

Contactor, Size 14, 3-pole, AC-3, 335kW, 400/380 V (690 V)
 Auxiliary switch 33 (3 NO+3 NC) with reversing contactor 3TC4417-4A and series resistor DC economy circuit 24 V DC

Product designation	Vacuum contactor
Product type designation	3TF6

General technical data

Size of contactor	14
Product extension	
<ul style="list-style-type: none"> • function module for communication • Auxiliary switch 	No No
Insulation voltage	
<ul style="list-style-type: none"> • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value 	1 000 V 690 V
Surge voltage resistance	
<ul style="list-style-type: none"> • of main circuit rated value • of auxiliary circuit rated value 	8 kV 6 kV
maximum permissible voltage for safe isolation in networks with grounded star point	
<ul style="list-style-type: none"> • between auxiliary and auxiliary circuit • between main and auxiliary circuit 	300 V 500 V
Protection class IP	
<ul style="list-style-type: none"> • on the front 	IP00
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of contactor typical 	5 000 000
Reference code acc. to DIN EN 81346-2	Q

Ambient conditions

Installation altitude at height above sea level	
<ul style="list-style-type: none"> • maximum 	2 000 m
<ul style="list-style-type: none"> • Ambient temperature during operation • Ambient temperature during storage 	-25 ... +55 °C -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	
<ul style="list-style-type: none"> • at AC <ul style="list-style-type: none"> — at 50 Hz rated value — at 60 Hz rated value 	 1 000 V 1 000 V
Operating current	
<ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 1000 V rated value • at AC-4 at 400 V rated value 	 700 A 630 A 630 A 630 A 435 A 610 A
Connectable conductor cross-section in main circuit at AC-1	
<ul style="list-style-type: none"> • at 40 °C minimum permissible 	480 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> • at 400 V rated value • at 690 V rated value 	 300 A 300 A
Operating power	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 690 V rated value — at 1000 V rated value 	 200 kW 335 kW 600 kW 600 kW
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	
<ul style="list-style-type: none"> • at AC-1 maximum • at AC-2 at AC-3 maximum 	 700 1/h 200 1/h
Control circuit/ Control	
Type of voltage of the control supply voltage	DC
Control supply voltage at DC	
<ul style="list-style-type: none"> • rated value 	24 V
Operating range factor control supply voltage rated value of magnet coil at DC	
<ul style="list-style-type: none"> • initial value 	0.8

• Full-scale value	1.1
Closing power of magnet coil at DC	1 010 W
Holding power of magnet coil at DC	28 W
Closing delay	
• at DC	80 ... 90 ms
Opening delay	
• at DC	10 ... 50 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	3
• instantaneous contact	3
Number of NO contacts for auxiliary contacts	
• attachable	3
• instantaneous contact	3
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	
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<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	630 A 630 A
Yielded mechanical performance [hp] <ul style="list-style-type: none"> • for three-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 	231 hp 266 hp 530 hp 664 hp
Contact rating of auxiliary contacts according to UL	A600 / Q600

Short-circuit protection

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 • for short-circuit protection of the auxiliary switch required 	gG: 1000 A (690 V, 100 kA) fuse gG: 10 A
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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 <ul style="list-style-type: none"> • Side-by-side mounting 	screw fixing Yes
Height	232 mm
Width	230 mm
Depth	237 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 10 mm 20 mm 10 mm 10 mm 10 mm 20 mm 10 mm 10 mm 10 mm

Connections/ Terminals

Type of electrical connection	
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<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit • at contactor for auxiliary contacts 	Connection bar screw-type terminals Screw-type terminals
Type of connectable conductor cross-sections <ul style="list-style-type: none"> • at AWG conductors for main contacts 	2/0 ... 500 kcmil
Connectable conductor cross-section for main contacts <ul style="list-style-type: none"> • finely stranded with core end processing 	240 ... 50 mm ²
Connectable conductor cross-section for auxiliary contacts <ul style="list-style-type: none"> • single or multi-stranded • finely stranded with core end processing 	0.5 ... 2.5 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 — finely stranded with core end processing • at AWG conductors for auxiliary contacts 	2x (0.5 ... 1.0 mm ²), 2x (1.0 ... 2.5 mm ²) 2x (0.5 ... 1.0 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (18 ... 12)
AWG number as coded connectable conductor cross section <ul style="list-style-type: none"> • for main contacts • for auxiliary contacts 	500 18 ... 12

Safety related data

Product function <ul style="list-style-type: none"> • Mirror contact acc. to IEC 60947-4-1 • positively driven operation acc. to IEC 60947-5-1 	Yes No
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Certificates/ approvals

General Product Approval	Functional Safety/Safety of Machinery
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[Type Examination Certificate](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)



Marine / Shipping	other	Railway
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[Environmental Conformations](#)

[Confirmation](#)

[Special Test Certificate](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3TF6833-1DB4>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TF6833-1DB4>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TF6833-1DB4>

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

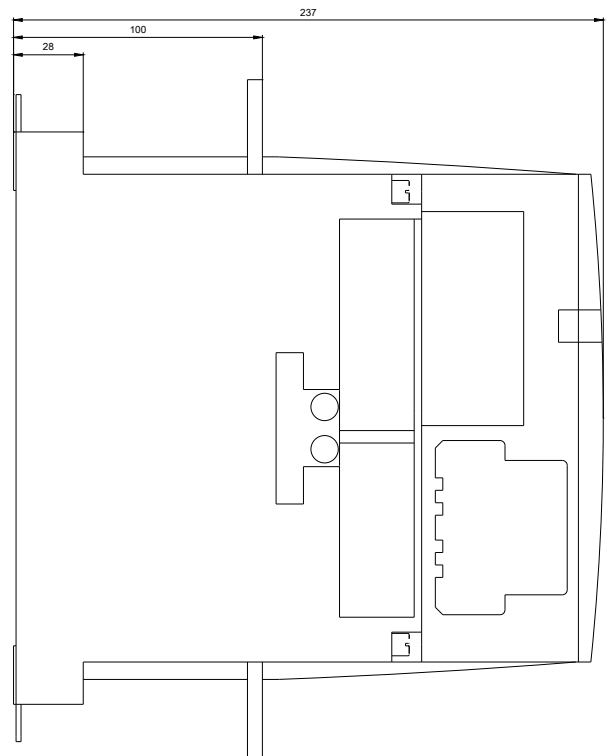
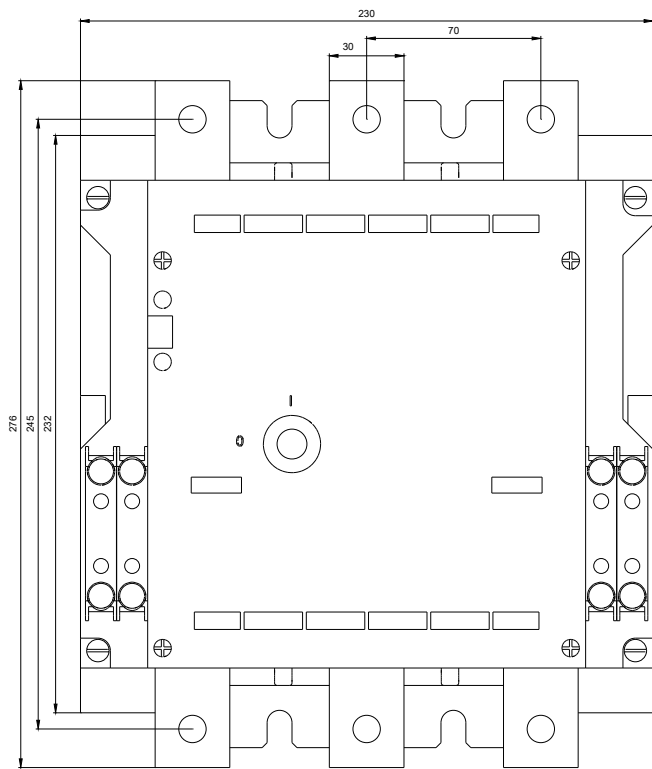
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TF6833-1DB4&lang=en

Characteristic: Tripping characteristics, I^t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3TF6833-1DB4/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TF6833-1DB4&objecttype=14&gridview=view1>



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