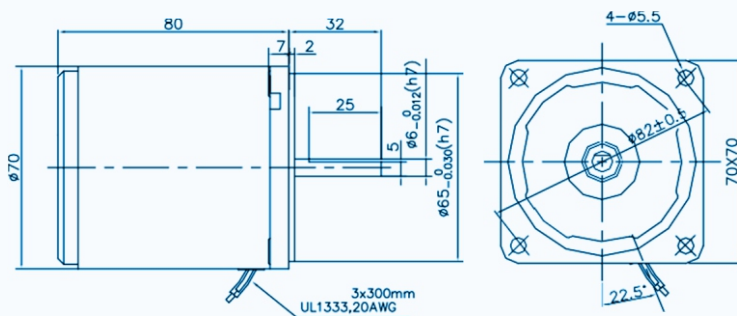


Induction Motors **15W**

Frame Size 70mm (2.76inch)

EIKO AUTOMATION

EIKO™

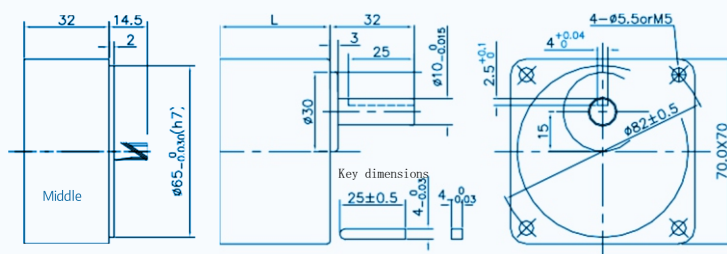


• Eiko Induction motor specifications-continuous Rating (lead wire)

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.m	μF/V
31K15GN-A	31K15A-A	15	1ph100	50	0.35	90	125	1200	6/250
				60	0.33	85	105	1450	
31K15GN-C	31K15A-C	15	1ph220	50	0.18	90	125	1200	1.2/450
			1ph230	50	0.20			1450	
31K15GN-S	31K15A-S	15	3ph220	50	0.35	90	125	1200	-
				60	0.33	85	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.

• Eiko Gear Head - Dimensions



Item	Ratio	L mm	Weight 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)			0.30	0.66
Motor			1.10	2.42

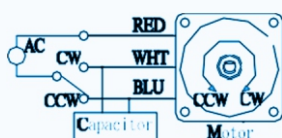
• Eiko Gear Motor - Torque Table

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 (r/min)		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
		60Hz	RPM	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	9
31K15GN-A	3GN□K	50Hz	Nm	0.33	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
31K15GN-C			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
31K15GN-S		60Hz	Nm	0.26	0.32	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
			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

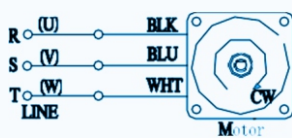
- Enter the gear ratio in the box (□) within the model name. Colored background indicates the output. Shaft rotate in the same direction as the motor shaft.
- The speed is calculated based on the synchronous speed (50Hz : 1500rpm, 60Hz : 1800rpm) by the gear ratio.
- Higher gear ratio (>200) can be achieved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

• Connection Diagrams

• Lead Wire Single Phase

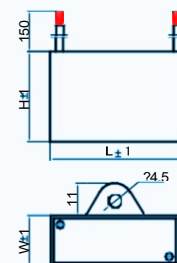


• Lead Wire Three Phase



• Capacitor

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



TECHNICAL SPECIFICATIONS

General specifications for Eiko Motors

Item	Specifications
Insulation Resistance	100 MΩ or more when 500 VD is applied between the windings and the frame
Dielectric Strength	Sufficient to withstand 1.5 kV at 50/60 Hz applied between the windings and the frame for 1 min
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°~+40°) [three phase: 14°F-122°F (-10°~+50°)] (Non freezing)
Ambient Humidity	85% or less (Non Condensing)
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 and permissible load inertia at the motor shaft

Frame Size	Shaft Diameter mm	Permissible Hung Load (from end of shaft)				Permissible Hung Inertia at the Motor Shaft	
		10mm		20mm		J (x10 kg.m ²)	GD (kg.m ²)
		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 to keep it no more than half the motor weight

Permissible load for Eiko Gearheads

Frame Size	Gear Ratio	Maximum Permissible Torque		Permissible Overhung Load (from end of shaft)				Permissible Thrust Load	
				10mm		20mm		lb	N
		lb-in	N.m	lb	N	lb	N		
□70	3 - 18	44	5	18	80	27.0	120	9.0	40
	25 -200			33.7	150	56.2	250		

Heat Radiation Plate Dimension (Material: Aluminium) : 235 x 236 (for 15W motor)

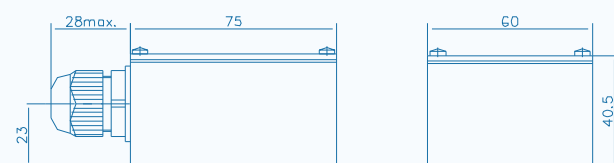
Product Number Codes for Motors:

3	I	K	15	R	GN	C	F
Frame Size 2: 60mm 3: 70mm 4: 80mm 5: 90mm 6: 100mm	Motor Type I: Induction R: Reversible T: Torque	Series K: k series	Power 15 = 15W	Control R: speed control motor	Shaft A: round w/flat A1: round w/keyway GN: Normal Pinion GU: Enhanced Pinion	Voltage & Poles A: Single Phase 100~120V AC, 4P B: Single Phase 100~120V AC, 2P C: Single Phase 220~240V AC, 4P D: Single Phase 220~240V AC, 2P S: Three Phase 220~240V AC, 4P T: Three Phase 220~240V AC, 2P S3: Three Phase 380~415V AC, 4P T3: Three Phase 380~415V AC, 2P	Accessory F: W/Fan FF: W/forced Fan M: W/Brake T: W/Terminal Box

Product Number Codes for Gearheads:

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

Terminal Boxes:



RELIABLE BEARINGS AND AUTOMATION

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