SIEMENS

Data sheet

3TF6844-0CM7



vacuum contactor AC-3e/AC-3 630 A, 335 kW / 400 V, Ue 690 V, 3-pole, Uc: 200-240 V AC(50/60 Hz) drive: conventional auxiliary contacts 4 NO + 4 NC main circuit: busbar control and auxiliary circuit: screw terminal

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 protective separation 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			

	200.)/
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 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	300 A
at 690 V rated value	300 A 300 A
operating power	500 A
• at AC-3	
	200 144
— at 230 V rated value	200 kW
— at 400 V rated value	355 kW
— at 500 V rated value	434 kW
— at 690 V rated value	600 kW
• at AC-3e	000 114
— at 230 V rated value	200 kW
— at 400 V rated value	355 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	
control supply voltage at AC	

 at 50 Hz rated value 	200 240 V
 at 60 Hz rated value 	200 240 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
	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
	7
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 220/220 V rated value	266 ba			
— 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	~C: 1000 A (C00)/ 100 kA)			
— 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 mm ²			
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 mm ²			
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 mm ²), 2x (0.75 2.5 mm ²)			
 for 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			
s for durinary contacto				

Safety related data							
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					
B10 value with high demand rate according to SN 31920			1 000 000	I			
proportion of dangero	ous failures						
with high demand rate according to SN 31920			73 %				
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				
ertificates/ approvals							
General Product App	roval				Functional Safety/Safety of Ma- chinery	Declaration of Con- formity	
(SP)		(U) u		EHC	Type Examination Cer- tificate	UK CA	
Declaration of Con- formity	Test Certificates				Marine / Shipping		
CE EG-Konf.	<u>Miscellaneous</u>	Type Test Cert ates/Test Rep		becial Test Certific- ate	BUREAU VERITAS	PRS	
Marine / Shipping		other					
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Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

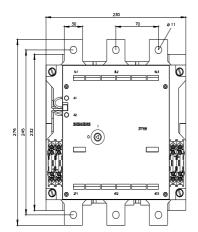
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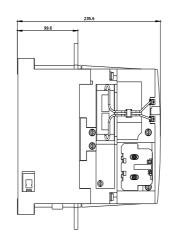
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TF6844-0CM7&lang=en

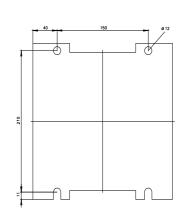
Characteristic: Tripping characteristics, I²t, Let-through current

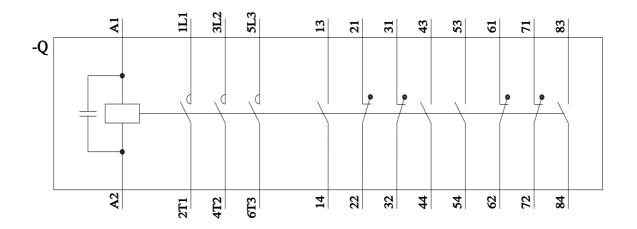
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Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TF6844-0CM7&objecttype=14&gridview=view1









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