SIEMENS

Data sheet 3RT2015-1BW41



CONTACTOR, AC-3, 3KW/400V, 1NO, DC 48V, 3-POLE, SZ S00 SCREW TERMINAL

| product brand name | SIRIUS |
|-------------------------|----------------|
| Product designation | 3RT2 contactor |
| | |
| General technical data: | |

| General technical data: | | |
|--|----|------------|
| Insulation voltage | | |
| Rated value | V | 690 |
| Degree of pollution | | 3 |
| Surge voltage resistance Rated value | kV | 6 |
| Mechanical service life (switching cycles) | | |
| of the contactor typical | | 30 000 000 |
| 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 |
| Thermal short-time current restricted to 10 s | А | 56 |
| Protection class IP | | |
| • on the front | | IP20 |
| • of the terminal | | IP20 |
| Equipment marking | | |
| • acc. to DIN EN 61346-2 | | Q |
| • acc. to DIN EN 81346-2 | | Q |

| Main circuit: | | |
|--|---|--|
| Number of poles for main current circuit | 3 | |
| Number of NC contacts for main contacts | 0 | |
| Number of NO contacts for main contacts | 3 | |
| Operating voltage | | |

| at AC-3 Rated value maximum | V | 690 |
|---|---|------|
| Operating current | | |
| • at AC-1 | | |
| — at 400 V at ambient temperature 40 °C Rated value | А | 18 |
| up to 690 V at ambient temperature 40 °C Rated value | Α | 18 |
| up to 690 V at ambient temperature 60 °C Rated value | Α | 16 |
| • at AC-2 at 400 V Rated value | Α | 7 |
| • at AC-3 | | |
| — at 400 V Rated value | Α | 7 |
| — at 500 V Rated value | Α | 6 |
| — at 690 V Rated value | Α | 4.9 |
| • at AC-4 at 400 V Rated value | Α | 6.5 |
| Operating current with 1 current path | | |
| • at DC-1 | | |
| — at 24 V Rated value | Α | 15 |
| — at 110 V Rated value | Α | 1.5 |
| — at 220 V Rated value | Α | 0.6 |
| — at 440 V Rated value | Α | 0.42 |
| — at 600 V Rated value | Α | 0.42 |
| • at DC-3 at DC-5 | | |
| — at 24 V Rated value | Α | 15 |
| — at 110 V Rated value | Α | 0.1 |
| Operating current with 2 current paths in series | | |
| • at DC-1 | | |
| — at 24 V Rated value | Α | 15 |
| — at 110 V Rated value | Α | 8.4 |
| — at 220 V Rated value | Α | 1.2 |
| — at 440 V Rated value | Α | 0.6 |
| — at 600 V Rated value | Α | 0.5 |
| • at DC-3 at DC-5 | | |
| — at 110 V Rated value | Α | 0.25 |
| — at 24 V Rated value | Α | 15 |
| Operating current with 3 current paths in series | | |
| • at DC-1 | | |
| — at 24 V Rated value | Α | 15 |
| — at 110 V Rated value | Α | 15 |
| — at 220 V Rated value | Α | 15 |
| — at 440 V Rated value | Α | 0.9 |
| — at 600 V Rated value | Α | 0.7 |
| | | |

| • at DC-3 at DC-5 — at 110 V Rated value — at 220 V Rated value — at 24 V Rated value — at 440 V Rated value — at 600 V Rated value — at 600 V Rated value • at AC-1 at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-3 at 400 V Rated value • at AC-1 at 400 V Rated value • at AC-1 at 400 V Rated value • at AC-1 — at 230 V Rated value — at 230 V Rated value — at 230 V Rated value — at 690 V at 60 °C Rated value — at 690 V at 60 °C Rated value — at 690 V Rated value — at 690 V Rated value • at AC-3 — at 230 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • 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 — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value • at AC-3 — at 230 V Rated value — at 690 V Rat | | | |
|---|--|-----|---------|
| — at 220 V Rated value — at 24 V Rated value — at 440 V Rated value — at 440 V Rated value — at 460 V Rated value — at 600 V Rated value — at 600 V Rated value Part AC-1 at 400 V Rated value * at AC-2 at 400 V Rated value * at AC-3 at 400 V Rated value * at AC-4 at 400 V Rated value * at AC-1 — at 230 V Rated value * at AC-1 — at 230 V Rated value — at 230 V Rated value — at 690 V Rated value — at 400 V Rated value — at 400 V Rated value — at 690 V Rated value — by the formula of the magnet coil for DC Control supply voltage for DC — Rated value Poperating power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts — instantaneous contact 0 | • at DC-3 at DC-5 | | |
| at 24 V Rated value | — at 110 V Rated value | Α | |
| | — at 220 V Rated value | Α | 1.2 |
| — at 600 V Rated value Operating power • at AC-1 at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-3 at 400 V Rated value • at AC-1 — at 230 V Rated value • at AC-1 — at 230 V Rated value • at AC-1 — at 230 V Rated value — at 400 V at 60 °C Rated value — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value • at AC-3 — at 230 V Rated value • at AC-3 — at 230 V Rated value • at AC-3 — at 230 V Rated value • at AC-3 — at 230 V Rated value • at 690 V Rated value • at 690 V Rated value • at 690 V Rated value — at 400 V Rated value — at 400 V Rated value — at 400 V Rated value • at 400 V Rated value | — at 24 V Rated value | Α | 15 |
| Operating power • at AC-1 at 400 V Rated value kW 11 • at AC-2 at 400 V Rated value kW 3 • at AC-2 at 400 V Rated value kW 3 • at AC-1 KW 3 • at AC-1 KW 6 — at 230 V Rated value kW 6.3 — at 400 V at 60 °C Rated value kW 10.5 — at 690 V Rated value kW 19 • at AC-3 W 19 • at AC-3 W 3 — at 230 V Rated value kW 1.5 — at 400 V Rated value kW 3 — at 400 V Rated value kW 4 Operating power for ≥ 200000 operating cycles at AC-3 KW 4 AC-4 kW 1.15 • at 400 V Rated value kW 1.15 • at 400 V Rated value kW 1.15 • at 690 V Rated value kW 1.15 • at 400 V Rated value kW 1.15 • at 400 V Rated value kW 1.15 • at 690 V Rated value kW 1.15 • at 690 V Rated value | — at 440 V Rated value | Α | 0.14 |
| • at AC-1 at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-4 at 400 V Rated value • at AC-4 at 400 V Rated value • at AC-1 • at AC-1 — at 230 V Rated value • at AC-1 — at 230 V Rated value — at 400 V at 60 °C Rated value — at 400 V at 60 °C Rated value — at 690 V at 60 °C Rated value — at 690 V Rated value — at 690 V Rated value • at AC-3 — at 230 V Rated value • at AC-3 — at 230 V Rated value • at AC-3 — at 230 V Rated value — at 400 V Rated value — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value — at 400 V Rated value — at 690 V Rated value — at 400 V Rated value — at 690 V Rated value — at 69 | — at 600 V Rated value | Α | 0.14 |
| | Operating power | | |
| ● at AC-4 at 400 V Rated value Operating power ● at AC-1 — at 230 V at 60 °C Rated value — at 230 V Rated value — at 400 V at 60 °C Rated value — at 690 V at 60 °C Rated value — at 690 V at 60 °C Rated value — at 690 V Rated value ● at AC-3 — at 230 V Rated value ● at AC-3 — at 230 V Rated value ● at AC-3 — at 230 V Rated value ■ at 690 V Rated value ■ at 690 V Rated value — at 400 V Rated value — 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 — at 690 V Rated value ■ at 690 | • at AC-1 at 400 V Rated value | kW | 11 |
| Operating power • at AC-1 — at 230 V at 60 °C Rated value kW 6 — at 230 V Rated value kW 10.5 — at 400 V at 60 °C Rated value kW 18 — at 690 V Rated value kW 19 • at AC-3 — at 230 V Rated value kW 3 — at 400 V Rated value kW 3 — at 690 V Rated value kW 4 Operating power for ≥ 200000 operating cycles at AC-4 at 400 V Rated value kW 1.15 • at 490 V Rated value kW 1.15 1.15 • at 690 V Rated value kW 1.15 1.15 • at 690 V Rated value kW 1.15 1.15 1.15 • at 690 V Rated value kW 1.15 | • at AC-2 at 400 V Rated value | kW | 3 |
| at AC-1 — at 230 V at 60 °C Rated value — at 230 V Rated value — at 400 V at 60 °C Rated value — at 400 V at 60 °C Rated value — at 690 V Rated value — at 400 V Rated value — at 690 V Rated value — at 400 V Rated value — at 400 V Rated value — at 690 V Rated value — at 400 V Rated value — at 690 V Rated value — at 400 V Rated value — a | • at AC-4 at 400 V Rated value | kW | 3 |
| at 230 V at 60 °C Rated value | Operating power | | |
| — at 230 ∨ Rated value — at 400 ∨ at 60 °C Rated value — at 690 ∨ at 60 °C Rated value | ● at AC-1 | | |
| - at 400 V at 60 °C Rated value | — at 230 V at 60 °C Rated value | kW | 6 |
| - at 690 V at 60 °C Rated value | — at 230 V Rated value | kW | 6.3 |
| - at 690 V Rated value | — at 400 V at 60 °C Rated value | kW | 10.5 |
| at AC-3 — at 230 V Rated value — at 400 V Rated value — at 690 V Rated value W AC-4 • at 400 V Rated value Ac-4 • at 400 V Rated value • at 690 V Rated value • at 690 V Rated value • at 690 V Rated value • at AC-3 maximum I/h 750 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage for DC • Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Holding power of the magnet coil for DC Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 1.5 AV 1.15 4 AV 1.15 DC Costing power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 0 | — at 690 V at 60 °C Rated value | kW | 18 |
| - at 230 V Rated value kW 3 - at 400 V Rated value kW 4 Operating power for ≥ 200000 operating cycles at AC-4 • at 400 V Rated value kW 1.15 • at 690 V Rated value kW 1.15 Operating frequency • at AC-3 maximum 1/h 750 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage for DC • Rated value V 48 Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact V 48 | — at 690 V Rated value | kW | 19 |
| — at 400 ∨ Rated value | • at AC-3 | | |
| — at 690 V Rated value | — at 230 V Rated value | kW | 1.5 |
| Operating power for ≥ 200000 operating cycles at AC-4 • at 400 V Rated value • at 690 V Rated value • at AC-3 maximum 1/h 750 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage for DC • Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC Holding power of the magnet coil for DC Auxiliary circuit: Number of NC contacts • for auxiliary contacts • for auxiliary contacts • instantaneous contact 0 | — at 400 V Rated value | kW | 3 |
| AC-4 • at 400 V Rated value • at 690 V Rated value V 1.15 Operating frequency • at AC-3 maximum Type of voltage of the control supply voltage Control supply voltage for DC • Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact V V V V | — at 690 V Rated value | kW | 4 |
| at 400 V Rated value at 690 V Rated value kW 1.15 Operating frequency at AC-3 maximum 1/h 750 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage for DC Rated value V 48 Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts for auxiliary contacts — instantaneous contact 0 | Operating power for ≥ 200000 operating cycles at | | |
| at 690 V Rated value Operating frequency at AC-3 maximum 1/h 750 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage for DC Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts for auxiliary contacts instantaneous contact V | AC-4 | | |
| Operating frequency • at AC-3 maximum 1/h 750 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage for DC • Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 0 DC 0 0 0 48 0 0 48 0 4 4 4 4 4 4 4 4 4 4 4 4 | at 400 V Rated value | kW | 1.15 |
| ● at AC-3 maximum 1/h 750 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage for DC ● Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Holding power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts ● for auxiliary contacts — instantaneous contact 0 | ● at 690 V Rated value | kW | 1.15 |
| Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage for DC Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Holding power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts of for auxiliary contacts instantaneous contact 0 | Operating frequency | | |
| Type of voltage of the control supply voltage Control supply voltage for DC Rated value Number of NC contacts In instantaneous contact One rating range factor control supply voltage rated value of the magnet coil for DC W Auxiliary circuit: Number of NC contacts In instantaneous contact DC V 48 0.8 1.1 V 48 V 4 V 4 V 4 V 4 V 4 V 4 V 4 V 4 V 4 V 4 V 4 V 4 V 4 V 4 Contacts In instantaneous contact O O O O O O O O O O O O O | • at AC-3 maximum | 1/h | 750 |
| Control supply voltage for DC • Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Holding power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 0 | Control circuit/ Control: | | |
| Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 4 Holding power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 0 | Type of voltage of the control supply voltage | | DC |
| Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC Holding power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 0 | Control supply voltage for DC | | |
| value of the magnet coil for DC Closing power of the magnet coil for DC Holding power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 0 | Rated value | V | 48 |
| Holding power of the magnet coil for DC W 4 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 0 | | | 0.8 1.1 |
| Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 0 | Closing power of the magnet coil for DC | W | 4 |
| Number of NC contacts | Holding power of the magnet coil for DC | W | 4 |
| • for auxiliary contacts — instantaneous contact 0 | | | |
| — instantaneous contact 0 | | | |
| | • for auxiliary contacts | | |
| Number of NO contacts | | | 0 |
| | | | |
| • for auxiliary contacts | • for auxiliary contacts | | |

| — instantaneous contact | | 1 |
|---|---|---|
| Product expansion Auxiliary switch | | Yes |
| Operating current at AC-15 | | |
| • at 230 V Rated value | Α | 10 |
| • at 400 V Rated value | Α | 3 |
| • at 690 V Rated value | Α | 1 |
| Operating current | | |
| • at DC-12 at 125 V Rated value | Α | 2 |
| • at DC-12 at 220 V Rated value | Α | 1 |
| • at DC-12 at 600 V Rated value | Α | 0.15 |
| • at DC-13 at 125 V Rated value | Α | 0.9 |
| • at DC-13 at 220 V Rated value | Α | 0.3 |
| • at DC-13 at 600 V Rated value | Α | 0.1 |
| Operating current | | |
| ● at DC-12 | | |
| — at 60 V Rated value | Α | 6 |
| — at 110 V Rated value | Α | 3 |
| • at DC-13 | | |
| — at 24 V Rated value | Α | 10 |
| — at 60 V Rated value | Α | 2 |
| — at 110 V Rated value | Α | 1 |
| Contact reliability of the 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 | Α | 4.8 |
| ● at 600 V Rated value | Α | 6.1 |
| yielded mechanical performance [hp] | | |
| • for single-phase AC motor at 110/120 V Rated value | metric hp | 0.25 |
| for single-phase AC motor at 230 V Rated value | metric hp | 0.75 |
| for three-phase AC motor at 200/208 V Rated value | metric hp | 1.5 |
| for three-phase AC motor at 220/230 V Rated value | metric hp | 2 |
| for three-phase AC motor at 460/480 V Rated value | metric hp | 3 |
| • for three-phase AC motor at 575/600 V Rated value | metric hp | 5 |
| Contact rating of the auxiliary contacts acc. to UL | | A600 / Q600 |

| Short-circuit: | | |
|-------------------------|--|--|
| Design of the fuse link | | |

• for short-circuit protection of the main circuit

— with type of assignment 1 required

— with type of assignment 2 required

• for short-circuit protection of the auxiliary switch required

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:

35 A

 $gL/gG\ LV\ HRC\ 3NA,\ DIAZED\ 5SB,\ NEOZED\ 5SE:$

20 A

fuse gL/gG: 10 A

| nstallation/ 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 50022 |
| Side-by-side mounting | | Yes |
| Height | mm | 57.5 |
| Width | mm | 45 |
| Depth | mm | 73 |
| Required spacing | | |
| with side-by-side mounting | | |
| — forwards | mm | 0 |
| — Backwards | mm | 0 |
| — upwards | mm | 0 |
| — downwards | mm | 0 |
| — at the side | mm | 0 |
| • for grounded parts | | |
| — forwards | mm | 0 |
| — Backwards | mm | 0 |
| — upwards | mm | 0 |
| — at the side | mm | 6 |
| — downwards | mm | 0 |
| • for live parts | | |
| — forwards | mm | 0 |
| — Backwards | mm | 0 |
| — upwards | mm | 0 |
| — downwards | mm | 0 |
| — at the side | mm | 6 |

| Connections/ Terminals: | | |
|---|----------------------|--|
| Type of electrical connection | | |
| • for main current circuit | screw-type terminals | |
| for auxiliary and control current circuit | screw-type terminals | |
| Type of connectable conductor cross-section | | |
| • for main contacts | | |

| — single or multi-stranded | 2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm² |
|---|---|
| — finely stranded with core end processing | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) |
| for AWG conductors for main contacts | 2x (20 16), 2x (18 14), 2x 12 |
| • for auxiliary contacts | |
| — single or multi-stranded | 2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm² |
| — finely stranded with core end processing | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) |
| for AWG conductors for auxiliary contacts | 2x (20 16), 2x (18 14), 2x 12 |

| 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 | |
| Failure rate [FIT] with low demand rate acc. to SN 31920 | FIT | 100 | |
| Product function Mirror contact acc. to IEC 60947-4-1 | | Yes | |
| • Note | | with 3RH29 | |
| T1 value for proof test interval or service life acc. to IEC 61508 | У | 20 | |
| Protection against electrical shock | | finger-safe | |
| Mechanical data: | | | |
| Size of contactor | | S00 | |
| Ambient conditions: | | | |
| Installation altitude at height above sea level | m | 2 000 | |
| maximum | | | |
| Ambient temperature | | | |
| during operation | °C | -25 + 60 | |
| during storage | °C | -55 + 80 | |

Certificates/ approvals:

General Product Approval

Functional Safety/Safety of Machinery Declaration of Conformity









Type Examination



| lest |
|--------------|
| Certificates |

Shipping Approval

Special Test Certificate











GL

LRS

Shipping Approval

other







Environmental Confirmations

Confirmation



Further information

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

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

Industry Mall (Online ordering system)

http://www.siemens.com/industrymall

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT20151BW41} \\$

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

http://support.automation.siemens.com/WW/view/en/3RT20151BW41/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT20151BW41&lang=en



