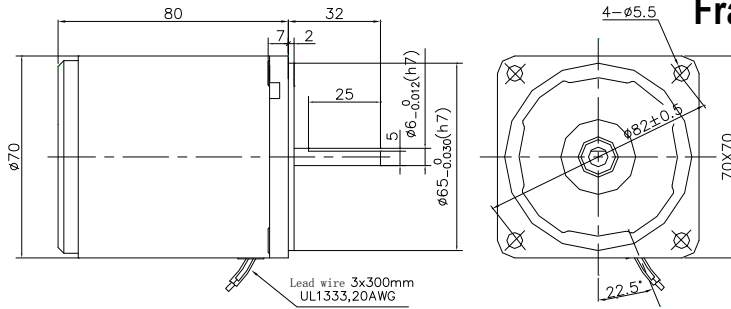


● Motor Dimensions:



**Induction Motors 15W**  
**Frame Size: □70mm (□2.76 in.)**

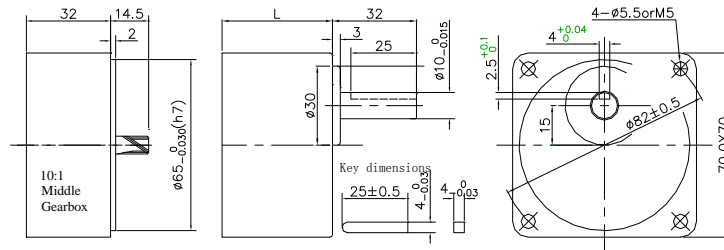


● Induction motor specifications-continuous Rating (leads wire type)

Model		Output Power	Voltage	Freq.	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor
Pinion Shaft	Round Shaft	W	Vac	Hz	Amp	mN.m	mN.m	r/min	μF/V
3IK15GN-A	3IK15A-A	15	1ph110	50	0.35	90	125	1200	6/250
				60	0.33	85	105	1450	
3IK15GN-C	3IK15A-C	15	1ph220	50	0.18	90	125	1200	1.2/450
					0.2			1450	
3IK15GN-S	3IK15A-S	15	3ph220	50	0.14	220	125	1200	-
				60	0.12	180	105	1450	

- 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	L		Weight	
		mm	Kg	lb	
Gearhead (3GNxxK)	3 - 18	32	0.38	0.84	
	25 - 50	42	0.47	1.03	
	60 - 200		0.52	1.14	
Middle gearbox(10:1)			0.3	0.66	
Motor			1.1	2.42	

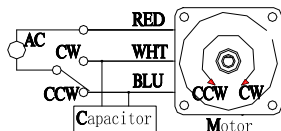
● Gear Motor-Torque Table

Model	Gear Ratio		X:1	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	200		
	Efficiency		%	81										73					66							
	Speed	50Hz	RPM	500	417	300	250	200	166	120	100	83	60	50	41	30	25	20	16	15	12.5	10	8.3	7.5		
3IK15GN-A 3IK15GN-C 3IK15GN-S		50Hz	Nm	0.3	0.36	0.51	0.61	0.76	0.91	1.3	1.5	1.8	2.3	2.7	3.3	4.1	5	5	5	5	5	5	5	5	5	
	Kg.cm		3.06	3.06	5.2	6.22	7.75	9.28	13.2	15.3	18.3	23.4	27.5	33.7	41.8	50	50	50	50	50	50	50	50	50		
	60Hz	Nm	0.26	0.31	0.43	0.51	0.64	0.77	1.1	1.3	1.5	1.9	2.3	2.8	3.5	4.2	5	5	5	5	5	5	5	5		
		Kg.cm	2.65	3.16	4.38	5.2	6.53	7.85	11.2	13.2	15.3	19.3	23.4	28.5	35.7	42.8	50	50	50	50	50	50	50	50		

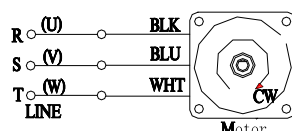
- Enter the gear ratio in the box □. Colored background indicates the output shaft rotate in the same direction as the motor shaft.
- The speed is calculated based on the synchronous speed (50 Hz: 1500rpm; 60Hz: 1800 rpm) by the gear ratio.
- Higher gear ratio (>200) can be achieved by adding a middle gearbox (10:1 only). Using Middle Gearbox limits Max.torque to 3Nm (30kg.cm)

● Connection Diagrams:

● Lead Wire Single Phase

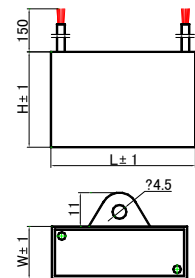


● Lead Wire Three Phase



● Capacitor:

Value		Dimensions		
uF	V	L	H	W
2.0 - 2.5	250	37	14	28
0.5 - 1.5	450			
5.0 - 8.0	250	47	22	34
3.0 - 5.0	450			



# Induction Motors 15W

## Frame Size: □70mm (□2.76 in.)

● General specifications for AC motors:

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

Notes: Above specifications is for motor operated under normal ambient temperature and humidity conditions

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

Frame Size	Shaft Dia. mm	Permissible overhung load (from end of shaft)				Permissible Load Inertia at the Motor Shaft	
		10 mm		20 mm		J (×10 kg. m <sup>2</sup> )	GD (kg. m <sup>2</sup> )
		lb	N	lb	N		
□70	6	9.0	40	13.5	60	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	
		lb-in	N.m	10 mm		20 mm		lb	N
				lb	N	lb	N		
□70	3 - 18	44	5	18.0	80	27.0	120	9.0	40
	25 - 200			33.7	150	56.2	250		

● Heat Radiation Plate Dimension (Material: Aluminum) : 125×125 (for 15W motor)

● Product Number Codes for Motors:

<b>3</b>	<b>I</b>	<b>K</b>	<b>15</b>	<b>R</b>	<b>GN</b>	<b>-</b>	<b>C</b>	<b>F</b>
Frame size	Motor Type	Series	Power	Control	Shaft		Voltage & Poles	Accessory
2: 60mm	I: Induction	K: k series	15 = 15W	R: speed control motor	A: round w/ flat A1: round w/keyway GN: Normal Pinion GU: Enhanced Pinion		A: Single phase 100~120VAC, 4P B: Single phase 100~120VAC, 2P C: Single phase 220~240VAC, 4P D: Single phase 220~240VAC, 2P S: Three phase 220~240VAC, 4P T: Three phase 220~240VAC, 2P S3: Three phase 380~415VAC, 4P T3: Three phase 380~415VAC, 2P	F: W/Fan FF: W/forced Fan M: W/Brake T: W/Terminal Box

● Product Number Codes for Gearheads:

<b>3</b>	<b>GN</b>	<b>50</b>	<b>K</b>
Frame size	Gear Type	Gear Ratio	Bearing
2: 60mm	GN: Normal Gear GU: Enhanced Gear	50 = 50:1	K: Normal Ball Bearing KB: Enhanced for GU Type B: Sleeve bearing
3: 70mm			
4: 80mm			
5: 90mm			
6: 100mm			

● Terminal Boxes:

