

Induction Motor

90 Watt

Frame Size: 90 mm

Continuous Rating, TEFC Aluminium Body.
Rotates in Clockwise or Counter Clockwise Direction.
Terminal Box or Open Lead Wires for Connection.



Specifications:

| Model | Supply Voltage | Frequency Hz | Current A | Starting Torque N.m | Rated Torque N.m | Rated Speed RPM | Capacitor μ F |
|-------------------------------------|-------------------|-----------------|--------------|------------------------|---------------------|--------------------|----------------------|
| 90 IW 4 <input type="checkbox"/> 90 | Single Phase 110V | 50 | 1.50 | 0.45 | 0.69 | 1300 | 0.20 |
| 90 IW 4 <input type="checkbox"/> 90 | Single Phase 110V | 60 | 1.50 | 0.45 | 0.57 | 1500 | 12.0 |
| 90 IX 4 <input type="checkbox"/> 90 | Single Phase 230V | 50 | 0.72 | 0.45 | 0.69 | 1300 | 3.5 |
| 90 IY 4 <input type="checkbox"/> 90 | Three Phase 230V | 50 | 0.72 | 0.78 | 0.70 | 1300 | --- |
| 90 IY 4 <input type="checkbox"/> 90 | Three Phase 230V | 60 | 0.60 | 0.70 | 0.57 | 1600 | — |
| 90 IY 4 <input type="checkbox"/> 90 | Three Phase 415V | 50 | 0.39 | 0.78 | 0.70 | 1350 | — |

Type Of Shaft, G for Gear Shaft, R for Round Shaft

Gearmotor Torque Table:

The maximum permissible torque is 20 N.m

50 Hz

Unit : N.m

| RPM | 500 | 416 | 300 | 250 | 200 | 166 | 120 | 100 | 83 | 60 | 50 | 41 | 30 | 25 | 20 | 16 | 15 | 12.5 | 10 | 8.3 |
|---------------|-----|-----|-----|-----|-----|-----|------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| 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 |
| Output Torque | 1.7 | 2.0 | 2.8 | 3.3 | 4.2 | 5.0 | 6.3 | 7.5 | 9.1 | 11.2 | 13.4 | 16.1 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |

60 Hz

Unit : N.m

| RPM | 600 | 500 | 360 | 300 | 240 | 200 | 144 | 120 | 100 | 72 | 60 | 50 | 30 | 30 | 24 | 20 | 18 | 15 | 12 | 10 |
|---------------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 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 |
| Output Torque | 1.4 | 1.7 | 2.4 | 2.8 | 3.6 | 4.3 | 5.3 | 6.4 | 7.7 | 9.7 | 11.6 | 13.9 | 19.3 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |

The Gear boxes are sold separately.

A coloured background indicates gear shaft rotation in same direction as motor shaft.

A white background indicates gear shaft rotation in opposite direction to the motor shaft.

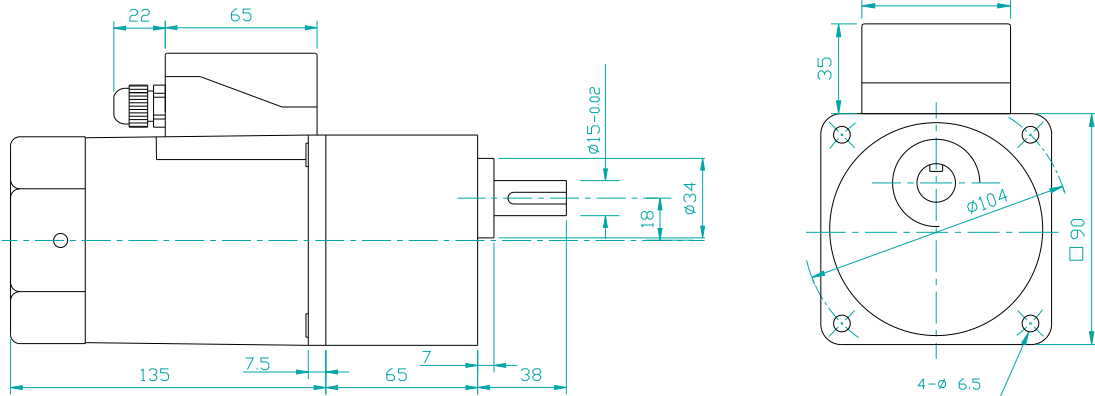
The speed of geared motor is calculated by dividing motor's synchronous speed by the gear ratio.

The actual speed is less than the displayed value, depending upon the load.

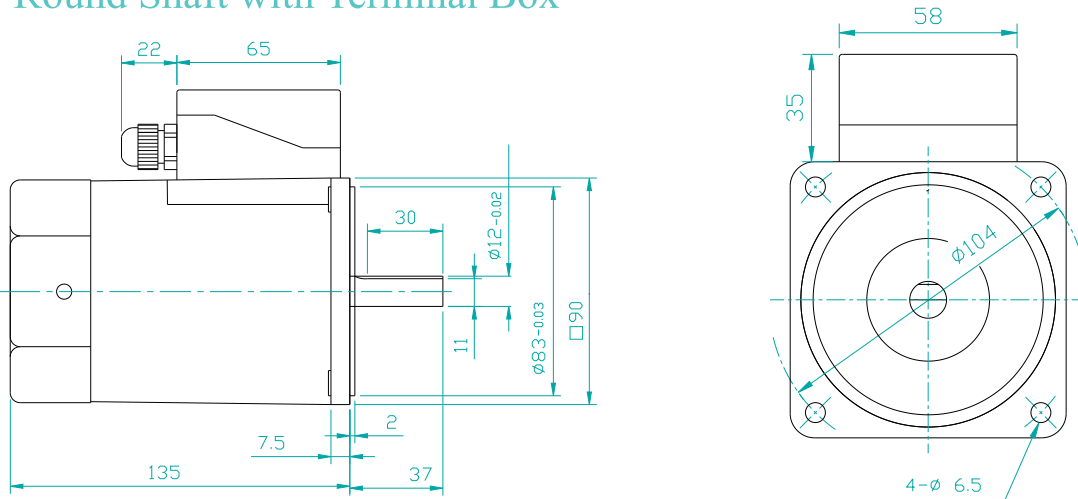
Characteristics, specifications and dimensions are subject to change without notice.

Dimensions:

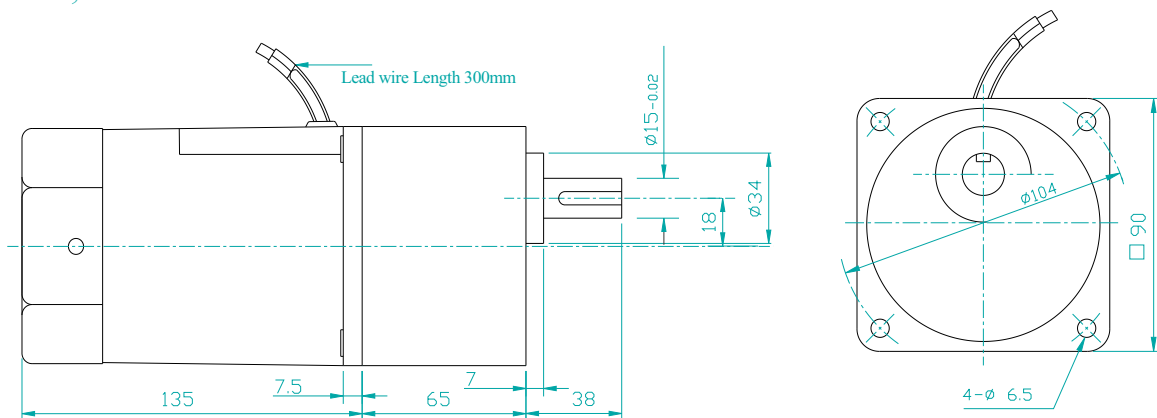
Motor, Gearbox with Terminal Box



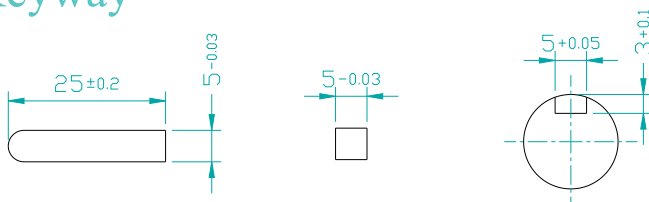
Motor Round Shaft with Terminal Box



Motor, Gearbox with Lead Wires



Key & Keyway



Weight: Motor 3 Kg

Gear Box 1.5 Kg

Induction Motor

Wiring Diagram:

Wiring Diagram for Single Phase Motor

| | |
|--|---|
| | |
| <p>Short Black wires and connect as shown to rotate the motor in clockwise direction. To change the direction, flip CW to CCW.</p> | <p>Red wires are for running winding & Black wires are for starting winding. To change the direction, interchange Black wires or Red wires.</p> |

Wiring Diagram for Three Phase Motor

| | |
|---|---|
| <h4>Star Connection</h4> | <h4>Delta Connection</h4> |
| <p>To change the direction, interchange any two wires between U, V & W. For 415 Volt supply, wires are connected as shown. Short White, Black & Blue wire and then insulate properly.</p> | <p>To change the direction, interchange any two wires between U, V & W. For 230 Volt 3 Ph supply, wires are connected as shown.</p> |

Change the direction of the motor only after it stops rotating. If the attempt is made during rotation, motor may ignore the reversing command or change the direction after some time.