SIEMENS

Data sheet 3RT1066-6AP36



Power contactor, AC-3 300 A, 160 kW / 400 V AC (50-60 Hz) / DC operation 220-240 V UC Auxiliary contacts 2 NO + 2 NC 3-pole, Size S10 Busbar connections Drive: conventional screw terminal

| product brand name | SIRIUS |
|---|----------------------------|
| product designation | Power contactor |
| product type designation | 3RT1 |
| 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 | 66 W |
| • per pole | 22 W |
| power loss [W] for rated value of the current without load current share typical | 7.4 W |
| surge voltage resistance | |
| of main circuit rated value | 8 kV |
| of auxiliary circuit rated value | 6 kV |
| maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1 | 690 V |
| 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 (switching 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 acc. to IEC 81346-2 | Q |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature during operation | -25 +60 °C |
| ambient temperature during storage | -55 +80 °C |
| 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 | 1 000 V |
|---|---------|
| operational current | |
| at AC-1 at 400 V at ambient temperature 40 °C rated value | 330 A |
| • at AC-1 | |
| — up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value | 330 A |
| up to 690 V at ambient temperature 60 °C rated value | 300 A |
| up to 1000 V at ambient temperature 40 °C rated value | 150 A |
| up to 1000 V at ambient temperature 60 °C rated value | 150 A |
| • at AC-3 | |
| — at 400 V rated value | 300 A |
| — at 500 V rated value | 300 A |
| — at 690 V rated value | 280 A |
| — at 1000 V rated value | 95 A |
| at AC-4 at 400 V rated value | 280 A |
| at AC-5a up to 690 V rated value | 290 A |
| at AC-5b up to 400 V rated value | 249 A |
| • at AC-6a | |
| — up to 230 V for current peak value n=20 rated value | 292 A |
| up to 400 V for current peak value n=20 rated value | 292 A |
| up to 500 V for current peak value n=20 rated value | 292 A |
| up to 690 V for current peak value n=20 rated value | 280 A |
| up to 1000 V for current peak value n=20 rated value | 95 A |
| • at AC-6a | |
| up to 230 V for current peak value n=30 rated value | 195 A |
| up to 400 V for current peak value n=30 rated value | 195 A |
| up to 500 V for current peak value n=30 rated value | 195 A |
| — up to 690 V for current peak value n=30 rated value | 195 A |
| — up to 1000 V for current peak value n=30 rated value | 95 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 185 mm² |
| operational current for approx. 200000 operating cycles at AC-4 | |
| at 400 V rated value | 125 A |
| at 690 V rated value | 115 A |
| operational current | |
| at 1 current path at DC-1 | |
| — at 24 V rated value | 300 A |
| — at 110 V rated value | 33 A |
| — at 220 V rated value | 3.8 A |
| — at 440 V rated value | 0.9 A |
| — at 600 V rated value | 0.6 A |
| with 2 current paths in series at DC-1 | |
| — at 24 V rated value | 300 A |
| — at 110 V rated value | 300 A |
| — at 220 V rated value | 300 A |
| — at 440 V rated value | 4 A |
| — at 600 V rated value | 2 A |



| with 3 current paths in series at DC-1 | |
|---|---|
| — at 24 V rated value | 300 A |
| — at 110 V rated value | 300 A |
| — at 220 V rated value | 300 A |
| — at 440 V rated value | 11 A |
| — at 600 V rated value | 5.2 A |
| operational current | |
| at 1 current path at DC-3 at DC-5 | |
| at 24 V rated value | 300 A |
| — at 110 V rated value | 3 A |
| — at 220 V rated value | 0.6 A |
| — at 440 V rated value | 0.18 A |
| — at 600 V rated value | 0.125 A |
| with 2 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 300 A |
| — at 110 V rated value | 300 A |
| — at 220 V rated value | 2.5 A |
| — at 440 V rated value | 0.65 A |
| — at 600 V rated value | 0.37 A |
| with 3 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 300 A |
| — at 110 V rated value | 300 A |
| — at 220 V rated value | 300 A |
| — at 440 V rated value | 1.4 A |
| — at 600 V rated value | 0.75 A |
| operating power | |
| • at AC-3 | |
| — at 230 V rated value | 90 kW |
| — at 400 V rated value | 160 kW |
| — at 500 V rated value | 200 kW |
| — at 690 V rated value | 250 kW |
| — at 1000 V rated value | 132 kW |
| operating power for approx. 200000 operating cycles | 102 1111 |
| at AC-4 | |
| • at 400 V rated value | 71 kW |
| at 690 V rated value | 112 kW |
| operating apparent power at AC-6a | |
| • up to 230 V for current peak value n=20 rated value | 110 000 kV·A |
| • up to 400 V for current peak value n=20 rated value | 200 000 V·A |
| • up to 500 V for current peak value n=20 rated value | 250 000 V·A |
| up to 690 V for current peak value n=20 rated value | 330 000 V·A |
| up to 1000 V for current peak value n=20 rated | 160 000 V·A |
| value | |
| operating apparent power at AC-6a | |
| up to 230 V for current peak value n=30 rated value | 70 000 V·A |
| up to 400 V for current peak value n=30 rated value | 130 000 V·A |
| up to 500 V for current peak value n=30 rated value | 160 000 V·A |
| • up to 690 V for current peak value n=30 rated value | 230 000 V·A |
| up to 1000 V for current peak value n=30 rated value | 160 000 V·A |
| short-time withstand current in cold operating state up to 40 °C | |
| limited to 1 s switching at zero current maximum | 5 524 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum | 4 579 A; Use minimum cross-section acc. to AC-1 rated value |
| | |
| limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum | 3 153 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum | 1 883 A; Use minimum cross-section acc. to AC-1 rated value |
| Iimited to 60 s switching at zero current maximum no load switching fraguency | 1 445 A; Use minimum cross-section acc. to AC-1 rated value |
| no-load switching frequency • at AC | 2 000 1/h |
| ₹ at ∧ O | 2 000 1/11 |



| • at DC | 2 000 1/h |
|---|---------------------------|
| operating frequency | |
| • at AC-1 maximum | 750 1/h |
| at AC-2 maximum | 250 1/h |
| at AC-3 maximum | 500 1/h |
| at AC-4 maximum | 130 1/h |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | AC/DC |
| control supply voltage at AC | NOIDO |
| • at 50 Hz rated value | 220 240 V |
| at 60 Hz rated value at 60 Hz rated value | 220 240 V |
| control supply voltage at DC | 220 240 V |
| • rated value | 220 240 V |
| operating range factor control supply voltage rated | 220 240 V |
| 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 of magnet coil at AC | |
| ● at 50 Hz | 590 V·A |
| inductive power factor with closing power of the coil | |
| ● at 50 Hz | 0.9 |
| apparent holding power of magnet coil at AC | |
| ● at 50 Hz | 6.7 V·A |
| inductive power factor with the holding power of the | |
| coil | |
| ● at 50 Hz | 0.9 |
| 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 |
| instantaneous contact | |
| number of NO contacts for auxiliary contacts 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 500 V rated value at 690 V rated value | 2 A 1 A |
| at 690 V rated value | 2 A 1 A |
| at 690 V rated value operational current at DC-12 | 1 A |
| at 690 V rated value operational current at DC-12 at 24 V rated value | 1 A 10 A |
| at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value | 1 A 10 A 6 A |
| at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value | 1 A 10 A 6 A 6 A |
| at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value | 1 A 10 A 6 A 6 A 3 A |
| at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value | 1 A 10 A 6 A 6 A |



| | 0.45 |
|---|--|
| 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 | 200.4 |
| • at 480 V rated value | 302 A |
| at 600 V rated value | 289 A |
| yielded mechanical performance [hp] | |
| • for 3-phase AC motor | 400 1 |
| — at 200/208 V rated value | 100 hp |
| — at 220/230 V rated value | 125 hp |
| — at 460/480 V rated value | 250 hp |
| — at 575/600 V rated value | 300 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: 500 A (690 V, 100 kA) |
| — with type of assignment 2 required | gG: 400 A (690 V, 100 kA), aM: 315 A (690 V, 50 kA), BS88: 400 A (415 V, 50 kA) |
| for short-circuit protection of the auxiliary switch required | gG: 10 A (500 V, 1 kA) |
| · | |
| Installation/ mounting/ dimensions | |
| Installation/ mounting/ dimensions mounting position | with vertical mounting surface +/-90° rotatable, with vertical mounting |
| mounting position | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| | |
| mounting position | surface +/- 22.5° tiltable to the front and back |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing |
| mounting position fastening method • side-by-side mounting | surface +/- 22.5° tiltable to the front and back screw fixing Yes |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm |
| mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 10 mm 0 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 10 mm 0 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 0 mm 0 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 0 mm 10 mm 10 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 0 mm 0 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm |
| mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — downwards — at the side • for grounded parts — forwards — at the side — downwards — at the side — downwards • for live parts — forwards | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm |
| mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — downwards — at the side • for grounded parts — forwards — at the side — downwards — at the side — downwards • for live parts — forwards | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 0 mm 10 mm |
| mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — upwards — at the side • for grounded parts — forwards — upwards — at the side — downwards • for live parts — forwards — upwards — upwards — upwards — downwards | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 0 mm 10 mm |
| mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — downwards — at the side — downwards • for live parts — forwards — upwards — upwards — downwards • for live parts — forwards — upwards — downwards — downwards — downwards — downwards — at the side | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 0 mm 10 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 0 mm 10 mm |
| mounting position fastening method | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 0 mm 10 mm |
| mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side • for live parts — forwards — upwards — at the side — downwards — upwards — upwards — upwards — downwards — at the side Connections/ Terminals width of connection bar thickness of connection bar | surface +/- 22.5° tiltable to the front and back screw fixing Yes 210 mm 145 mm 202 mm 20 mm 10 mm 0 mm 10 mm |



| 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 |
| type of connectable conductor cross-sections | |
| at AWG cables for main contacts | 2/0 500 kcmil |
| connectable conductor cross-section for main contacts | |
| • stranded | 70 240 mm² |
| connectable conductor cross-section for auxiliary contacts | |
| solid or stranded | 0.5 4 mm ² |
| 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) |
| at AWG cables for auxiliary contacts | 2x (20 16), 2x (18 14), 1x 12 |
| AWG number as coded connectable conductor cross section for auxiliary contacts | 18 14 |
| Safety related data | |
| B10 value with high demand rate acc. to SN 31920 | 1 000 000 |
| product function | |
| mirror contact acc. to IEC 60947-4-1 | Yes |
| positively driven operation acc. to IEC 60947-5-1 | No |
| protection class IP on the front acc. to IEC 60529 | IP00; IP20 with box terminal/cover |
| touch protection on the front acc. to IEC 60529 | finger-safe, for vertical contact from the front with box terminal/cover |
| suitability for use safety-related switching OFF | Yes |
| Certificates/ approvals | |

Certificates/ approvais

General Product Approval









<u>KC</u>





Declaration of Conformity

Test Certificates

Marine / Shipping

Miscellaneous



Type Test
Certificates/Test
Report

Special Test Certificate Miscellaneous



Marine / Shipping

other





Miscellaneous

Confirmation

Miscellaneous

Confirmation

Railway

Special Test



Certificate

Further information

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=3RT1066-6AP36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1066-6AP36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1066-6AP36

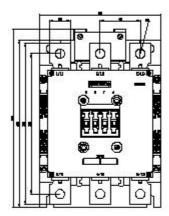
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1066-6AP36&lang=en

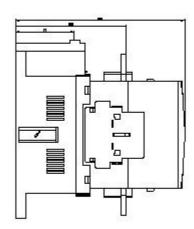
Characteristic: Tripping characteristics, I2t, Let-through current

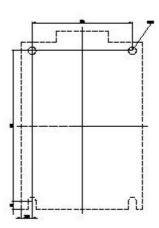
https://support.industry.siemens.com/cs/ww/en/ps/3RT1066-6AP36/char

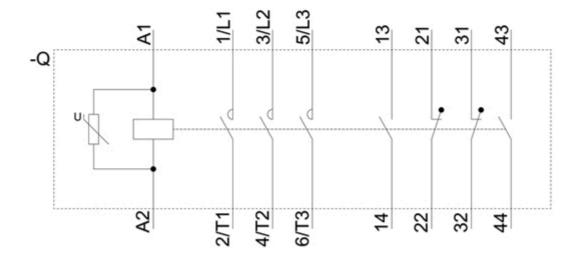
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1066-6AP36&objecttype=14&gridview=view1









last modified: 12/18/2020 🖸