

Contactor, Size 14, 3-pole, AC-3, 335kW, 400/380 V (690 V)
Auxiliary switch 44 (4NO+4NC) AC operation 230...276 V AC 50/60 Hz



Figure similar

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
Protection class IP	
• on the front	IP00
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 (switching cycles)	
• of contactor typical	5 000 000
Reference code acc. to DIN EN 81346-2	Q

Ambient conditions	
Installation altitude at height above sea level	
• maximum	2 000 m
• Ambient temperature during operation	-25 ... +55 °C
• Ambient temperature during storage	-55 ... +80 °C
Relative humidity during operation	10 ... 100 %

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	
— at 50 Hz rated value	1 000 V
— at 60 Hz rated value	1 000 V
Operating current	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	700 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 1000 V rated value	435 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
— up to 1000 V for current peak value n=20 rated value	435 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
— up to 1000 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 mm ²
Operating 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 1000 V rated value	600 kW
Operating apparent output at AC-6a	
• up to 400 V for current peak value n=20 rated value	338 kV·A
• up to 690 V for current peak value n=20 rated value	586 kV·A
• up to 1000 V for current peak value n=20 rated value	752 kV·A
Operating apparent output at AC-6a	
• up to 400 V for current peak value n=30 rated value	226 kV·A
• up to 690 V for current peak value n=30 rated value	390 kV·A
• up to 1000 V for current peak value n=30 rated value	592 kV·A
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 operating 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-2 at AC-3 maximum	200 1/h
Control circuit/ Control	

Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	230 ... 276 V
• at 60 Hz rated value	230 ... 276 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 V·A
• at 60 Hz	1 200 V·A
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 V·A
• at 60 Hz	13.5 V·A
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
Operating current at AC-12 maximum	10 A
Operating 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
Operating current at DC-12 at 440 V rated value	0.33 A
Operating 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
Operating 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 three-phase AC motor	
• at 480 V rated value	630 A
• at 600 V rated value	630 A
Yielded mechanical performance [hp]	
• for three-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
— 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
Mounting type	screw fixing
• Side-by-side mounting	Yes
Height	232 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	
Width of connection bar	30 mm
Thickness of connection bar	6 mm
Diameter of holes	11 mm
Number of holes	1
Type of electrical connection	
• for main current circuit	Connection bar
• for auxiliary and control current circuit	screw-type terminals
• at contactor for auxiliary contacts	Screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts	
— stranded	70 ... 240 mm ²
— finely stranded with core end processing	50 ... 240 mm ²
• at AWG conductors for main contacts	2/0 ... 500 kcmil
Connectable conductor cross-section for main contacts	
• finely stranded with core end processing	240 ... 50 mm ²
Connectable conductor cross-section for auxiliary contacts	
• single or multi-stranded	0.5 ... 2.5 mm ²
• finely stranded with core end processing	0.5 ... 2.5 mm ²
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.5 ... 1.0 mm ²), 2x (1.0 ... 2.5 mm ²)
— finely stranded with core end processing	2x (0.5 ... 1.0 mm ²), 2x (0.75 ... 2.5 mm ²)

• at AWG conductors 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

Product function	
• Mirror contact acc. 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 acc. to IEC 60947-5-1	No

Certificates/ approvals

General Product Approval	Functional Safety/Safety of Machinery
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CCC



CSA



UL



UR



[Type Examination Certificate](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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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=3TF6844-0CP7>

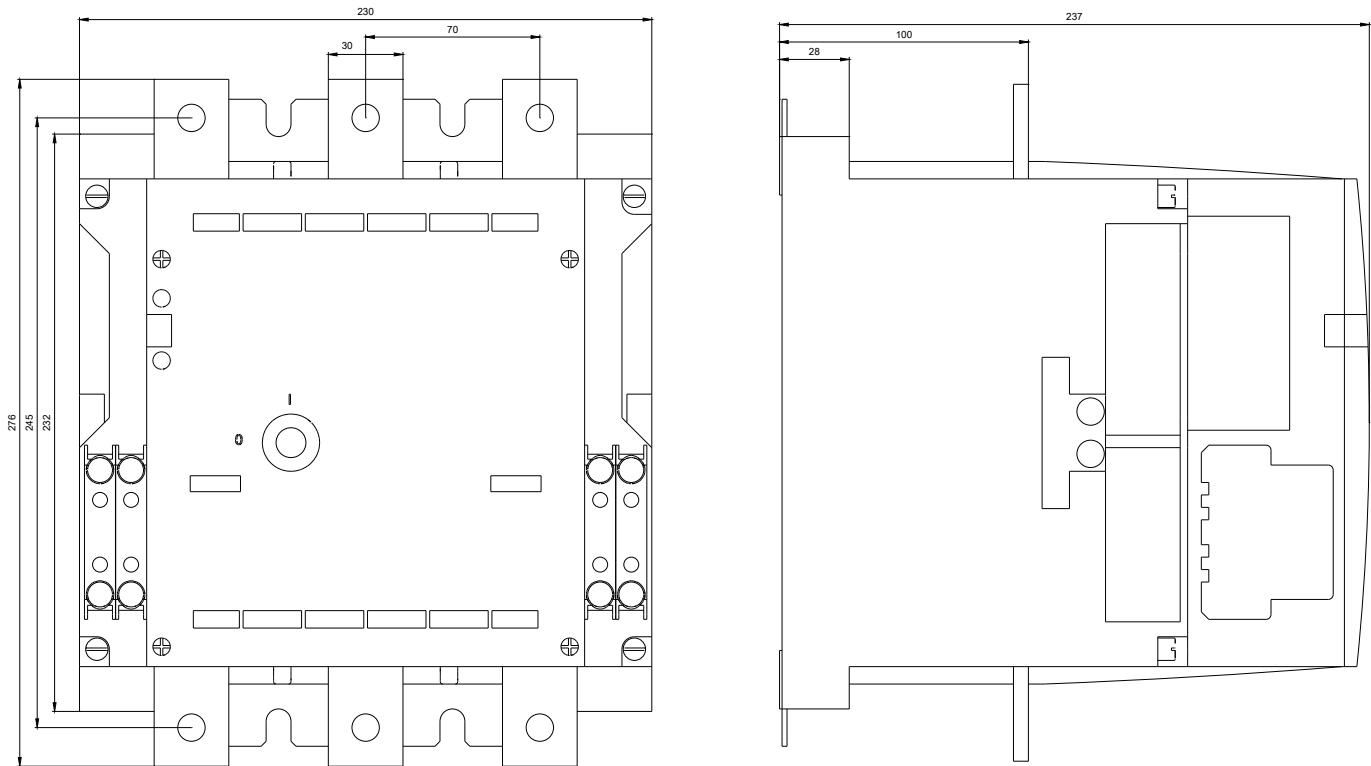
Cax online generator
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TF6844-0CP7>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3TF6844-0CP7>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TF6844-0CP7&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3TF6844-0CP7/char>

Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TF6844-0CP7&objecttype=14&gridview=view1>



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