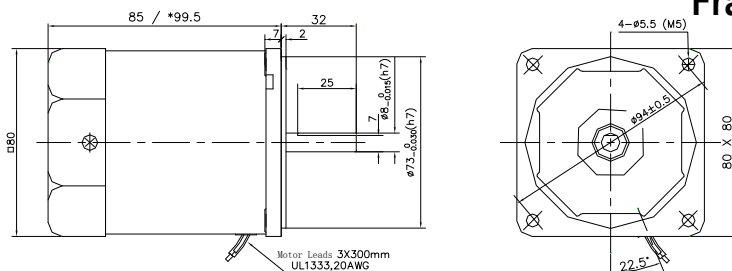


# Reversible Motors 25W

## Frame Size: □80mm (□3.15 in.)

### Motor Dimensions:

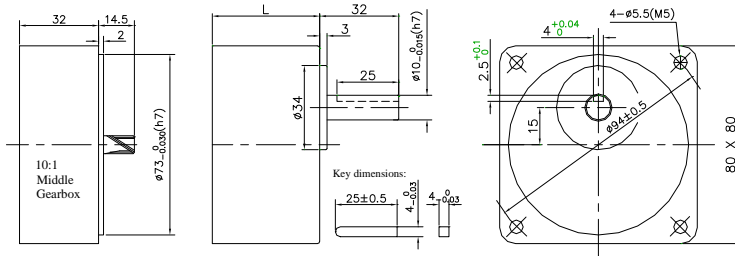


### Reversible motor specifications-30 minute rating (leads wire type)

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
4RK25GN-A	4RK25A-A	25	1ph110	50	0.59	160	200	1250	10
				60	0.69	140	165	1550	
4RK25GN-C	4RK25A-C	25	1ph220	50	0.29	140	200	1250	1.8
			1ph230		0.3			160	

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	Weight		
		L mm	Kg	lb
Gearhead (4GNxxK)	3 - 18	32	0.43	0.95
	25 - 50	42	0.57	1.25
	60 - 200		0.61	1.34
Middle gearbox(10:1)			0.4	0.88
Motor			1.64	3.61

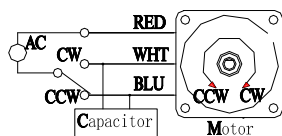
### Gear Motor-Torque Table

Model	Gear Ratio	X:1	Gear Ratio																				
			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 %																				
Speed	Efficiency %																						
	81																						
73																							
66																							
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	
	RPM	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	9	
60Hz	Nm	0.49	0.58	0.81	0.97	1.2	1.5	2	2.4	2.9	3.7	4.4	5.3	6.6	7.9	8	8	8	8	8	8	8	
	Kg.cm	5	5.91	8.26	9.89	12.2	15.3	20.4	24.4	29.6	37.7	44.9	54.1	67.3	80	80	80	80	80	80	80	80	
60Hz	Nm	0.4	0.48	0.67	0.8	1	1.2	1.7	2	2.4	3	3.6	4.3	5.4	6.5	8	8	8	8	8	8	8	
	Kg.cm	4.08	4.89	6.83	8.16	10.2	12.2	17.3	20.4	24.4	30.6	36.7	43.8	55.1	66.3	80	80	80	80	80	80	80	

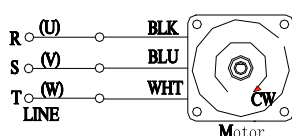
Enter the gear ratio in the box □. Colored background indicates the output shaft rotate in the same direction as the motor shaft.  
 The speed is calculated based on the synchronous speed (50 Hz: 1500rpm; 60Hz: 1800 rpm) by the gear ratio.  
 Higher gear ratio (>200) can be achieved by adding a middle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

### Connection Diagrams:

#### Lead Wire Single Phase

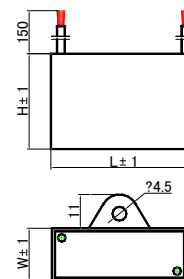


#### Lead Wire Three Phase



### Capacitor:

Value	Dimensions			
	uF	V	L	H
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			



# 25W Frame Size: □80mm (□3.15 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		
□80	8	20.2	90	31.5	140	0.31	1.2
	10	24.7	110	27.0	120		

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			
		lb-in	N.m	lb	N	lb	N	lb	N
□80	3 - 18	71	8	22.5	100	33.7	150	11	50
	25 - 200			44.9	200	67.4	300		

● **Heat Radiation Plate Dimension (Material: Aluminum): 135×135 (for 25W motor)**

● **Product Number Codes for Motors:**

<b>4</b>	<b>I</b>	<b>K</b>	<b>25</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	25 = 25W	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>4</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:**

