SIEMENS

Data sheet

3TF6833-1QV7

Contactor, Size 14, 3-pole, AC-3, 335kW, 400/380 V (690 V) Auxiliary switch 33 (3NO+3NC) Rectifier bridge built-in with reversing contactor 3TC44 AC operation 380 to 420 V AC 50/60 Hz



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
 Insulation voltage 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
 during storage 	-55 +80 °C
Relative humidity during operation	10 100 %
Aain 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
— up to 690 V at ambient temperature 55 °C rated value	630 A
— up to 1000 V at ambient temperature 55 °C rated value	450 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	
	342 A
— up to 400 V for current peak value n=30 rated value	0+2 Λ
— 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 mm²
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	45 W
the operating current per conductor	
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	380 420 V
• at 60 Hz rated value	380 420 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	1 000 V·A
● at 60 Hz	1 000 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	11 V·A
• at 60 Hz	11 V·A
Inductive power factor with the holding power of the	
coil	
● at 50 Hz	1
● at 60 Hz	1
Closing delay	
• at AC	35 90 ms
Opening delay	
● at AC	65 90 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/USA 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 gG: 1000 A (690 V, 100 kA) - with type of coordination 1 required gG: 500 A (690 V, 100 kA), aM: 630 A (690 V, 50 kA), BS88: 500 - with type of assignment 2 required A (415 V, 50 kA) fuse gG: 10 A • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions with vertical mounting surface +/-90° rotatable, with vertical mounting position mounting surface +/- 22.5° tiltable to the front and back Mounting type screw fixing Yes • Side-by-side mounting

11-:	000
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
 Type of electrical connection for auxiliary and control current circuit 	screw-type terminals
 Type of electrical connection at contactor for auxiliary contacts 	Screw-type terminals
Type of connectable conductor cross-sections	
 for main contacts 	
— stranded	70 240 mm²
— finely stranded with core end processing	50 240 mm²
 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 mm²
Connectable conductor cross-section for auxiliary	
contacts	
 single or multi-stranded 	0.5 2.5 mm²
 finely stranded with core end processing 	0.5 2.5 mm²

ype of connectable conduc	tor cross-se	ctions			
 for auxiliary contacts 					
— solid			2x (0.5 1.0 mm²)), 2x (1.0 2.5 mm²))
- finely stranded wit	th core end p	processing	2x (0.5 1.0 mm²)), 2x (0.75 2.5 mm) ²)
 at AWG conductors for 	r auxiliary co	ontacts	2x (18 12)		
WG number as coded conr	nectable con	ductor cross			
ection					
 for main contacts 			500		
 for auxiliary contacts 			18 12		
ety related data					
oduct function					
• Mirror contact acc. to I	EC 60947-4	-1		act each must be cor ary switch block resp	nnected in series for the
 positively driven operatively 	tion acc. to !	EC 60047 5	No	ary switch block resp	Convery
 positively driven opera 1 			110		
	val				Functional
	val			_	
	val				
	val			r D r	Safety/Safety of Machinery Type Examination
	val	(H)	GN °	F 0 F	Safety/Safety of Machinery
General Product Appro	val		S	EAC	Safety/Safety of Machinery Type Examination
	val	UL	SNS UR	EAC	Safety/Safety of Machinery Type Examination
General Product Appro	val	UL	SNS UR	EAC	Safety/Safety of Machinery Type Examinatio
General Product Appro	val	UL UL Marine / S		EAC	Safety/Safety of Machinery Type Examinatio
General Product Approv	val			EAC	Safety/Safety of Machinery Type Examinatio Certificate
CCC Contraction Co	Ē	Marine / S			Safety/Safety of Machinery Type Examination Certificate
General Product Approv	Ē	Marine / S	hipping		Safety/Safety of Machinery Type Examinatio Certificate
General Product Approv	Ē	Marine / S			Safety/Safety of Machinery Type Examinatio Certificate
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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=3TF6833-1QV7

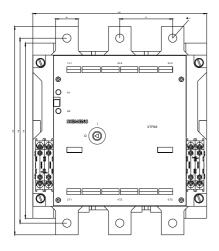
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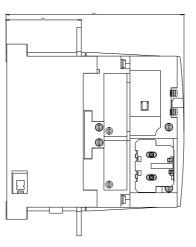
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3TF6833-1QV7

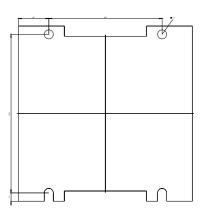
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TF6833-1QV7&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3TF6833-1QV7/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TF6833-1QV7&objecttype=14&gridview=view1







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