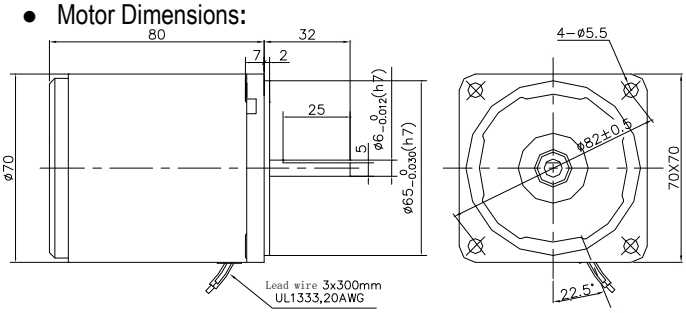
Torque Motors

Frame Size: □70mm (□2.76 in.)

- Motor Dimensions:

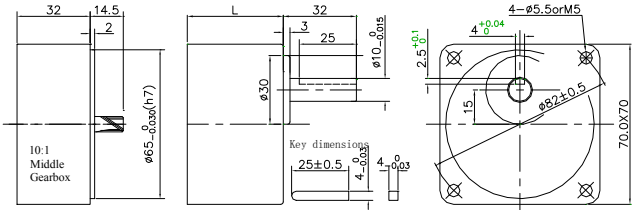


- Torque motor specifications (leads wire type)

Model		Rating	Voltage	Freq.	Starting Torque	Max. output power	At Max. output power		Capacitor
							Speed	Torque	
Pinion Shaft	Round Shaft		Vac	Hz	mN.m	W	r/min	mN.m	μF
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	7.0/250
		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	1.5/450
		Cont	140		68	2.8		30	

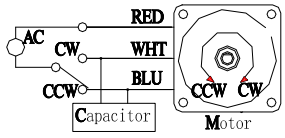
- These motors have built in thermal protectors: If a motor overheats the thermal protector opens and the motor stops. When the motor temperature drops to the rated level, the thermal protector closes and the motor restarts.

- Gearhead dimensions:



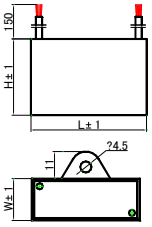
Item	Ratio	Eff.	L	Weight	
		%	mm	Kg	lb
Gearhead (3GNxxK)	3,3.6,5,6,7.5,9,12.5,15,18	81	32	0.38	0.84
	25,30,36	73	42	0.47	1.03
	50,60,75,90,100,120,150,180,200	66		0.52	1.14
10:1 middle gearbox		90	32	0.3	0.66
Motor			80	1.1	2.42

- Connection Diagrams:
- Lead Wire Single Phase

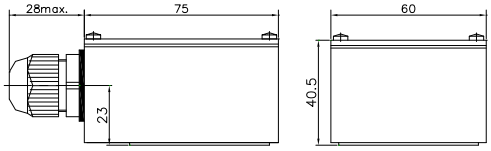


- Capacitor:

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



- 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°Cwith 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. m²）	GD (kg. m²)
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	27.0 lb	120 N	9.0 lb	40 N
	25 - 200			33.7 lb	150 N	56.2 lb	250 N		