SIEMENS

3RT2045-3NB30 Data sheet

> power contactor, AC-3 80 A, 37 kW / 400 V 1 NO + 1 NC, 20-33 V $\,$ AC/DC 3-pole, 3 NO, Size S3 Spring-type terminal integrated varistor



Figure similar

| Product brand name | SIRIUS |
|--------------------------|-----------------|
| Product designation | Power contactor |
| Product type designation | 3RT2 |

| S3 |
|---------|
| |
| No |
| Yes |
| |
| 1 000 V |
| 3 |
| 6 kV |
| |
| 690 V |
| |
| |
| IP20 |
| |

| • of the terminal | IP00 |
|--|--|
| Shock resistance at rectangular impulse | |
| • at AC | 6.7 g / 5 ms, 4.0 g / 10 ms |
| • at DC | 6.7 g / 5 ms, 4.0 g / 10 ms |
| Shock resistance with sine pulse | |
| • at AC | 10.6 g / 5 ms, 6.3 g / 10 ms |
| • at DC | 10.6 g / 5 ms, 6.3 g / 10 ms |
| Mechanical service life (switching cycles) | |
| • of contactor typical | 10 000 000 |
| of the contactor with added electronics- compatible auxiliary switch block typical | 5 000 000 |
| of the contactor with added auxiliary switch block typical | 10 000 000 |
| Reference indentifier acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 | К |
| Ambient conditions | |
| Installation altitude at height above sea level | |
| • maximum | 2 000 m |
| Ambient temperature | |
| during operation | -25 +60 °C |
| during storage | -55 +80 °C |
| during storage | |
| Main circuit | |
| | 3 |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts | 3 3 |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage | 3 |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum | |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current | 3 |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V | 3 1 000 V |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current | 3 |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 | 3 1 000 V 125 A |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value | 3 1 000 V |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C | 3 1 000 V 125 A |
| Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C | 3 1 000 V 125 A 125 A |
| Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value | 3 1 000 V 125 A 125 A 105 A |
| Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value | 3 1 000 V 125 A 125 A 105 A |
| Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 | 3 1 000 V 125 A 125 A 105 A 80 A |
| Main circuit Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 — at 400 V rated value | 3 1 000 V 125 A 125 A 105 A 80 A |
| Number of poles for main current circuit Number of NO contacts for main contacts Operating voltage • at AC-3 rated value maximum Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 — at 400 V rated value — at 500 V rated value | 3 1 000 V 125 A 125 A 105 A 80 A 80 A |

| • at 40 °C minimum permissible | 50 mm² |
|--|--------|
| Operating current for approx. 200000 operating | |
| cycles at AC-4 | |
| ● at 400 V rated value | 34 A |
| at 690 V rated value | 24 A |
| Operating current | |
| • at 1 current path at DC-1 | |
| — at 24 V rated value | 100 A |
| — at 110 V rated value | 9 A |
| — at 220 V rated value | 2 A |
| — at 440 V rated value | 0.6 A |
| — at 600 V rated value | 0.4 A |
| with 2 current paths in series at DC-1 | |
| — at 24 V rated value | 100 A |
| — at 110 V rated value | 100 A |
| — at 220 V rated value | 10 A |
| — at 440 V rated value | 1.8 A |
| — at 600 V rated value | 1 A |
| with 3 current paths in series at DC-1 | |
| — at 24 V rated value | 100 A |
| — at 110 V rated value | 100 A |
| — at 220 V rated value | 80 A |
| — at 440 V rated value | 4.5 A |
| — at 600 V rated value | 2.6 A |
| Operating current | |
| at 1 current path at DC-3 at DC-5 | |
| — at 24 V rated value | 40 A |
| — at 110 V rated value | 2.5 A |
| — at 220 V rated value | 1 A |
| — at 440 V rated value | 0.15 A |
| — at 600 V rated value | 0.06 A |
| with 2 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 100 A |
| — at 110 V rated value | 100 A |
| — at 220 V rated value | 7 A |
| — at 440 V rated value | 0.42 A |
| — at 600 V rated value | 0.16 A |
| • with 3 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 100 A |
| — at 110 V rated value | 100 A |
| — at 220 V rated value | 35 A |
| | |

| Operating power | — at 440 V rated value | 0.8 A |
|--|---|------------|
| | — at 600 V rated value | 0.35 A |
| | Operating power | |
| = at 230 V at 60 °C rated value | • at AC-1 | |
| | — at 230 V rated value | 47 kW |
| | — at 230 V at 60 °C rated value | 40 kW |
| | — at 400 V rated value | 82 kW |
| - at 690 V at 60 °C rated value 37 kW • at AC-2 at 400 V rated value 22 kW - at 230 V rated value 37 kW - at 230 V rated value 37 kW - at 500 V rated value 55 kW Operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value 17.9 kW • at 690 V rated value 21.8 kW Thermal short-time current limited to 10 s 760 A Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency • at AC 1 1 000 1/h • at DC 1 000 1/h • at AC-2 maximum 900 1/h • at AC-3 maximum 400 1/h • at AC-4 maximum 900 1/h • at AC-4 maximum 1000 1/h • at AC-4 maximum 300 1/h Control curl Control Type of voltage of the control supply voltage AC/DC Control supply voltage at AC • at 60 Hz rated value 20 33 V Control supply voltage at DC • rated value 70 33 V • initial value 0.8 | — at 400 V at 60 °C rated value | 69 kW |
| * at AC-2 at 400 V rated value * at AC-3 — at 230 V rated value — at 400 V rated value — at 900 V rated value — at 500 V rated value — at 500 V rated value — at 690 V rated value * at 400 V rated value * at 690 V rated value * at 690 V rated value * at 690 V rated value * at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency * at AC * at DC * at DC * at DC * at AC-1 maximum * at AC-2 maximum * at AC-3 maximum * at AC-3 maximum * at AC-3 maximum * at AC-4 maximum * at 60 Hz rated value * at 50 Hz rated value * at 50 Hz rated value * at 60 Hz rated value * at 60 Hz rated value * at 60 Hz rated value * at acd value * are value of magnet coll at DC * initial value * initial value * initial value * initial value * at init | — at 690 V rated value | 142 kW |
| at 230 V rated value | — at 690 V at 60 °C rated value | 119 kW |
| - at 230 V rated value | • at AC-2 at 400 V rated value | 37 kW |
| - at 400 V rated value | • at AC-3 | |
| — at 500 V rated value 55 kW Operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value 17.9 kW • at 690 V rated value 21.8 kW Thermal short-time current limited to 10 s 760 A Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency • at AC 1000 1/h • at DC 1000 1/h Operating frequency • at AC-1 maximum 900 1/h • at AC-2 maximum 400 1/h • at AC-3 maximum 1000 1/h • at AC-3 maximum 300 1/h • at AC-4 maximum 300 1/h • at AC-4 maximum 300 1/h • at AC-4 maximum 200 1/h • at AC-4 maximum 200 1/h • at AC-9 maximum 300 1/h Control supply voltage at AC • at 50 Hz rated value 20 33 V Control supply voltage at DC • rated value 20 33 V Operating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 | — at 230 V rated value | 22 kW |
| — at 690 V rated value Operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value 760 A Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency • at AC • at DC 1 000 1/h • at DC Operating frequency • at AC-1 maximum • at AC-2 maximum • 400 1/h • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum 300 1/h Control circuit/ Control Type of voltage of the control supply voltage • at 60 Hz rated value | — at 400 V rated value | 37 kW |
| Operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value 21.8 kW Thermal short-time current limited to 10 s Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency • at AC • at DC Operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 rated value • at 50 Hz rated value • at 50 Hz rated value • at 60 Hz rated value • at 60 Hz rated value • at act value Operating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 | — at 500 V rated value | 45 kW |
| at AC-4 • at 400 V rated value • at 690 V rated value 21.8 kW Thermal short-time current limited to 10 s Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency • at AC • at DC Operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-5 maximum • at AC-4 maximum • at AC-5 maximum • at AC-6 maximum • at AC-1 maximum • at AC-1 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum Control circuit/ Control Type of voltage of the control supply voltage AC/DC Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value 20 33 V Control supply voltage at DC • rated value Operating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 | — at 690 V rated value | 55 kW |
| at 400 V rated value at 690 V rated value 21.8 kW Thermal short-time current limited to 10 s Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency at AC at DC 1 000 1/h Operating frequency at AC-1 maximum at AC-2 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum at AC-6 maximum at AC-6 maximum at AC-7 maximum at AC-8 maximum at AC-8 maximum at AC-9 maximum at AC-9 maximum at AC-1 maximum at AC-1 maximum at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum at AC-4 maximum at AC-4 maximum Control circuit/ Control Type of voltage of the control supply voltage AC/DC Control supply voltage at AC at 50 Hz rated value at 60 | Operating power for approx. 200000 operating cycles | |
| at 690 V rated value Thermal short-time current limited to 10 s Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency at AC at DC 1 000 1/h Operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum at AC-5 most in the control supply voltage Control circuit/ Control Type of voltage of the control supply voltage Control supply voltage at AC at 50 Hz rated value at 60 Hz rated value at 60 Hz rated value control supply voltage at DC at 60 Hz rated value control supply voltage at DC arated value Operating range factor control supply voltage rated value of magnet coll at DC initial value 0.8 | at AC-4 | |
| Thermal short-time current limited to 10 s Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency • at AC • at DC 1 000 1/h • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-5 maximum • at AC-6 maximum • at AC-1 maximum • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum Control circuit/ Control Type of voltage of the control supply voltage Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value • at 60 Hz rated value • at 60 Hz rated value • rated value Operating range factor control supply voltage rated value of magnet coil at DC • initial value • initial value | • at 400 V rated value | 17.9 kW |
| Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor No-load switching frequency at AC at DC 1 000 1/h Operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum at AC-4 maximum at AC-4 maximum at AC-4 maximum but AC-4 maximum Control circuit/ Control Type of voltage of the control supply voltage Control supply voltage at AC at 50 Hz rated value at 60 Hz rated value at 60 Hz rated value at 60 Hz rated value are 61 Hz rated value but 700 Hz rated value are 61 Hz rated val | | 21.8 kW |
| the operating current per conductor No-load switching frequency • at AC • at DC 1 000 1/h Operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum 500 1/h • at AC-4 maximum Control circuit/ Control Type of voltage of the control supply voltage Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value • at 60 Hz rated value Operating range factor control supply voltage rated value of magnet coil at DC • initial value 0 0.8 | | |
| No-load switching frequency • at AC • at DC 1 000 1/h Operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-9 maximum • at AC-1 maximum • at AC-1 maximum • at AC-2 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum Control circuit/ Control Type of voltage of the control supply voltage AC/DC Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value 20 33 V Control supply voltage at DC • rated value • rated value Operating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 | | 5.3 W |
| at AC at DC 1 000 1/h 1 000 1/h Operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum at AC-4 maximum 300 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 at 60 Hz rated value 20 33 V Control supply voltage at DC at at 60 Hz rated value 20 33 V Control supply voltage at DC at at on Hz rated value 20 33 V Operating range factor control supply voltage rated value of magnet coil at DC initial value 0.8 | | |
| at DC Operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum at AC-4 maximum Type of voltage of the control supply voltage Control circuit/ Control Type of voltage at AC at 50 Hz rated value at 60 Hz rated value control supply voltage at DC at rated value are rated value at control supply voltage at DC are rated value or rated value | | 1 000 1/b |
| Operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum Type of voltage of the control supply voltage Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value • rated value Control supply voltage at DC • rated value • rated value Operating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 | | |
| at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-4 maximum at AC-6 maximum at AC-6 maximum at AC-7 maximum at AC-8 maximum at AC-9 maximum at AC-9 maximum at AC-9 maximum at AC-1 maximum at AC-1 maximum at AC-1 maximum at AC-1 maximum at AC-2 maximum at AC-1 maximum at AC-2 maximum at AC-1 maximum at AC-2 maximum at AC-2 maximum at AC-2 maximum at AC-3 maximum at AC-2 maximum at AC-4 maximum at AC-DC at AC-DC at AC-DC at AC-DC at AC-DC at AC-DC at at at AC-2 maximum at at AC-3 maximum at at AC-4 maximum at | | 1 000 1/11 |
| at AC-2 maximum at AC-3 maximum at AC-4 maximum 300 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 at 60 Hz rated value Control supply voltage at DC rated value at 33 V Operating range factor control supply voltage rated value of magnet coil at DC initial value 0.8 | | 900 1/h |
| at AC-3 maximum at AC-4 maximum 300 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 at 60 Hz rat | | |
| ● at AC-4 maximum 300 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 20 33 V • at 60 Hz rated value 20 33 V Control supply voltage at DC ● rated value 20 33 V Operating range factor control supply voltage rated value of magnet coil at DC ● initial value 0.8 | | |
| Type of voltage of the control supply voltage Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value 20 33 V Control supply voltage at DC • rated value 20 33 V Control supply voltage at DC • rated value 0.8 | | |
| Type of voltage of the control supply voltage Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value Control supply voltage at DC • rated value 20 33 V Control supply voltage at DC • rated value 20 33 V Operating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 | ■ at AC-4 maximum | 300 1/11 |
| Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value Control supply voltage at DC • rated value Coperating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 | Control circuit/ Control | |
| at 50 Hz rated value at 60 Hz rated value 20 33 V Control supply voltage at DC rated value 20 33 V Operating range factor control supply voltage rated value of magnet coil at DC initial value 0.8 | Type of voltage of the control supply voltage | AC/DC |
| at 60 Hz rated value Control supply voltage at DC rated value 20 33 V Operating range factor control supply voltage rated value of magnet coil at DC initial value 0.8 | • | |
| Control supply voltage at DC • rated value Operating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 | • at 50 Hz rated value | |
| rated value 20 33 V Operating range factor control supply voltage rated value of magnet coil at DC initial value 0.8 | | 20 33 V |
| Operating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 | | |
| value of magnet coil at DC ● initial value 0.8 | | 20 33 V |
| • initial value 0.8 | | |
| | | 0.0 |
| • Fuil-scale value | | |
| | ■ Full-scale value | 1.1 |

| 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 |
| Inrush current peak | |
| ● at 24 V | 4.2 A |
| Apparent pick-up power of magnet coil at AC | |
| ● at 50 Hz | 163 V·A |
| ● at 60 Hz | 163 V·A |
| Apparent holding power of magnet coil at AC | |
| ● at 50 Hz | 3.5 V·A |
| ● at 60 Hz | 3.5 V·A |
| Closing power of magnet coil at DC | 76 W |
| Holding power of magnet coil at DC | 2.7 W |
| Closing delay | |
| • at DC | 50 70 ms |
| Opening delay | |
| • at DC | 38 57 ms |
| Arcing time | 10 20 ms |
| Residual current of the electronics for control with signal <0> | |
| • at AC at 230 V maximum permissible | 20 mA |
| • at DC at 24 V maximum permissible | 20 mA |

| Auxiliary circuit | |
|---|------|
| Number of NC contacts | |
| ● for auxiliary contacts | |
| instantaneous contact | 1 |
| Number of NO contacts | |
| ● for auxiliary contacts | |
| instantaneous contact | 1 |
| 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 | |
| • at 24 V rated value | 10 A |
| • at 48 V rated value | 2 A |
| • at 60 V rated value | 2 A |
| • at 110 V rated value | 1 A |
| • at 125 V rated value | 0.9 A |
| • at 220 V rated value | 0.3 A |
| • at 600 V rated value | 0.1 A |
| 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 | |
| • at 480 V rated value | 77 A |
| • at 600 V rated value | 62 A |
| Yielded mechanical performance [hp] | |
| for single-phase AC motor | |
| — at 110/120 V rated value | 7.5 hp |
| — at 230 V rated value | 15 hp |
| • for three-phase AC motor | |
| — at 200/208 V rated value | 25 hp |
| — at 220/230 V rated value | 30 hp |
| — at 460/480 V rated value | 60 hp |
| — at 575/600 V rated value | 60 hp |
| Contact rating of auxiliary contacts according to UL | A600 / P600 |

| Short-circuit | protection |
|---------------|-------------|
| Design of the | e 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

gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 250 A gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A fuse gG: 10 A

| 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 and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |
| Side-by-side mounting | Yes |
| Height | 140 mm |

| Type of electrical connection • for main current circuit • for auxiliary and control current circuit Type of connectable conductor cross-sections • for main contacts — finely stranded with core end processing • at AWG conductors for main contacts • solid • stranded Type of connectable conductor cross-section for main contacts • solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing — finely stranded without core end processing — finely stranded without core end processing — finely stranded without core end processing — finely stranded without core end processing | Width | 70 mm |
|--|---|----------------------------------|
| • with side-by-side mounting — forwards — Backwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — backwards — upwards — o mm — backwards — upwards — upwards — upwards — upwards — upwards — upwards — o mm — downwards — to mm — downwards — forwards — forwards — forwards — o mm — o mm • for live parts — forwards — Backwards — upwards — to mm — downwards — to mm — downwards — upwards — o mm | Depth | 152 mm |
| forwards | Required spacing | |
| Backwards 0 mm upwards 0 mm downwards 0 mm at the side 0 mm for grounded parts forwards 0 mm forwards 0 mm forwards 0 mm forwards 0 mm Backwards 0 mm upwards 10 mm at the side 10 mm for live parts 10 mm forwards 0 mm forwards 0 mm forwards 10 mm forwards 10 mm forwards 10 mm at the side 10 mm forwards 10 mm are accepted by the side 10 mm Connections/Terminals Type of electrical connection for auxiliary and control current circuit spring-loaded terminals Type of connectable conductor cross-sections for main current circuit spring-loaded terminals Type of connectable conductor cross-sections for main current circuit spring-loaded terminals Type of connectable conductor cross-sections for main current circuit spring-loaded terminals Type of connectable conductor cross-sections for main cuntacts 2x (10 1/0), 1x (10 2) Connectable conductor cross-section for main contacts finely stranded conductor cross-sections for auxiliary contacts finely stranded with core end processing finely stranded without core end processing | with side-by-side mounting | |
| - upwards 0 mm - downwards 0 mm - at the side 0 mm • for grounded parts - forwards 0 mm - Backwards 0 mm - at the side 10 mm - downwards 10 mm - for live parts - forwards 0 mm - backwards 0 mm - downwards 10 mm - at the side 10 mm - downwards 10 mm - downwards 10 mm - at the side 10 mm - at the side 10 mm - for main current circuit screw-type terminals - at the side 2 x (2.5 35 mm²), 1x (2.5 50 mm²) - at AWG conductor for main contacts 2x (10 1/0), 1x (10 2) Connectable conductor cross-sections - finely stranded with core end processing 2x (2.5 35 mm²) - stranded 2.5 16 mm² - stranded 5 70 mm² Type of connectable conductor cross-sections - finely stranded with core end processing 2x (0.5 2.5 mm²) - finely stranded with core end processing 2x (0.5 2.5 mm²) - finely stranded with core end processing 2x (0.5 2.5 mm²) - finely stranded with core end processing 2x (0.5 2.5 mm²) - finely stranded with core end processing 2x (0.5 2.5 mm²) - finely stranded with core end processing 2x (0.5 2.5 mm²) | — forwards | 0 mm |
| - downwards 0 mm - at the side 0 mm • for grounded parts - forwards 0 mm - Backwards 0 mm - upwards 10 mm - at the side 10 mm - downwards 10 mm • for live parts - forwards 0 mm - downwards 10 mm • for live parts - forwards 0 mm - backwards 0 mm - upwards 10 mm - downwards 10 mm - upwards 10 mm - upwards 10 mm - downwards 10 mm - at the side 10 mm - for auxiliary and control current circuit spring-loaded terminals Type of connectable conductor cross-sections • for main current circuit spring-loaded terminals • for main current circuit spring-loaded terminals • for main contacts - finely stranded with core end processing 2x (2.5 35 mm²), 1x (2.5 50 mm²) • stranded • stranded Type of connectable conductor cross-sections • for auxiliary conductor for main contacts - single conductor cross-sections • for auxiliary contacts - single or multi-stranded - finely stranded with core end processing | — Backwards | 0 mm |
| - at the side • for grounded parts - forwards - Backwards - upwards - at the side 10 mm - at the side 10 mm • for live parts - forwards - forwards • for live parts - forwards - forwards - upwards - forwards - upwards - upwards - upwards - upwards - upwards - downwards - upwards - at the side 10 mm - at the side 10 mm - the side Connections/Terminals Type of electrical connection • for main current circuit • for auxiliary and control current circuit - finely stranded with core end processing • at AWC conductors for main contacts - solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts - single or multi-stranded - finely stranded with core end processing • for auxiliary contacts - single or multi-stranded - finely stranded with core end processing • for auxiliary contacts - single or multi-stranded - finely stranded with core end processing • finely stranded with core end processing - finely stranded with core end processing | — upwards | 0 mm |
| • for grounded parts | — downwards | 0 mm |
| forwards 0 mm Backwards 10 mm at the side 10 mm downwards 10 mm downwards 10 mm for live parts forwards 0 mm Backwards 0 mm Backwards 10 mm Backwards 10 mm downwards 10 mm at the side 10 mm for main current circuit screw-type terminals for auxiliary and control current circuit spring-loaded terminals for main contacts finely stranded with core end processing 2x (2.5 35 mm²), 1x (2.5 50 mm²) single or multi-stranded 5 70 mm² finely stranded with core end processing finely stranded without core end processing finely stranded finely stranded fine | — at the side | 0 mm |
| Backwards - upwards - ut the side - downwards - for live parts - forwards - packwards - upwards - downwards - Domm - Backwards - upwards - upwards - downwards - 10 mm - downwards - upwards - 10 mm - downwards - the side - downwards - at the side - downwards - at the side - downwards - at the side - for main current circuit - for auxiliary and control current circuit - for auxiliary and control current circuit - for an an contacts - finely stranded with core end processing - solid - stranded - stranded - finely stranded with core end processing - finely stranded without core end processing | for grounded parts | |
| upwards | — forwards | 0 mm |
| — at the side — downwards • for live parts — forwards — Backwards — upwards — upwards — downwards — 10 mm — downwards — 10 mm — at the side — downwards — 10 mm — at the side — the side — to mm Connections/Terminals Type of electrical connection • for main current circuit • for auxiliary and control current circuit • for main contacts — finely stranded with core end processing • at AWG conductors for main contacts — solid • stranded Type of connectable conductor cross-sections • for main contacts — solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts — solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing | — Backwards | 0 mm |
| - downwards • for live parts - forwards - Backwards - upwards - downwards - at the side Connections/Terminals Type of electrical connection • for main current circuit • for auxiliary and control current circuit Type of connectable conductor cross-sections • for main contacts - finely stranded with core end processing • at AWG conductors for main contacts - solid • stranded Type of connectable conductor cross-sections • for auxiliary and control current circuit 2x (2.5 35 mm²), 1x (2.5 50 mm²) 2x (10 1/0), 1x (10 2) Connectable conductor cross-section for main contacts • solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts - single or multi-stranded - finely stranded with core end processing - finely stranded without core end processing | — upwards | 10 mm |
| • for live parts — forwards — Backwards — upwards — downwards — at the side Connections/Terminals Type of electrical connection • for main current circuit • for auxiliary and control current circuit spring-loaded terminals Type of connectable conductor cross-sections • for main contacts — finely stranded with core end processing • solid • stranded • stranded • stranded • for auxiliary contacts • solid • stranded • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • solid • stranded • for auxiliary contacts • for auxiliary cont | — at the side | 10 mm |
| - forwards - Backwards - upwards - upwards - downwards - at the side Connections/Terminals Type of electrical connection • for main current circuit • for main contacts - finely stranded • stranded - stranded - finely stranded with core end processing - finely stranded without core end processing | — downwards | 10 mm |
| Backwards - upwards - upwards - downwards - at the side Connections/Terminals Type of electrical connection • for main current circuit • for auxiliary and control current circuit - finely stranded with core end processing • at AWG conductor cross-section for main contacts • solid • stranded • stranded Type of connectable conductor cross-sections • for auxiliary and control current circuit - finely stranded with core end processing • at AWG conductors for main contacts • solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts - single or multi-stranded - finely stranded with core end processing - finely stranded with core end processing - finely stranded with core end processing - finely stranded without core end processing | • for live parts | |
| - upwards 10 mm 10 | — forwards | 0 mm |
| — downwards — at the side Connections/Terminals Type of electrical connection • for main current circuit • for auxiliary and control current circuit Type of connectable conductor cross-sections • for main contacts — finely stranded with core end processing • at AWG conductors for main contacts • solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts • solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts • for auxiliary contacts - single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing | — Backwards | 0 mm |
| Connections/Terminals Type of electrical connection • for main current circuit screw-type terminals • for auxiliary and control current circuit spring-loaded terminals Type of connectable conductor cross-sections • for main contacts — finely stranded with core end processing • at AWG conductors for main contacts • solid • stranded Type of connectable conductor cross-section for main contacts • solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts - single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing | — upwards | 10 mm |
| Type of electrical connection • for main current circuit • for auxiliary and control current circuit Type of connectable conductor cross-sections • for main contacts — finely stranded with core end processing • at AWG conductors for main contacts 2x (10 1/0), 1x (10 2) Connectable conductor cross-section for main contacts • solid • stranded • stranded Type of connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing — finely stranded without core end processing — finely stranded without core end processing | — downwards | 10 mm |
| Type of electrical connection • for main current circuit • for auxiliary and control current circuit Type of connectable conductor cross-sections • for main contacts — finely stranded with core end processing • at AWG conductors for main contacts • solid • stranded Type of connectable conductor cross-section for main contacts • solid • stranded Type of connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing — finely stranded without core end processing — finely stranded without core end processing — finely stranded without core end processing — finely stranded without core end processing | — at the side | 10 mm |
| for main current circuit for auxiliary and control current circuit spring-loaded terminals Type of connectable conductor cross-sections for main contacts finely stranded with core end processing at AWG conductors for main contacts at AWG conductors for main contacts 2x (10 1/0), 1x (10 2) Connectable conductor cross-section for main contacts solid stranded Type of connectable conductor cross-sections for auxiliary contacts single or multi-stranded finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing finely stranded without core end processing 2x (0.5 2.5 mm²) | Connections/Terminals | |
| for auxiliary and control current circuit Type of connectable conductor cross-sections for main contacts finely stranded with core end processing at AWG conductors for main contacts at AWG conductor cross-section for main contacts solid stranded stranded Type of connectable conductor cross-sections for auxiliary contacts single or multi-stranded finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing processing | Type of electrical connection | |
| Type of connectable conductor cross-sections • for main contacts — finely stranded with core end processing • at AWG conductors for main contacts Connectable conductor cross-section for main contacts • solid • stranded 5 tranded 5 tranded Type of connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing | • for main current circuit | screw-type terminals |
| for main contacts — finely stranded with core end processing at AWG conductors for main contacts 2x (10 1/0), 1x (10 2) Connectable conductor cross-section for main contacts solid stranded stranded for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing processing | for auxiliary and control current circuit | spring-loaded terminals |
| — finely stranded with core end processing at AWG conductors for main contacts 2x (2.5 35 mm²), 1x (2.5 50 mm²) 2x (10 1/0), 1x (10 2) Connectable conductor cross-section for main contacts solid stranded Type of connectable conductor cross-sections for auxiliary contacts single or multi-stranded finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing finely stranded without core end processing 2x (0.5 2,5 mm²) 2x (0.5 2.5 mm²) | Type of connectable conductor cross-sections | |
| at AWG conductors for main contacts Connectable conductor cross-section for main contacts solid stranded stranded Type of connectable conductor cross-sections for auxiliary contacts single or multi-stranded finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing 2x (0.5 2,5 mm²) 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) | • for main contacts | |
| Connectable conductor cross-section for main contacts • solid • stranded • stranded Connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing — finely stranded without core end processing | finely stranded with core end processing | 2x (2.5 35 mm²), 1x (2.5 50 mm²) |
| osolid stranded ostranded ostr | at AWG conductors for main contacts | 2x (10 1/0), 1x (10 2) |
| solid stranded 10 mm² 11 mm² 12 mm² 13 mm² 14 mm² 15 mm² 16 mm² 17 mm² 17 mm² 18 mm² 19 mm² 10 mm² | Connectable conductor cross-section for main | |
| ● stranded Type of connectable conductor cross-sections ● for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing 2x (0.5 2,5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) | | |
| Type of connectable conductor cross-sections ● for auxiliary contacts — single or multi-stranded 2x (0,5 2,5 mm²) — finely stranded with core end processing 2x (0.5 1.5 mm²) — finely stranded without core end processing 2x (0.5 2.5 mm²) | | |
| for auxiliary contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing 2x (0,5 2,5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) | | 6 70 mm² |
| — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing 2x (0,5 2,5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) | | |
| — finely stranded with core end processing — finely stranded without core end processing 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) | · | 0. (0.5 0.5 |
| — finely stranded without core end 2x (0.5 2.5 mm²) processing | | |
| processing | | |
| • at AWG conductors for auxiliary contacts 2x (20 16) | | 2x (U.5 2.5 mm²) |
| (== · =) | at AWG conductors for auxiliary contacts | 2x (20 16) |

Safety related data

| B10 value | |
|---|--|
| • with high demand rate acc. to SN 31920 | 1 000 000 |
| Proportion of dangerous failures | |
| with low demand rate acc. to SN 31920 | 40 % |
| • with high demand rate acc. to SN 31920 | 73 % |
| Product function | |
| Mirror contact acc. to IEC 60947-4-1 | Yes |
| • positively driven operation acc. to IEC 60947-5- | No |
| 1 | |
| T1 value for proof test interval or service life acc. to | 20 y |
| IEC 61508 | |
| Protection against electrical shock | finger-safe when touched vertically from front acc. to IEC 60529 |

Certificates/approvals

General Product Approval

Declaration of Conformity

Test Certificates











Type Test
Certificates/Test
Report

| Test Certificates | other | Railway |
|--------------------------|--------------|---------------------|
| Special Test Certificate | Confirmation | Vibration and Shock |

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=3RT2045-3NB30

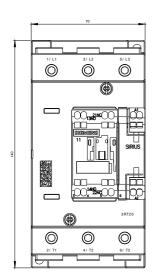
Cax online generator

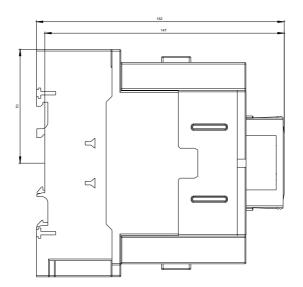
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2045-3NB30

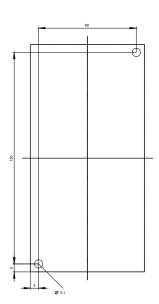
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

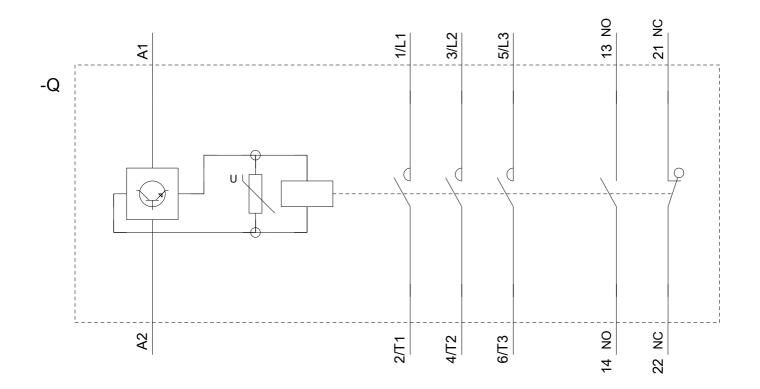
 $\underline{\text{https://support.industry.siemens.com/cs/ww/en/ps/3RT2045-3NB30}}$

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2045-3NB30&lang=en









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