



vacuum contactor AC-3e/AC-3 300 A, 160 kW / 400 V, 3-pole, U_c: 200-277 V
 AC(50-60 Hz) / DC PLC input 24 V DC drive: electronic auxiliary contacts 2 NO + 2
 NC main circuit: busbar control and auxiliary circuit: screw terminal

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| product brand name | SIRIUS |
| product designation | Power contactor |
| product type designation | 3RT12 |
| 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 | 42 W |
| • at AC in hot operating state per pole | 14 W |
| • without load current share typical | 3.4 W |
| type of calculation of power loss current-dependent | quadratic |
| 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 |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 690 V |
| shock resistance at rectangular impulse | |
| • at AC | 8,5 g / 5 ms, 4,2 g / 10 ms |
| • at DC | 8,5 g / 5 ms, 4,2 g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 13,4 g / 5 ms, 6,5 g / 10 ms |
| • at DC | 13,4 g / 5 ms, 6,5 g / 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 (day/month/year) | 05/01/2012 |
| SVHC substance name | Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1 |
| Net Weight | 7.285 kg |

| Ambient conditions | |
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| 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 |
| number of NC contacts for main contacts | 0 |
| operating voltage | |
| • at AC-3 rated value maximum | 1 000 V |
| • at AC-3e 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 °C rated value | 330 A |
| — up to 690 V at ambient temperature 60 °C rated value | 300 A |
| • at AC-3 | |
| — at 400 V rated value | 300 A |
| — at 500 V rated value | 300 A |
| — at 690 V rated value | 300 A |
| • at AC-3e | |
| — at 400 V rated value | 300 A |
| — at 500 V rated value | 300 A |
| — at 690 V rated value | 300 A |
| • at AC-4 at 400 V rated value | 280 A |
| • at AC-6a | |
| — up to 230 V for current peak value n=20 rated value | 300 A |
| — up to 400 V for current peak value n=20 rated value | 300 A |
| — up to 500 V for current peak value n=20 rated value | 300 A |
| — up to 690 V for current peak value n=20 rated value | 300 A |
| • at AC-6a | |
| — up to 230 V for current peak value n=30 rated value | 209 A |
| — up to 400 V for current peak value n=30 rated value | 209 A |
| — up to 500 V for current peak value n=30 rated value | 209 A |
| — up to 690 V for current peak value n=30 rated value | 209 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 185 mm ² |
| operational current for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 140 A |
| • at 690 V rated value | 140 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 AC-3e | |
| — 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 |
| operating power for approx. 200000 operating cycles at AC-4 | |

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| <ul style="list-style-type: none"> • at 400 V rated value | 79 kW |
| <ul style="list-style-type: none"> • at 690 V rated value | 138 kW |
| operating apparent power at AC-6a | |
| <ul style="list-style-type: none"> • up to 230 V for current peak value n=20 rated value | 120 kVA |
| <ul style="list-style-type: none"> • up to 400 V for current peak value n=20 rated value | 200 kVA |
| <ul style="list-style-type: none"> • up to 500 V for current peak value n=20 rated value | 260 kVA |
| <ul style="list-style-type: none"> • up to 690 V for current peak value n=20 rated value | 350 kVA |
| operating apparent power at AC-6a | |
| <ul style="list-style-type: none"> • up to 230 V for current peak value n=30 rated value | 80 kVA |
| <ul style="list-style-type: none"> • up to 400 V for current peak value n=30 rated value | 140 kVA |
| <ul style="list-style-type: none"> • up to 500 V for current peak value n=30 rated value | 180 kVA |
| <ul style="list-style-type: none"> • up to 690 V for current peak value n=30 rated value | 250 kVA |
| <ul style="list-style-type: none"> • up to 1000 V for current peak value n=30 rated value | 360 kVA |
| no-load switching frequency | |
| <ul style="list-style-type: none"> • at AC | 1 000 1/h |
| <ul style="list-style-type: none"> • at DC | 1 000 1/h |
| operating frequency | |
| <ul style="list-style-type: none"> • at AC-1 maximum | 750 1/h |
| <ul style="list-style-type: none"> • at AC-2 maximum | 250 1/h |
| <ul style="list-style-type: none"> • at AC-3 maximum | 750 1/h |
| <ul style="list-style-type: none"> • at AC-3e | |
| <ul style="list-style-type: none"> — maximum | 750 1/h |
| <ul style="list-style-type: none"> • at AC-4 maximum | 250 1/h |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | AC/DC |
| control supply voltage at AC | |
| <ul style="list-style-type: none"> • at 50 Hz rated value | 200 ... 277 V |
| <ul style="list-style-type: none"> • at 60 Hz rated value | 200 ... 277 V |
| control supply voltage at DC rated value | 200 ... 277 V |
| operating range factor control supply voltage rated value of magnet coil at DC | |
| <ul style="list-style-type: none"> • initial value | 0.8 |
| <ul style="list-style-type: none"> • full-scale value | 1.1 |
| operating range factor control supply voltage rated value of magnet coil at AC | |
| <ul style="list-style-type: none"> • at 50 Hz | 0.8 ... 1.1 |
| <ul style="list-style-type: none"> • at 60 Hz | 0.8 ... 1.1 |
| type of PLC-control input according to IEC 60947-1 | Type 2 |
| consumed current at PLC-control input according to IEC 60947-1 maximum | 20 mA |
| voltage at PLC-control input rated value | 24 V |
| operating range factor of the voltage at PLC-control input | 0.8 ... 1.1 |
| design of the surge suppressor | with varistor |
| apparent pick-up power | |
| <ul style="list-style-type: none"> • at minimum rated control supply voltage at AC | |
| <ul style="list-style-type: none"> — at 50 Hz | 420 VA |
| <ul style="list-style-type: none"> — at 60 Hz | 420 VA |
| <ul style="list-style-type: none"> • at maximum rated control supply voltage at AC | |
| <ul style="list-style-type: none"> — at 60 Hz | 570 VA |
| <ul style="list-style-type: none"> — at 50 Hz | 570 VA |
| apparent pick-up power of magnet coil at AC | |
| <ul style="list-style-type: none"> • at 50 Hz | 570 VA |
| <ul style="list-style-type: none"> • at 60 Hz | 570 VA |
| inductive power factor with closing power of the coil | |
| <ul style="list-style-type: none"> • at 50 Hz | 0.8 |
| <ul style="list-style-type: none"> • at 60 Hz | 0.8 |
| apparent holding power | |
| <ul style="list-style-type: none"> • at minimum rated control supply voltage at DC | 2.8 VA |
| <ul style="list-style-type: none"> • at maximum rated control supply voltage at DC | 3.4 VA |
| apparent holding power | |

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| <ul style="list-style-type: none"> ● at minimum rated control supply voltage at AC <ul style="list-style-type: none"> — at 50 Hz — at 60 Hz ● at maximum rated control supply voltage at AC <ul style="list-style-type: none"> — at 50 Hz — at 60 Hz | <p>5.5 VA</p> <p>5.5 VA</p> <p>8.5 VA</p> <p>8.5 VA</p> |
| inductive power factor with the holding power of the coil | |
| <ul style="list-style-type: none"> ● at 50 Hz ● at 60 Hz | <p>0.5</p> <p>0.4</p> |
| closing power of magnet coil at DC | 630 W |
| holding power of magnet coil at DC | 3.4 W |
| closing delay | |
| <ul style="list-style-type: none"> ● at AC ● at DC | <p>45 ... 80 ms</p> <p>45 ... 80 ms</p> |
| opening delay | |
| <ul style="list-style-type: none"> ● at AC ● at DC | <p>80 ... 100 ms</p> <p>80 ... 100 ms</p> |
| arcing time | 10 ... 15 ms |
| control version of the switch operating mechanism | PLC-IN or Standard A1 - A2 (adjustable) |
| Auxiliary circuit | |
| number of NC contacts for auxiliary contacts instantaneous contact | 2 |
| number of NO contacts for auxiliary contacts instantaneous contact | 2 |
| operational current at AC-12 maximum | 10 A |
| operational current at AC-15 | |
| <ul style="list-style-type: none"> ● at 230 V rated value ● at 400 V rated value ● at 500 V rated value ● at 690 V rated value | <p>6 A</p> <p>3 A</p> <p>2 A</p> <p>1 A</p> |
| operational current at DC-12 | |
| <ul style="list-style-type: none"> ● at 24 V rated value ● at 48 V rated value ● at 60 V rated value ● at 110 V rated value ● at 125 V rated value ● at 220 V rated value ● at 600 V rated value | <p>10 A</p> <p>6 A</p> <p>6 A</p> <p>3 A</p> <p>2 A</p> <p>1 A</p> <p>0.15 A</p> |
| operational current at DC-13 | |
| <ul style="list-style-type: none"> ● at 24 V rated value ● at 48 V rated value ● at 60 V rated value ● at 110 V rated value ● at 125 V rated value ● at 220 V rated value ● at 600 V rated value | <p>10 A</p> <p>2 A</p> <p>2 A</p> <p>1 A</p> <p>0.9 A</p> <p>0.3 A</p> <p>0.1 A</p> |
| 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 | |
| <ul style="list-style-type: none"> ● at 480 V rated value ● at 600 V rated value | <p>302 A</p> <p>289 A</p> |
| yielded mechanical performance [hp] | |
| <ul style="list-style-type: none"> ● for 3-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value | <p>100 hp</p> <p>125 hp</p> <p>250 hp</p> <p>300 hp</p> |
| contact rating of auxiliary contacts according to UL | A600 / Q600 |
| Short-circuit protection | |

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| design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V | C characteristic: 10 A; 0.4 kA |
| design of the fuse link <ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of coordination 2 required • for short-circuit protection of the auxiliary switch required | gG: 500 A (690 V, 100 kA) gG: 500 A (690 V, 100 kA), aM: 400 A (690 V, 50 kA), BS88: 450 A (415 V, 50 kA) gG: 10 A (500 V, 1 kA) |
| Installation/ mounting/ dimensions | |
| mounting position | +/-22,5° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| fastening method side-by-side mounting | Yes |
| fastening method | screw fixing |
| height | 210 mm |
| width | 145 mm |
| depth | 206 mm |
| required spacing <ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — upwards — downwards — at the side | 20 mm 10 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 20 mm 10 mm 10 mm 10 mm |
| Connections/ Terminals | |
| type of electrical connection <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil | Connection bar screw-type terminals Screw-type terminals Screw-type terminals |
| width of connection bar | 25 mm |
| thickness of connection bar | 6 mm |
| diameter of holes | 11 mm |
| number of holes | 1 |
| type of connectable conductor cross-sections <ul style="list-style-type: none"> • for AWG cables for main contacts | 2/0 ... 500 kcmil |
| connectable conductor cross-section for main contacts <ul style="list-style-type: none"> • stranded | 70 ... 240 mm ² |
| connectable conductor cross-section for auxiliary contacts <ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing | 0.5 ... 4 mm ² 0.5 ... 2.5 mm ² |
| type of connectable conductor cross-sections <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), max. 2x (0.75 ... 4 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), max. 2x (0.75 ... 4 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 1x 12 |
| AWG number as coded connectable conductor cross section for auxiliary contacts | 18 ... 14 |
| Safety related data | |
| product function <ul style="list-style-type: none"> • mirror contact according to IEC 60947-4-1 | Yes |

- positively driven operation according to IEC 60947-5-1

No

Electrical Safety

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

Approvals Certificates

Environment

General Product Approval

[Environmental Confirmations](#)



General Product Approval

EMV

Functional Safety

Test Certificates



[Type Examination Certificate](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Maritime application

other



[Miscellaneous](#)

[Confirmation](#)

[Confirmation](#)



Railway

[Special Test Certificate](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RT1266-6NP36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1266-6NP36>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1266-6NP36&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1266-6NP36>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)



