

TGCA- □ M Mini AC Contactor



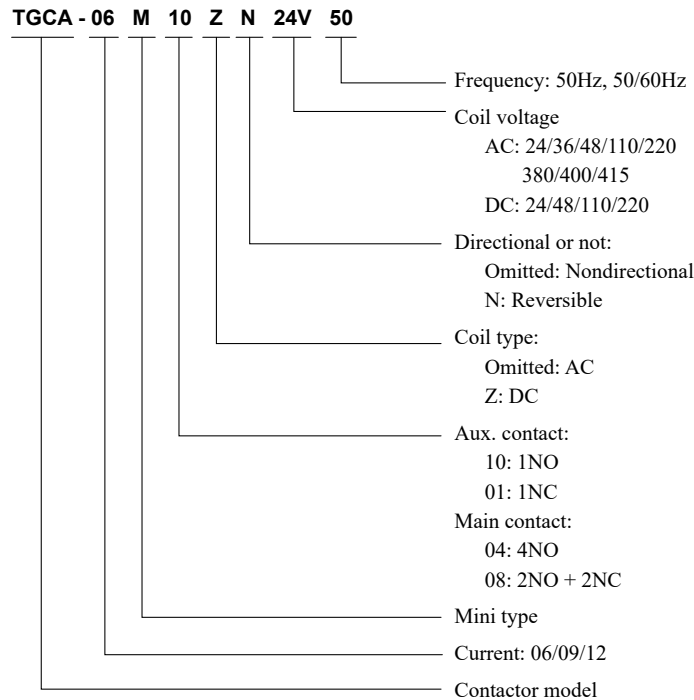
1 Overview

TGCA- □ M Mini AC contactor (hereinafter referred to as contactor) features with artistic appearance and small size. It is primarily used in the AC 50Hz(50/60Hz) power system with the rated working voltage up to 690V, and with the rated working current up to 12A at the rated working voltage 380V under the AC-3 usage category for remotely marking and breaking circuit breaker. The contactor is suitable for AC motor with frequent starts and controls.

Standard: IEC 60947-4-1

Certification: CCC, CE

2 Type Designation



3 Technical Parameters

Rated working current I _e	6A~12A
Rated working voltage U _e	220V~690V
Rated insulation voltage	690V
Number of poles	3P, 4P
Coil control type	AC, DC
Insatllation method	35mm rail-mounted, mounted through screws

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4 Operating Conditions

Installation category	Class III
Pollution degree	3
Protection grade	IP20
Ambient air temperature	Ambient temperature (surrounding the equipment): permissible working temperature: $-35^{\circ}\text{C}\sim+70^{\circ}\text{C}$; normal working temperature: $-5^{\circ}\text{C}\sim+40^{\circ}\text{C}$; when the working temperature is higher than $+40^{\circ}\text{C}$, it must be considered that the permissible limit temperature rise of product shall be reduced. When the working temperature is below than -5°C , it shall be considered that greased used for insulation and lubrication may be frozen in a too low ambient temperature, resulting in action failure of product. The manufacturer shall contact the user for design or usage through negotiation.
Altitude	$\leq 2,000$ meters
Atmospheric conditions	The relative air humidity does not exceed 50% at the maximum temperature $+70^{\circ}\text{C}$, and a higher relative humidity is allowed at a lower temperature, such as up to 90% at 20°C . Special measures shall be taken for condensation occurred occasionally due to temperature changes.
Installation conditions	The inclination between the mounting plane and the vertical plane is not greater than $\pm 22.5^{\circ}$
Impact and vibration	The product shall be installed in places where there is no obvious shaking, impact or vibration.

5 Derating Coefficient Table

Ambient temperature $^{\circ}\text{C}$	40	50	55	60	65	70
Correction factor	1	0.98	0.95	0.93	0.875	0.75

6 Main Circuit Parameters and Performance Indicators

6.1 Main circuit parameters and performance indicators

Model		TGCA-06M	TGCA-09M	TGCA-12M	
Rated working current (A)	220V/230V	AC-3	6	9	12
		AC-4	2.6	3.5	5
	380V/400V	AC-3	6	9	12
		AC-4	2.6	3.5	5
	660V/690V	AC-3	3.8	4.9	4.9
		AC-4	1	1.5	2
Conventional heating current (A)		20	20	20	
Rated insulation voltage (V)		690			
Rated impulse withstand voltage (KV)		6			

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Table, continued

Model		TGCA-06M	TGCA-09M	TGCA-12M			
Power of controlled 3-phase cage motor (AC-3) kW	220V/230V	1.5	2.2	3			
	380V/400V	2.2	4	5.5			
	660V/690V	3	4	4			
Power of intermittent periodic duty-type motor (AC-4)kW	220V/230V	0.55	0.75	1.1			
	380V/400V	1.1	1.5	2.2			
	660V/690V	0.75	1.1	1.5			
Operating frequency (times/h)	Electrical life	AC-3	1200				
		AC-4	300				
Electrical life (10,000 times)	AC-3	120					
	AC-4	15					
Mechanical life (10,000 times)		1200					
Matched fuse model		RT16-00 16		RT16-00 20			
Cold- pressed terminal	Piece		1	2	1	2	
	Non-prefabricated terminal soft wire	mm ²	1/2.5	1/2.5	1/2.5	1/2.5	
			Prefabricated terminal soft wire	1/2.5	1/1.5	1/2.5	1/1.5
			Non-prefabricated terminal hard wire	1/2.5	1/2.5	1/2.5	1/2.5
Size and tightening torque of wiring terminal screw (N.m)		M3					
		0.8					
AC coil power (50Hz)	Pull-in (VA)	40					
	Hold (VA)	7					
DC coil power (W)		3~4					
Structure type of main contact		3NO, 4NO, 2NO+2NC					
Number of self-contained aux. contacts	Three-pole	1NO/1NC					
	Four-pole	-					
Installation requirements		Vertical installation ±5°					
Action range	Pull-in voltage range	85%~110%Us					
	Pull-out voltage range	AC : (20%~75%) Us DC: (10%~70%) Us					
Rated making capacity		10×Ie(AC-3) or 12×Ie(AC-4)					
Rated breaking capacity		8×Ie(AC-3) or 10×Ie(AC-4)					
Coil control power	AC	24/36/48/110/220/380/400/415					
	DC	24/48/110/220					
Matched accessories		Top assist FD1					

6.2 Circuit parameters

Conventional heating current I _{th}	10A
Rated insulation voltage U _i (V)	690
Control capacity of aux. contact	AC-15:1.6A/220V, 0.95A/380V
	DC-13:0.15A/220V
Rated impulse withstand voltage U _{imp} (kV)	6
Wiring capacity (N.m)	0.8(M3)

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7 Accessories

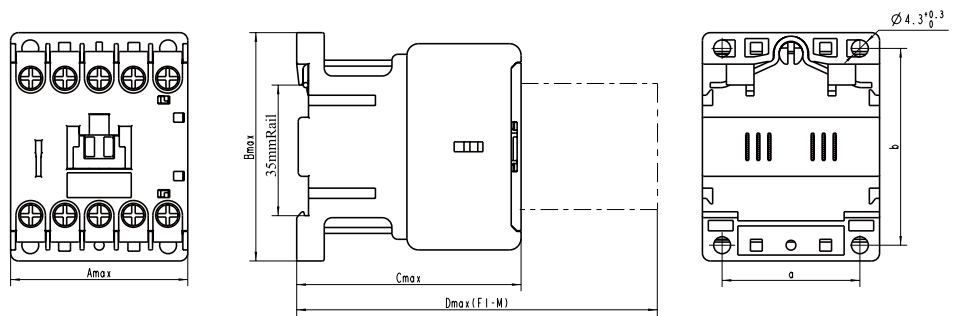
TGCA-06~12M



Top aux. contact FD1

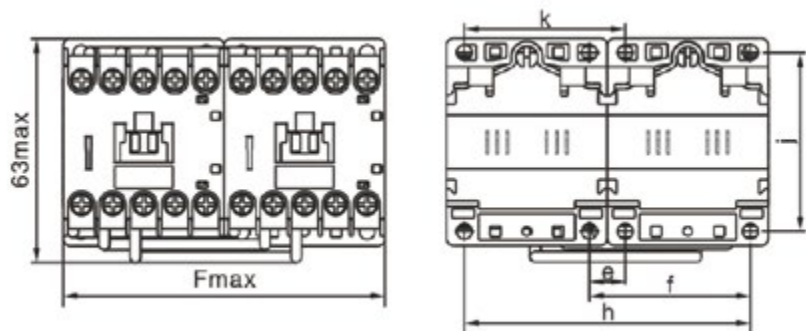


8 Outline and Installation Dimensions



Unit (mm)

Model & Spec.	Amax	Bmax	Cmax	Dmax	a	b
TGCA-06M~12M	45.5	58.5	57.5	92	35	50
TGCA-06M/Z~12M/Z	45.5	58.5	70	104	35	50



Unit (mm)

Model & Spec.	Fmax	e	f	h	j	k
TGCA-06M/N~16M/N	91	10	45	80	50	45