SIEMENS

## Data sheet 3TF6844-0CF7

Contactor, Size 14, 3-pole, AC-3, 335kW, 400/380 V (690 V) Auxiliary switch 44 (4NO+4NC) AC operation 110...132 V AC 50/60 Hz

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|---|---|
| **product designation** | Vacuum contactor |
| **product type designation** | 3TF6 |
| **General technical data** | |
| **size of contactor** | 14 |
| **product extension** | |
| ● function module for communication | No |
| ● auxiliary switch | No |
| **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 | 690 V |
| **surge voltage resistance** | |
| ● of main circuit rated value | 8 kV |
| ● of auxiliary circuit rated value | 6 kV |
| **maximum permissible voltage for safe isolation in networks with grounded star point** | |
| ● between auxiliary and auxiliary circuit | 300 V |
| ● between main and auxiliary circuit | 500 V |
| **shock resistance at rectangular impulse** | |
| ● at AC | 8.1g / 5 ms, 4.7g / 10 ms |
| **shock resistance with sine pulse** | |
| ● at AC | 12.8g / 5 ms, 7.4g / 10 ms |
| **mechanical service life (operating cycles)** | |
| ● of contactor typical | 5 000 000 |
| **reference code according to IEC 81346-2** | Q |
| **Substance Prohibitance (Date)** | 03/01/2017 |
| **Ambient conditions** | |
| installation altitude at height above sea level maximum | 2 000 m |
| **ambient temperature** | |
| ● during operation | -25 ... +55 °C |
| ● during storage | -55 ... +80 °C |
| **relative humidity minimum** | 10 % |
| relative humidity during operation | 10 ... 95 % |
| **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 |
| **type of voltage for main current circuit** | AC |
| **operating voltage** | |
| ● at AC-3 rated value maximum | 690 V |

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| ● at AC-3e rated value maximum | 690 V |
| **operational current** | |
| ● at AC-1 | |
| — up to 690 V at ambient temperature 40 °C rated value | 700 A |
| — up to 690 V at ambient temperature 55 °C rated value | 630 A |
| ● at AC-3 | |
| — at 400 V rated value | 630 A |
| — at 500 V rated value | 630 A |
| — at 690 V rated value | 630 A |
| ● at AC-3e | |
| — at 400 V rated value | 630 A |
| — at 500 V rated value | 630 A |
| — at 690 V rated value | 630 A |
| ● at AC-4 at 400 V rated value | 610 A |
| ● at AC-6a | |
| — up to 500 V for current peak value n=20 rated value | 513 A |
| — up to 690 V for current peak value n=20 rated value | 513 A |
| ● at AC-6a | |
| — up to 400 V for current peak value n=30 rated value | 342 A |
| — up to 500 V for current peak value n=30 rated value | 342 A |
| — up to 690 V for current peak value n=30 rated value | 342 A |
| **connectable conductor cross-section in main circuit at AC-1** | |
| ● at 40 °C minimum permissible | 480 mm² |
| **operational current for approx. 200000 operating cycles at AC-4** | |
| ● at 400 V rated value | 300 A |
| ● at 690 V rated value | 300 A |
| **operating power** | |
| ● at AC-3 | |
| — at 230 V rated value | 200 kW |
| — at 400 V rated value | 335 kW |
| — at 690 V rated value | 600 kW |
| ● at AC-3e | |
| — at 230 V rated value | 200 kW |
| — at 400 V rated value | 335 kW |
| — at 690 V rated value | 600 kW |
| **operating apparent power at AC-6a** | |
| ● up to 400 V for current peak value n=20 rated value | 338 kVA |
| ● up to 690 V for current peak value n=20 rated value | 586 kVA |
| **operating apparent power at AC-6a** | |
| ● up to 400 V for current peak value n=30 rated value | 226 kVA |
| ● up to 690 V for current peak value n=30 rated value | 390 kVA |
| **thermal short-time current limited to 10 s** | 5 040 A |
| **power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor** | 45 W |
| **power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor** | 45 W |
| no-load switching frequency at AC | 2 000 1/h |
| **operating frequency** | |
| ● at AC-1 maximum | 700 1/h |
| ● at AC-3e | |
| — at 400 V maximum | 500 1/h |
| — at 690 V maximum | 500 1/h |
| ● at AC-2 at AC-3 maximum | 200 1/h |
| ● at AC-2 at AC-3e maximum | 200 1/h |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | AC |
| **control supply voltage at AC** | |

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| ● at 50 Hz rated value | 110 ... 132 V |
| ● at 60 Hz rated value | 110 ... 132 V |
| **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 |
| **apparent pick-up power of magnet coil at AC** | |
| ● at 50 Hz | 1 200 VA |
| ● at 60 Hz | 1 200 VA |
| **inductive power factor with closing power of the coil** | |
| ● at 50 Hz | 1 |
| ● at 60 Hz | 1 |
| **apparent holding power of magnet coil at AC** | |
| ● at 50 Hz | 13.5 VA |
| ● at 60 Hz | 13.5 VA |
| **inductive power factor with the holding power of the coil** | |
| ● at 50 Hz | 0.15 |
| ● at 60 Hz | 0.15 |
| **closing delay** | |
| ● at AC | 70 ... 120 ms |
| **opening delay** | |
| ● at AC | 70 ... 100 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** | |
| ● attachable | 4 |
| ● instantaneous contact | 4 |
| number of NO contacts for auxiliary contacts | |
| ● attachable | 4 |
| ● instantaneous contact | 4 |
| operational current at AC-12 maximum | 10 A |
| **operational current at AC-15** | |
| ● at 230 V rated value | 5.6 A |
| ● at 400 V rated value | 3.6 A |
| ● at 500 V rated value | 2.5 A |
| ● at 690 V rated value | 2.3 A |
| **operational current at DC-12 at 440 V rated value** | 0.33 A |
| **operational current at DC-12** | |
| ● at 24 V rated value | 10 A |
| ● at 48 V rated value | 10 A |
| ● at 110 V rated value | 3.2 A |
| ● at 125 V rated value | 2.5 A |
| ● at 220 V rated value | 0.9 A |
| ● at 600 V rated value | 0.22 A |
| **operational current at DC-13** | |
| ● at 24 V rated value | 10 A |
| ● at 48 V rated value | 5 A |
| ● at 110 V rated value | 1.14 A |
| ● at 125 V rated value | 0.98 A |
| ● at 220 V rated value | 0.48 A |
| ● at 600 V rated value | 0.07 A |
| **contact reliability of auxiliary contacts** | one incorrect switching operation of 100 million switching operations (17 V, 5 mA) |
| **UL/CSA ratings** | |
| **full-load current (FLA) for 3-phase AC motor** | |
| ● at 480 V rated value | 630 A |
| ● at 600 V rated value | 630 A |
| **yielded mechanical performance [hp]** | |
| ● for 3-phase AC motor | |
| — at 200/208 V rated value | 231 hp |
| — at 220/230 V rated value | 266 hp |
| — at 460/480 V rated value | 530 hp |

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| — at 575/600 V rated value | 664 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: 1000 A (690 V, 100 kA) |
| — with type of assignment 2 required | gG: 500 A (690 V, 100 kA), aM: 630 A (690 V, 50 kA), BS88: 500 A (415 V, 50 kA) |
| ● for short-circuit protection of the auxiliary switch required | fuse gG: 10 A |
| **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** | 276 mm |
| **width** | 230 mm |
| **depth** | 237 mm |
| **required spacing** | |
| ● with side-by-side mounting | |
| — forwards | 20 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 10 mm |
| ● for grounded parts | |
| — forwards | 20 mm |
| — upwards | 10 mm |
| — at the side | 10 mm |
| — downwards | 10 mm |
| ● for live parts | |
| — 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 |
| **width of connection bar** | 30 mm |
| **thickness of connection bar** | 6 mm |
| **diameter of holes** | 11 mm |
| **number of holes** | 1 |
| type of connectable conductor cross-sections for main contacts | |
| ● stranded | 70 ... 240 mm² |
| ● finely stranded with core end processing | 50 ... 240 mm² |
| **connectable conductor cross-section for main contacts** | |
| ● finely stranded with core end processing | 240 ... 50 mm² |
| **connectable conductor cross-section for auxiliary contacts** | |
| ● solid or stranded | 0.5 ... 2.5 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 ... 1.0 mm²), 2x (1.0 ... 2.5 mm²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.0 mm²), 2x (0.75 ... 2.5 mm²) |
| ● at AWG cables for auxiliary contacts | 2x (18 ... 12) |
| **AWG number as coded connectable conductor cross section** | |
| ● for main contacts | 500 |
| ● for auxiliary contacts | 18 ... 12 |
| **Safety related data** | |

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| **product function** | |
| ● mirror contact according to IEC 60947-4-1 | Yes; One NC contact each must be connected in series for the right and left auxiliary switch block respectively |
| ● positively driven operation according to IEC 60947-5-1 | No |
| **protection class IP on the front according to IEC 60529** | IP00; IP20 with cover |
| **touch protection on the front according to IEC 60529** | finger-safe, for vertical contact from the front with cover |

## Certificates/ approvals

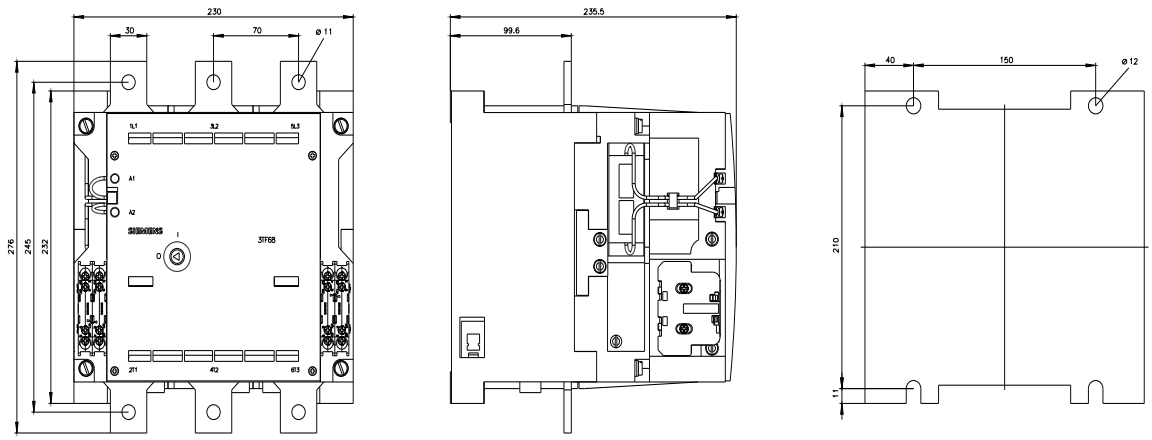
| General Product Approval | | | | Functional Safety/Safety of Machinery | Declaration of Conformity |
|---|---|---|---|---|---|
| CSA | CCC | UL | EAC | Type Examination Certificate | UKCA |

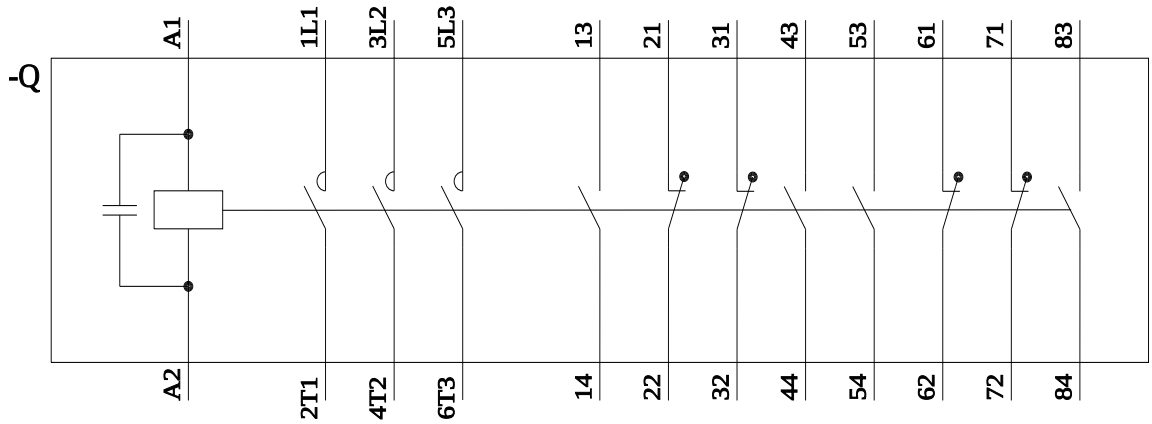
| Declaration of Conformity | Test Certificates | | | Marine / Shipping | |
|---|---|---|---|---|---|
| CE EG-Konf. | Special Test Certific-ate | Miscellaneous | Type Test Certific-ates/Test Report | BUREAU VERITAS | PRS |

| Marine / Shipping | | other | | |
|---|---|---|---|---|
| RMRS | DNV·GL | Confirmation | Miscellaneous | Confirmation |

## Further information

**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=3TF6844-0CF7
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TF6844-0CF7
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3TF6844-0CF7
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TF6844-0CF7&lang=en
**Characteristic: Tripping characteristics, I²t, Let-through current**
https://support.industry.siemens.com/cs/ww/en/ps/3TF6844-0CF7/char
**Further characteristics (e.g. electrical endurance, switching frequency)**
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TF6844-0CF7&objecttype=14&gridview=view1




**last modified:** 8/2/2022