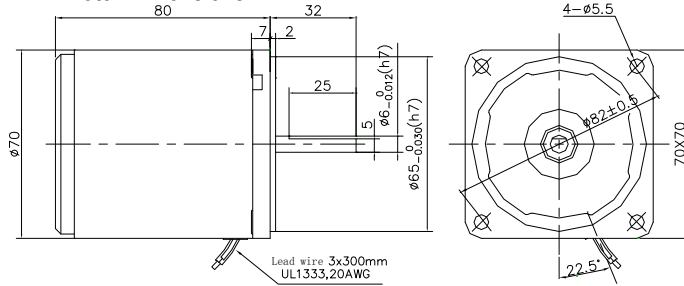


Torque Motors

Frame Size: □70mm (□2.76 in.)

Motor Dimensions:

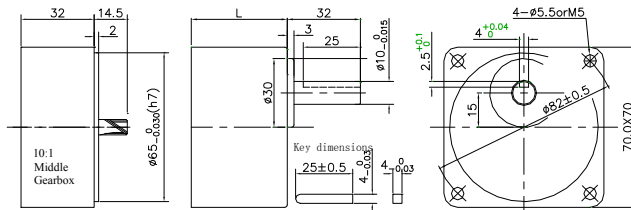


Torque motor specifications (leads wire type)

Model		Rating	Voltage	Freq.	Starting Torque	Max. output power	At Max. output power		Capacitor
Pinion Shaft	Round Shaft						Speed	Torque	
3TK6GN-A	3TK6A-A	5MIN	110	50	134	6	750	80	8.0/250
		Cont	60		68	2.5		36	
		5MIN	110	60	134	6.5	900	74	
		Cont	60		68	2.8		30	
3TK6GN-C	3TK6A-C	5MIN	220	50	134	6	750	80	2.0/450
		Cont	140		68	2.5		36	
		5MIN	220	60	134	6.5	900	74	
		Cont	140		68	2.8		30	

- These motors have built in thermal protectors: If a motor overheats the thermal protector opens and the motor stops. When the motor temperature drops to the rated level, the thermal protector closes and the motor restarts.

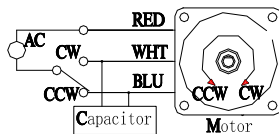
Gearhead dimensions:



Item	Ratio	Eff. %	L mm	Weight	
				Kg	lb
Gearhead (3GNxxK)	3,3,6,5,6,7,5,9,12,5,15,18	81	32	0.38	0.84
	25,30,36	73	42	0.47	1.03
	50,60,75,90,100,120,150,180,200	66	42	0.52	1.14
10:1 middle gearbox			90	32	0.3 0.66
Motor			80	1.1	2.42

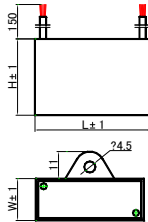
Connection Diagrams:

Lead Wire Single Phase

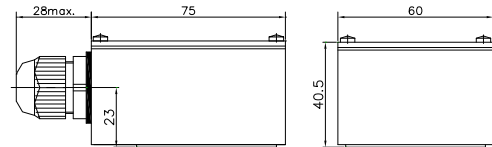


Capacitor:

Value	Dimensions
uF	V L H W
2.0 - 2.5	250 37 14 28
0.5 - 1.5	450 37 14 28
3.5 - 4.0	250 37 18 28
1.8 - 2.5	450 37 18 28



Terminal Boxes:



General specifications for AC motors (motor operated under normal ambient temperature and humidity conditions):

Item	Specifications
Insulation Resistance	100 MΩ or more when 500VDC is applied between the windings and the frame
Dielectric Strength	Sufficient to withstand 1.5 kV at 50/60Hz applied between the windings and the frame for 1 minute
Temperature Rise	Temperature rise of windings should be lower than 80°C (60°C with fan)
Insulation Class	Class B (130°C)
Overheat Protection	Build in thermal protector (automatic return); Class B (O: 120±5°C, C: 75±15°C)
Ambient Temperature	14°F-104°F (-10°C~+40°C) [three-Phase: 14°F-122°F (-10~+50°C)] (Nonfreezing)
Ambient Humidity	85% or less (Noncondensing)
Degree of Protection	Lead wire type: IP20; Terminal Box Type: IP54

Permissible load for round shaft motors & Permissible Load Inertia at the Motor Shaft

Frame Size	Shaft Dia.	Permissible overhung load (from end of shaft)		Permissible Load Inertia at the Motor Shaft			
		10 mm	20 mm	J (×10 kg. m ²)	GD (kg. m ²)		
3TK15GN/A	6mm	9.0 lb	40 Nm	13.5 lb	60 Nm	0.14	0.52

Permissible thrust load: Avoid thrust load as much as possible or keep it to no more than half the motor weight

Permissible load for gearheads

Frame Size	Gear Ratio	Maximum Permissible torque	Permissible overhung load (from end of shaft)		Permissible thrust load		
			10 mm	20 mm			
3GNxxK	3 - 18	44 lb.in	5 Nm	18.0 lb	80 N	9.0 lb	40 N
	25 - 200			33.7 lb	150 N		