A |
| — at 440 V rated value | 1.4 A |
| — at 600 V rated value | 0.75 A |
| Operating power | |
| • at AC-1 | |
| — at 230 V at 60 °C rated value | 53 kW |
| — at 400 V rated value | 92 kW |
| — at 400 V at 60 °C rated value | 92 kW |
| — at 690 V rated value | 159 kW |
| — at 690 V at 60 °C rated value | 159 kW |
| — at 1000 V at 60 °C rated value | 131 kW |
| • at AC-2 at 400 V rated value | 55 kW |
| • at AC-3 | |
| — at 230 V rated value | 37 kW |
| — at 400 V rated value | 55 kW |
| — at 500 V rated value | 75 kW |
| — at 690 V rated value | 110 kW |
| — at 1000 V rated value | 75 kW |
| Operating power for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 29 kW |
| • at 690 V rated value | 48 kW |
| Thermal short-time current limited to 10 s | 1 100 A |
| Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor | 7 W |
| No-load switching frequency | |
| • at AC | 2 000 1/h |
| • at DC | 2 000 1/h |
| Operating frequency | |
| • at AC-1 maximum | 800 1/h |
| • at AC-2 maximum | 400 1/h |
| • at AC-3 maximum | 1 000 1/h |
| • at AC-4 maximum | 130 1/h |
| Control circuit/ Control | |
| Type of voltage of the control supply voltage | AC/DC |
| Control supply voltage at AC | |
| • at 50 Hz rated value | 96 ... 127 V |
| • at 60 Hz rated value | 96 ... 127 V |
| Control supply voltage at DC | |
| • rated value | 96 ... 127 V |
| Operating range factor control supply voltage rated value of magnet coil at AC | |

| | |
|--|---------------|
| • at 50 Hz | 0.8 ... 1.1 |
| • at 60 Hz | 0.8 ... 1.1 |
| Design of the surge suppressor | with varistor |
| Apparent pick-up power of magnet coil at AC | |
| • at 50 Hz | 280 V·A |
| Inductive power factor with closing power of the coil | |
| • at 50 Hz | 0.8 |
| Apparent holding power of magnet coil at AC | |
| • at 50 Hz | 4.4 V·A |
| Inductive power factor with the holding power of the coil | |
| • at 50 Hz | 0.5 |
| Closing power of magnet coil at DC | 320 W |
| Holding power of magnet coil at DC | 2.8 W |
| Closing delay | |
| • at AC | 35 ... 75 ms |
| • at DC | 35 ... 75 ms |
| Opening delay | |
| • at AC | 80 ... 90 ms |
| • at DC | 80 ... 90 ms |
| Arcing time | 10 ... 15 ms |

Auxiliary circuit

| | |
|---|--------|
| Number of NC contacts | |
| • for auxiliary contacts | |
| — instantaneous contact | 2 |
| Number of NO contacts | |
| • for auxiliary contacts | |
| — instantaneous contact | 2 |
| 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 |
| • at 500 V rated value | 2 A |
| • at 690 V rated value | 1 A |
| Operating current at DC-12 | |
| • at 24 V rated value | 10 A |
| • at 48 V rated value | 6 A |
| • at 60 V rated value | 6 A |
| • at 110 V rated value | 3 A |
| • at 125 V rated value | 2 A |
| • at 220 V rated value | 1 A |
| • at 600 V rated value | 0.15 A |

| | |
|---|---|
| Operating current at DC-13 | |
| <ul style="list-style-type: none"> • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value | <p>10 A</p> <p>2 A</p> <p>2 A</p> <p>1 A</p> <p>0.9 A</p> <p>0.3 A</p> <p>0.1 A</p> |
| Contact reliability of auxiliary contacts | 1 faulty switching per 100 million (17 V, 1 mA) |

UL/CSA ratings

| | |
|---|--|
| Full-load current (FLA) for three-phase AC motor | |
| <ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value | <p>124 A</p> <p>125 A</p> |
| Yielded mechanical performance [hp] | |
| <ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 230 V rated value • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value | <p>25 hp</p> <p>40 hp</p> <p>50 hp</p> <p>100 hp</p> <p>125 hp</p> |
| Contact rating of auxiliary contacts according to UL | A600 / Q600 |

Short-circuit protection

| | |
|---|--|
| Design of the fuse link | |
| <ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required | <p>Fuse gG: 355 A</p> <p>Fuse gG: 315 A</p> <p>fuse gG: 10 A</p> |

Installation/ mounting/ dimensions

| | |
|---|--|
| Mounting position | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| Mounting type | screw fixing |
| <ul style="list-style-type: none"> • Side-by-side mounting | Yes |
| Height | 172 mm |
| Width | 120 mm |
| Depth | 170 mm |
| Required spacing | |
| <ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — at the side | 10 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"> • at AWG conductors for main contacts | 4 ... 250 kcmil |
| Type of connectable conductor cross-sections <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — single or multi-stranded — 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), 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> |

Safety related data

| | |
|---|--|
| Product function <ul style="list-style-type: none"> • Mirror contact acc. to IEC 60947-4-1 • positively driven operation acc. to IEC 60947-5-1 | <p>Yes</p> <p>No</p> |
| Protection against electrical shock | finger-safe when touched vertically from front acc. to IEC 60529 |

Certificates/approvals

| General Product Approval | Functional Safety/Safety of Machinery | Declaration of Conformity |
|---|--|--|
|  CCC  CSA  UL  EAC | Type Examination Certificate |  EG-Konf. |

| Test Certificates | Marine / Shipping |
|--|---|
| Type Test Certificates/Test Report Special Test Certificate |  ABS  RMRS  DNV  DNV-GL <small>DNVGL.COM/AF</small> |

| other |
|--|
| Confirmation Environmental Confirmations Miscellaneous |

Further information

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=3RT1054-6NF36>

Cax online generator

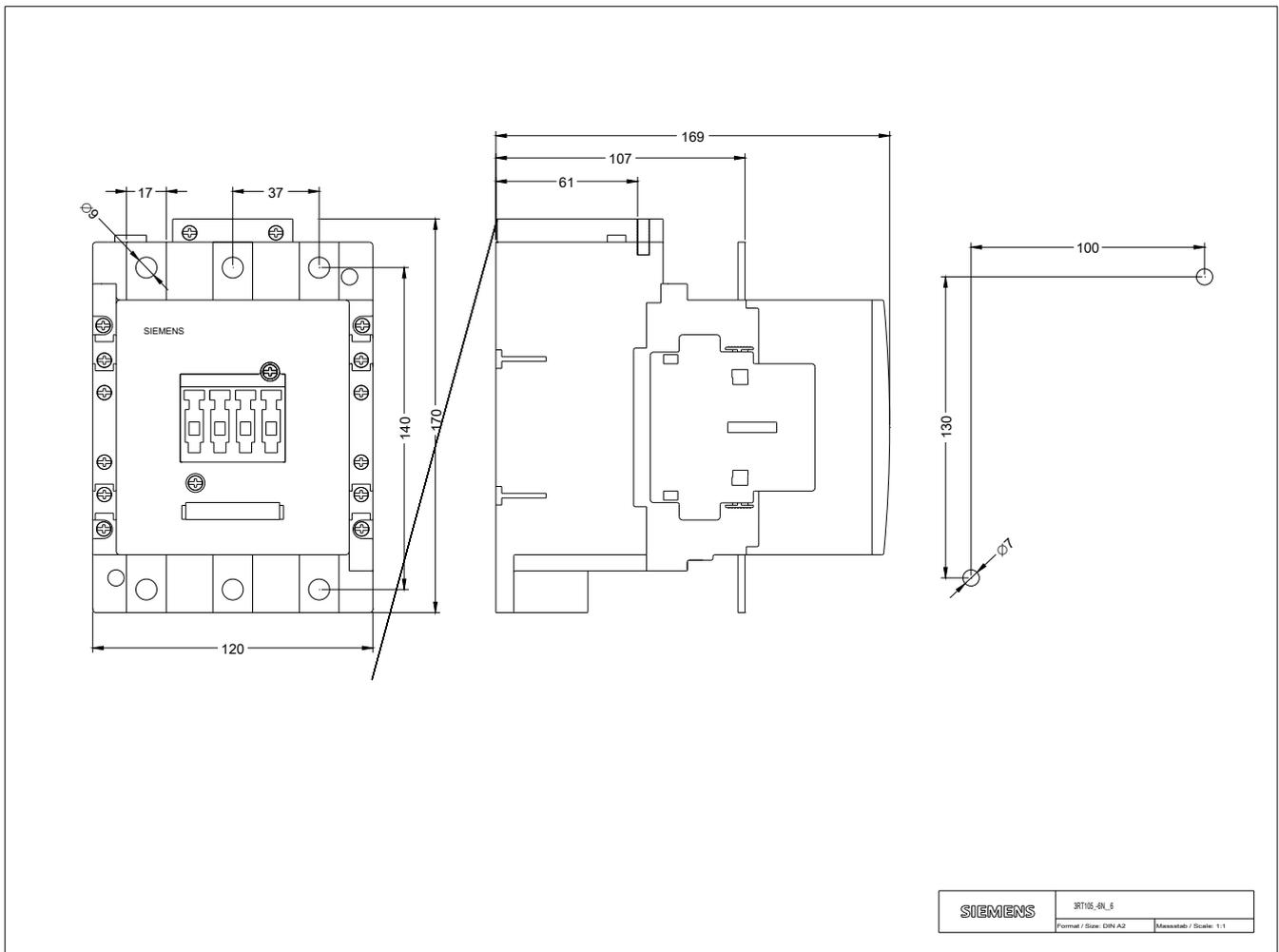
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1054-6NF36>

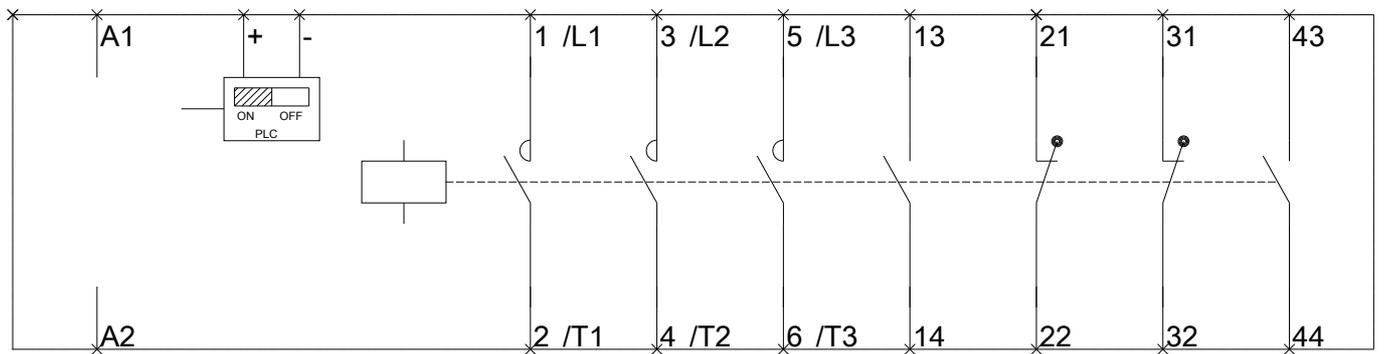
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1054-6NF36>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1054-6NF36&lang=en





last modified:

07/25/2017