SIEMENS

Data sheet

3RT2018-1AT62



power contactor, AC-3e/AC-3, 16 A, 7.5 kW / 400 V, 3-pole, 600 V AC, 60 Hz, auxiliary contacts: 1 NC, screw terminal, size: S00 $\,$

| Figure | simil | ar |
|--------|--------|----|
| rigure | SIIIII | a |

| product brand name | SIRIUS |
|---|----------------------------|
| product designation | Power contactor |
| product type designation | 3RT2 |
| General technical data | |
| size of contactor | S00 |
| 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 | 3 W |
| • at AC in hot operating state per pole | 1 W |
| without load current share typical | 6.5 W |
| insulation voltage | |
| of main circuit with degree of pollution 3 rated value | 690 V |
| of auxiliary circuit with degree of pollution 3 rated value | 690 V |
| surge voltage resistance | |
| of main circuit rated value | 6 kV |
| of auxiliary circuit rated value | 6 kV |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 400 V |
| shock resistance at rectangular impulse | |
| • at AC | 7,3g / 5 ms, 4,7g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 11,4g / 5 ms, 7,3g / 10 ms |
| mechanical service life (operating cycles) | |
| of contactor typical | 30 000 000 |
| 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) | 10/01/2009 |
| 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 |
|---|-------------------|
| number of NO contacts for main contacts | 3 |
| operating voltage | |
| at AC-3 rated value maximum | 690 V |
| at AC-3e rated value maximum | 690 V |
| operational current | |
| at AC-1 at 400 V at ambient temperature 40 °C rated | 22 A |
| value | |
| • at AC-1 | |
| — up to 690 V at ambient temperature 40 °C rated value | 22 A |
| — up to 690 V at ambient temperature 60 °C rated value | 20 A |
| • at AC-3 | |
| — at 400 V rated value | 16 A |
| — at 500 V rated value | 12.4 A |
| — at 690 V rated value | 8.9 A |
| • at AC-3e | |
| — at 400 V rated value | 16 A |
| — at 500 V rated value | 12.4 A |
| — at 690 V rated value | 8.9 A |
| • at AC-4 at 400 V rated value | 11.5 A |
| • at AC-5a up to 690 V rated value | 19.4 A |
| • at AC-5b up to 400 V rated value | 13.2 A |
| • at AC-6a | |
| — up to 230 V for current peak value n=20 rated value | 9.6 A |
| — up to 400 V for current peak value n=20 rated value | 9.6 A |
| — up to 500 V for current peak value n=20 rated value | 9.6 A |
| — up to 690 V for current peak value n=20 rated value | 8.9 A |
| • at AC-6a | |
| — up to 230 V for current peak value n=30 rated value | 6.6 A |
| — up to 400 V for current peak value n=30 rated value | 6.4 A |
| — up to 500 V for current peak value n=30 rated value | 6.4 A |
| — up to 690 V for current peak value n=30 rated value | 6.4 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 4 mm ² |
| operational current for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 5.5 A |
| • at 690 V rated value | 4.4 A |
| operational current | |
| at 1 current path at DC-1 | |
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 20 A |
| — at 110 V rated value | 2.1 A |
| — at 220 V rated value | 0.8 A |
| — at 440 V rated value | 0.6 A |
| — at 600 V rated value | 0.6 A |
| with 2 current paths in series at DC-1 | |
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 20 A |
| — at 110 V rated value | 12 A |
| — at 220 V rated value | 1.6 A |
| — at 440 V rated value | 0.8 A |
| — at 600 V rated value | 0.7 A |
| with 3 current paths in series at DC-1 | |
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 20 A |
| — at 110 V rated value | 20 A |
| — at 220 V rated value | 20 A |
| — at 440 V rated value | 1.3 A |
| — at 600 V rated value | 1 A |
| | |

| at 1 current path at DC-3 at DC-5 | |
|--|---|
| - at 24 V rated value | 20 A |
| — at 60 V rated value | 0.5 A |
| — at 110 V rated value | 0.15 A |
| with 2 current paths in series at DC-3 at DC-5 | 0.13 A |
| - at 24 V rated value | 20 A |
| — at 60 V rated value | 5 A |
| — at 110 V rated value | 0.35 A |
| • with 3 current paths in series at DC-3 at DC-5 | 0.00 A |
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 20 A |
| — at 110 V rated value | 20 A |
| — at 220 V rated value | 1.5 A |
| — at 440 V rated value | 0.2 A |
| — at 600 V rated value | 0.2 A |
| operating power | |
| at AC-2 at 400 V rated value | 7.5 kW |
| • at AC-3 | |
| — at 230 V rated value | 4 kW |
| — at 400 V rated value | 7.5 kW |
| — at 500 V rated value | 7.5 kW |
| — at 690 V rated value | 7.5 kW |
| • at AC-3e | |
| — at 230 V rated value | 4 kW |
| — at 400 V rated value | 7.5 kW |
| — at 500 V rated value | 7.5 kW |
| — at 690 V rated value | 7.5 kW |
| operating power for approx. 200000 operating cycles at AC- | |
| 4 | |
| • at 400 V rated value | 2.5 kW |
| at 690 V rated value | 3.5 kW |
| operating apparent power at AC-6a | |
| • up to 230 V for current peak value n=20 rated value | 3.8 kVA |
| • up to 400 V for current peak value n=20 rated value | 6.6 kVA |
| • up to 500 V for current peak value n=20 rated value | 8.3 kVA |
| • up to 690 V for current peak value n=20 rated value | 10.6 kVA |
| operating apparent power at AC-6a | 0.5 1) (A |
| up to 230 V for current peak value n=30 rated value | 2.5 kVA |
| • up to 400 V for current peak value n=30 rated value | 4.4 KVA |
| up to 500 V for current peak value n=30 rated value up to 600 V for current peak value n=30 rated value | 5.5 kVA |
| up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to | 7.6 kVA |
| 40 °C | |
| limited to 1 s switching at zero current maximum | 300 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 5 s switching at zero current maximum | 169 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 10 s switching at zero current maximum | 128 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 30 s switching at zero current maximum | 92 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 60 s switching at zero current maximum | 74 A; Use minimum cross-section acc. to AC-1 rated value |
| no-load switching frequency | |
| • at AC | 10 000 1/h |
| operating frequency | |
| • at AC-1 maximum | 1 000 1/h |
| • at AC-2 maximum | 750 1/h |
| • at AC-3 maximum | 750 1/h |
| • at AC-3e maximum | 750 1/h |
| • at AC-4 maximum | 250 1/h |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | AC |
| control supply voltage at AC • at 60 Hz rated value | 600 V |
| • at 60 H2 rated value operating range factor control supply voltage rated value of | 000 V |
| magnet coil at AC | |

| • at 60 Hz | 0.85 1.1 |
|--|---|
| apparent pick-up power of magnet coil at AC | |
| • at 50 Hz | 36 VA |
| • at 60 Hz | 43 VA |
| inductive power factor with closing power of the coil | |
| • at 50 Hz | 0.8 |
| • at 60 Hz | 0.8 |
| apparent holding power of magnet coil at AC | |
| ● at 50 Hz | 5.9 VA |
| • at 60 Hz | 6.5 VA |
| inductive power factor with the holding power of the coil | |
| • at 50 Hz | 0.24 |
| • at 60 Hz | 0.25 |
| closing delay | |
| • at AC | 9 35 ms |
| opening delay | |
| • at AC | 4 15 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 instantaneous | 1 |
| contact | |
| operational current at AC-12 maximum | 10 A |
| operational current at AC-15 | |
| at 230 V rated value | 10 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-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 |
| 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 |
| contact reliability of auxiliary contacts | 1 faulty switching per 100 million (17 V, 1 mA) |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| • at 480 V rated value | 14 A |
| at 600 V rated value | 11 A |
| yielded mechanical performance [hp] | |
| for single-phase AC motor | |
| — at 110/120 V rated value | 1 hp |
| — at 230 V rated value | 2 hp |
| • for 3-phase AC motor | |
| — at 200/208 V rated value | 3 hp |
| — at 220/230 V rated value | 5 hp |
| — at 460/480 V rated value | 10 hp |
| — at 575/600 V rated value | 10 hp |
| contact rating of auxiliary contacts according to UL | A600 / Q600 |
| Short-circuit protection | |
| design of the fuse link | |
| | |

| • for short-circuit protection of the main circuit | |
|---|--|
| - with type of coordination 1 required | gG: 50A (690V,100kA), aM: 25A (690V,100kA), BS88: 50A (415V,80kA) |
| - with type of assignment 2 required | gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA) |
| for short-circuit protection of the auxiliary switch required | gG: 10 A (500 V, 1 kA) |
| 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 |
| fastening method | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes |
| side-by-side mounting height | 58 mm |
| width | 45 mm |
| depth | 73 mm |
| required spacing | |
| with side-by-side mounting | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 0 mm |
| • for grounded parts | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — at the side | 6 mm |
| — downwards | 10 mm |
| • for live parts | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 6 mm |
| Connections/ Terminals | |
| type of electrical connection | |
| for main current circuit | screw-type terminals |
| for auxiliary and control circuit | screw-type terminals |
| at contactor for auxiliary contacts | Screw-type terminals |
| of magnet coil | Screw-type terminals |
| type of connectable conductor cross-sections for main contacts | |
| • solid | 2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²), 2x 4 mm ² |
| solid or stranded | 2x (0,5 1,5 mm ²), 2x (0,75 2,5 mm ²), 2x 4 mm ² |
| finely stranded with core end processing | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) |
| connectable conductor cross-section for main contacts | 0.5 4 mm² |
| solid strandod | 0.5 4 mm ² |
| stranded finally stranded with core and processing | 0.5 4 mm ² |
| finely stranded with core end processing connectable conductor cross-section for auxiliary contacts | 0.5 2.5 mm² |
| solid or stranded | 0.5 4 mm² |
| finely stranded with core end processing | 0.5 2.5 mm ² |
| type of connectable conductor cross-sections | |
| for auxiliary contacts | |
| — solid or 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 cables for auxiliary contacts | 2x (20 16), 2x (18 14), 2x 12 |
| AWG number as coded connectable conductor cross | |
| section | |
| ● for main contacts | 20 12 |
| for auxiliary contacts | 20 12 |
| Safety related data | |
| product function | |
| mirror contact according to IEC 60947-4-1 | Yes |
| B10 value with high demand rate according to SN 31920 | 1 000 000 |
| proportion of dangerous failures | |
| with low demand rate according to SN 31920 | 40 % |
| with high demand rate according to SN 31920 | 73 % |

| failure rate [FIT] with lo | ow demand rate according t | o SN 31920 1 | 00 FIT | | |
|---|--|---|---------------------------------|--|--|
| | interval or service life acco | | 0 a | | |
| protection class IP o | n the front according to I | EC 60529 IF | 20 | | |
| touch protection on t | the front according to IEC | 60529 fi | nger-safe, for vertical contact | from the front | |
| suitability for use | | | | | |
| safety-related s | witching on | Y | es | | |
| safety-related st | witching OFF | Y | es | | |
| ertificates/ approvals | ; | | | | |
| General Product App | proval | | | | |
| SP. | <u>Confirmation</u> | | | KC | EAC |
| EMC | Functional Safety/Safety of Ma- chinery | Declaration of Cor | nformity | Test Certificates | |
| RCM | <u>Type Examination Cer-</u> <u>tificate</u> | UK CA | CE EG-Konf. | <u>Type Test Certific-</u> ates/Test Report | <u>Special Test Certific</u> <u>ate</u> |
| Marine / Shipping | | | | | |
| ABS | B U R E A U VER I TAS | | Lloyds Kegister Us | PRS | |
| Marine / Shipping | other | | Railway | Environment | |
| KMRS RAME | <u>Confirmation</u> | UDE VDE | Vibration and Shock | Environmental Con- firmations | |
| urther information | d to exit the Russian mark | et (see here) | | | |
| https://press.siemens. Siemens is working of Please contact your lo | com/global/en/pressrelease on the renewal of the curr | /siemens-wind-down- ent EAC certificates tatus of validity of the | EAC certification if you intend | d to import or offer to supp | oly these products to a |
| | y.siemens.com/cs/ww/en/vie | | | | |
| https://www.siemens.c | vnloadcenter (Catalogs, E <u>com/ic10</u> e ordering system) | rochures,) | | | |

Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2018-1AT62

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2018-1AT62

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AT62

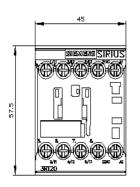
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

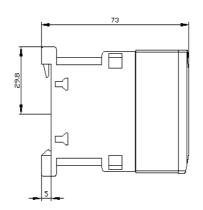
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2018-1AT62&lang=en

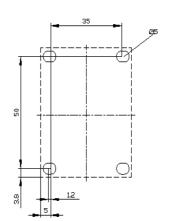
Characteristic: Tripping characteristics, I²t, Let-through current

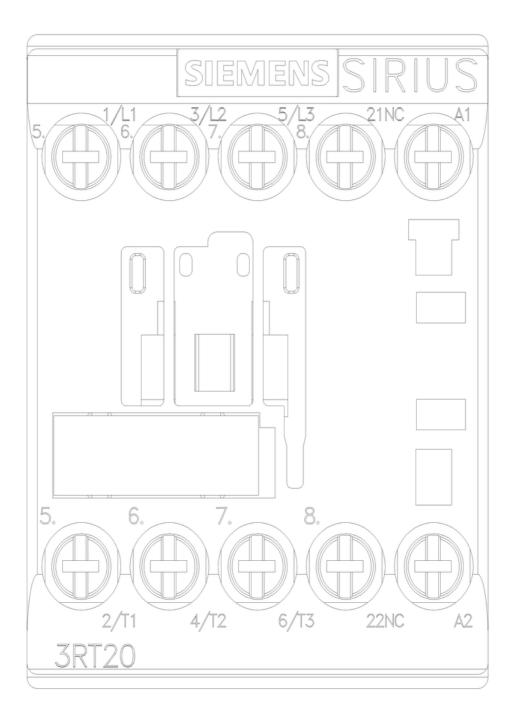
https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AT62/char

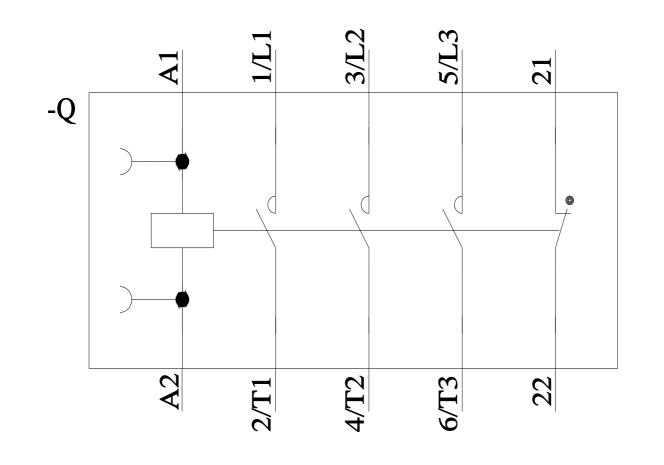
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2018-1AT62&objecttype=14&gridview=view1











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