SIEMENS

## Data sheet 3RT1466-6AR36

power contactor AC-1 400 A / 690 V / 40 °C 3-pole, Uc: 440-480 V AC(50-60 Hz) / DC drive: conventional auxiliary contacts 2 NO + 2 NC main circuit: busbar control and auxiliary circuit: screw terminal

| | |
|---|---|
| **product brand name** | SIRIUS |
| **product designation** | Contactor |
| **product type designation** | 3RT14 |
| **General technical data** | |
| **size of contactor** | S10 |
| **product extension** | |
| ● function module for communication | No |
| ● auxiliary switch | Yes |
| **power loss [W] for rated value of the current** | |
| ● at AC in hot operating state | 105.6 W |
| ● at AC in hot operating state per pole | 35.2 W |
| ● without load current share typical | 7.4 W |
| **insulation voltage** | |
| ● of main circuit with degree of pollution 3 rated value | 1 000 V |
| ● of auxiliary circuit with degree of pollution 3 rated value | 500 V |
| **surge voltage resistance** | |
| ● of main circuit rated value | 8 kV |
| ● of auxiliary circuit rated value | 6 kV |
| **shock resistance at rectangular impulse** | |
| ● at AC | 8,5g / 5 ms, 4,2g / 10 ms |
| ● at DC | 8,5g / 5 ms, 4,2g / 10 ms |
| **shock resistance with sine pulse** | |
| ● at AC | 13,4g / 5 ms, 6,5g / 10 ms |
| ● at DC | 13,4g / 5 ms, 6,5g / 10 ms |
| **mechanical service life (operating cycles)** | |
| ● of contactor typical | 10 000 000 |
| ● of the contactor with added electronically optimized auxiliary switch block typical | 5 000 000 |
| ● of the contactor with added auxiliary switch block typical | 10 000 000 |
| **reference code according to IEC 81346-2** | Q |
| **Substance Prohibitance (Date)** | 05/01/2012 |
| **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 |
| **relative humidity minimum** | 10 % |
| **relative humidity at 55 °C according to IEC 60068-2-30 maximum** | 95 % |
| **Main circuit** | |
| **number of poles for main current circuit** | 3 |

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| **number of NO contacts for main contacts** | 3 |
| **number of NC contacts for main contacts** | 0 |
| **type of voltage for main current circuit** | AC |
| **operational current** | |
| ● at AC-1 | |
| — up to 690 V at ambient temperature 40 °C rated value | 400 A |
| — up to 690 V at ambient temperature 55 °C rated value | 380 A |
| — up to 690 V at ambient temperature 60 °C rated value | 380 A |
| ● at AC-3 | |
| — at 400 V rated value | 138 A |
| — at 690 V rated value | 138 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 240 mm² |
| **no-load switching frequency** | |
| ● at AC | 2 000 1/h |
| ● at DC | 2 000 1/h |
| operating frequency at AC-1 maximum | 600 1/h |
| **Control circuit/ Control** | |
| **type of voltage** | AC/DC |
| **type of voltage of the control supply voltage** | AC/DC |
| **control supply voltage at AC** | |
| ● at 50 Hz rated value | 440 ... 480 V |
| ● at 60 Hz rated value | 440 ... 480 V |
| **control supply voltage at DC** | |
| ● rated value | 440 ... 480 V |
| **operating range factor control supply voltage rated value of magnet coil at DC** | |
| ● initial value | 0.8 |
| ● 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 |
| **apparent pick-up power** | |
| **● at minimum rated control supply voltage at AC** | |
| — at 50 Hz | 490 VA |
| — at 60 Hz | 490 VA |
| **● at maximum rated control supply voltage at AC** | |
| — at 60 Hz | 590 VA |
| — at 50 Hz | 590 VA |
| **apparent pick-up power of magnet coil at AC** | |
| ● at 50 Hz | 590 VA |
| **inductive power factor with closing power of the coil** | |
| ● at 50 Hz | 0.9 |
| **apparent holding power** | |
| ● at minimum rated control supply voltage at DC | 6.1 VA |
| ● at maximum rated control supply voltage at DC | 7.4 VA |
| **apparent holding power** | |
| **● at minimum rated control supply voltage at AC** | |
| — at 50 Hz | 5.6 VA |
| — at 60 Hz | 5.6 VA |
| **● at maximum rated control supply voltage at AC** | |
| — at 50 Hz | 6.7 VA |
| — at 60 Hz | 6.7 VA |
| **apparent holding power of magnet coil at AC** | |
| ● at 50 Hz | 6.7 VA |
| **inductive power factor with the holding power of the coil** | |
| ● at 50 Hz | 0.9 |

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| **closing power of magnet coil at DC** | 650 W |
| **holding power of magnet coil at DC** | 7.4 W |
| **closing delay** | |
| ● at AC | 30 ... 95 ms |
| ● at DC | 30 ... 95 ms |
| **opening delay** | |
| ● at AC | 40 ... 80 ms |
| ● at DC | 40 ... 80 ms |
| **arcing time** | 10 ... 15 ms |
| **control version of the switch operating mechanism** | Standard A1 - A2 |
| **Auxiliary circuit** | |
| **number of NC contacts for auxiliary contacts** | 2 |
| ● attachable | 4 |
| ● instantaneous contact | 2 |
| **number of NO contacts for auxiliary contacts** | 2 |
| ● attachable | 4 |
| ● instantaneous contact | 2 |
| operational current at AC-12 maximum | 10 A |
| **operational 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 |
| **operational 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 |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required | gG: 10 A (230 V, 400 A) |
| **contact reliability of auxiliary contacts** | 1 faulty switching per 100 million (17 V, 1 mA) |
| **Short-circuit protection** | |
| **product function short circuit protection** | No |
| **design of the fuse link** | |
| ● for short-circuit protection of the main circuit | |
| — with type of coordination 1 required | gG: 500 A (690 V, 100 kA) |
| — with type of assignment 2 required | gR: 500 A (690 V, 100 kA) |
| ● for short-circuit protection of the auxiliary switch required | gG: 10 A (500 V, 1 kA) |
| **Installation/ mounting/ dimensions** | |
| **mounting position** | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| **fastening method** | screw fixing |
| ● side-by-side mounting | Yes |
| **height** | 210 mm |
| **width** | 145 mm |
| **depth** | 202 mm |
| **required spacing** | |
| ● with side-by-side mounting | |
| — forwards | 20 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 0 mm |
| ● for grounded parts | |
| — forwards | 20 mm |
| — upwards | 10 mm |
| — at the side | 10 mm |
| — downwards | 10 mm |
| ● for live parts | |

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|---|---|
| — forwards | 20 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 10 mm |
| **Connections/ Terminals** | |
| **type of electrical connection** | |
| • for main current circuit | Connection bar |
| • for auxiliary and control circuit | screw-type terminals |
| • at contactor for auxiliary contacts | Screw-type terminals |
| • of magnet coil | Screw-type terminals |
| **width of connection bar** | 25 mm |
| **thickness of connection bar** | 6 mm |
| **diameter of holes** | 11 mm |
| **number of holes** | 1 |
| **connectable conductor cross-section for main contacts** | |
| • solid or stranded | 70 ... 240 mm² |
| • stranded | 70 ... 240 mm² |
| **connectable conductor cross-section for auxiliary contacts** | |
| • solid or stranded | 0.5 ... 4 mm² |
| • finely stranded with core end processing | 0.5 ... 2.5 mm² |
| **type of connectable conductor cross-sections** | |
| • for auxiliary contacts | |
| — solid | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²) |
| — solid or stranded | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), max. 2x (0,75 ... 4 mm²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) |
| • for AWG cables for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14), 1x 12 |
| **Safety related data** | |
| **product function** | |
| • mirror contact according to IEC 60947-4-1 | Yes |
| • positively driven operation according to IEC 60947-5-1 | No |
| **protection class IP on the front according to IEC 60529** | IP00; IP20 with box terminal/cover |
| **touch protection on the front according to IEC 60529** | finger-safe, for vertical contact from the front with box terminal/cover |

**Certificates/ approvals**

| General Product Approval | | | | | EMC |
|---|---|---|---|---|---|
| CSA | CCC | Confirmation | UL | EAC | RCM |

| Functional Safety/Safety of Machinery | Declaration of Conformity | | Test Certificates | | Marine / Shipping |
|---|---|---|---|---|---|
| Type Examination Certificate | UKCA | CE EG-Konf. | Special Test Certificate | Type Test Certificates/Test Report | ABS |

| Marine / Shipping | | | | other | |
|---|---|---|---|---|---|
| LRS | PRS | RMRS | DNV-GL | Confirmation | Confirmation |

| other | Railway | |
|---|---|---|
| Miscellaneous | Vibration and Shock | Special Test Certificate |

## Further information

**Siemens has decided to exit the Russian market (see here).**
https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

**Siemens is working on the renewal of the current EAC certificates.**
Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

**Information on the packaging**
https://support.industry.siemens.com/cs/ww/en/view/109813875

**Information- and Downloadcenter (Catalogs, Brochures,…)**
https://www.siemens.com/ic10

**Industry Mall (Online ordering system)**
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1466-6AR36

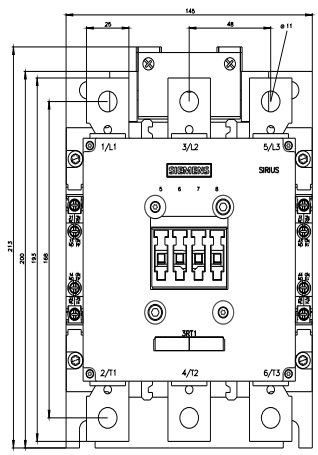
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1466-6AR36

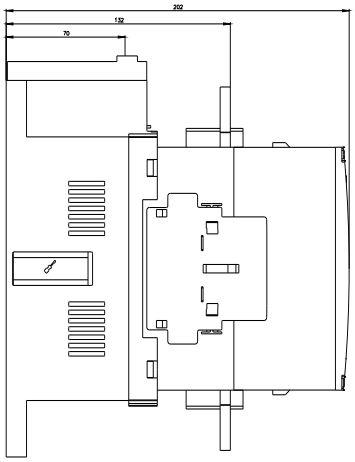
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RT1466-6AR36

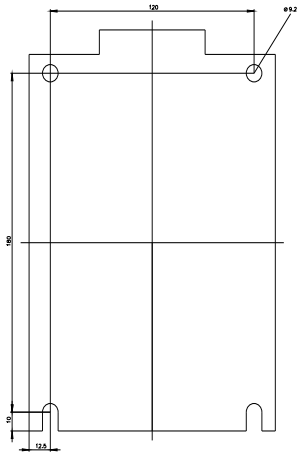
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1466-6AR36&lang=en

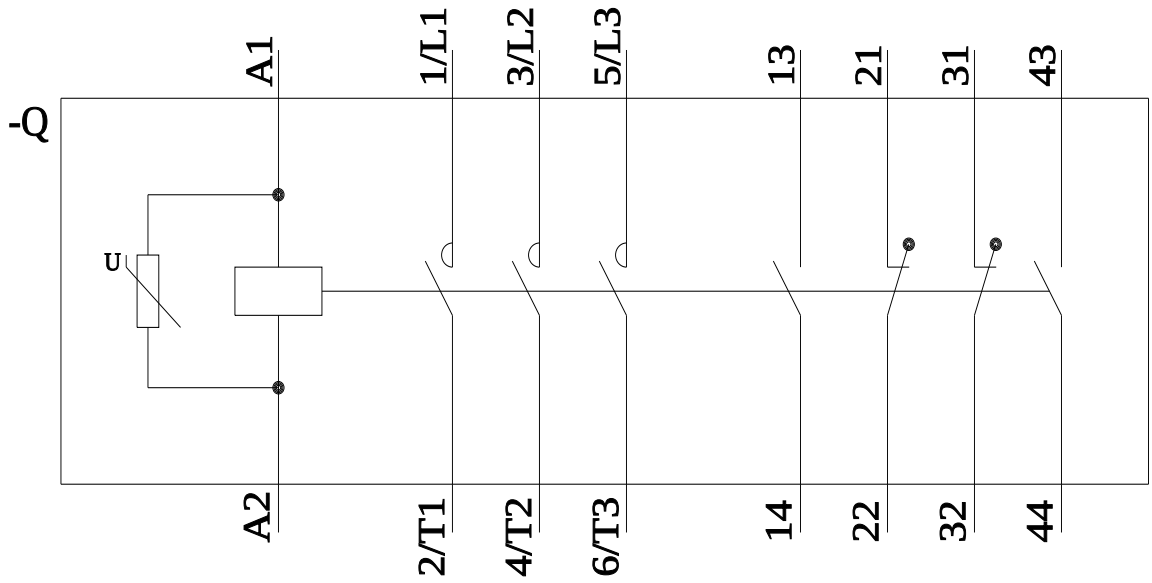
**Characteristic: Tripping characteristics, I²t, Let-through current**
https://support.industry.siemens.com/cs/ww/en/ps/3RT1466-6AR36/char

**Further characteristics (e.g. electrical endurance, switching frequency)**
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1466-6AR36&objecttype=14&gridview=view1





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