

## Induction Motor

90 watt

Frame Size : 90 x 90 mm

Continuous rating, TEFC Aluminium body

Rotates in clockwise or counter clockwise direction. Direction of rotation can be reversed

Overruns for a few rotation after supply is cut off

Speeds are 2880 / 1440 RPM and further low speeds with gearbox

Terminal box or open lead wires for connection

Model	Output Power W	Frequency Hz	Supply Voltage V	Current A	Starting Torque Kg.cm	Rated Torque Kg.cm	Rated Speed RPM	Capacitor $\mu$ F
90 IW 4G90	90	60	Single phase 110 V	1.5	4.5	5.7	1500	12
90 IX 4G90	90	50	Single phase 230 V	0.75	4.5	6.9	1350	3.5
90 IY 4G90	90	60	Three phase 230 V	0.6	7.0	5.7	1600	
90 IY 4G90	90	50	Three phase 230 V	0.6	7.8	7.0	1350	
90 IZ 4G90	90	50	Three phase 415 V	0.3	7.8	7.0	1350	

### Gearmotor Torque Table :

The maximum permissible torque is 200 kg.cm

50 HZ

Unit: kg.cm

<b>RPM</b>	500	416	300	250	200	166	120	100	83	60	50	41	30	25	20	16	15	13	10	8.3
<b>Gear Ratio</b>	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
<b>Output Torque</b>	18	21	30	35	44	53	67	80	96	120	145	171	200	200	200	200	200	200	200	200

60 HZ

Unit: kg.cm

<b>RPM</b>	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
<b>Gear Ratio</b>	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
<b>Output Torque</b>	14	17	24	28	36	43	53	64	77	97	116	139	193	200	200	200	200	200	200	200

The Gearheads are sold separately.

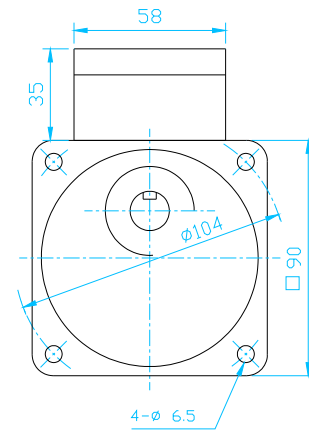
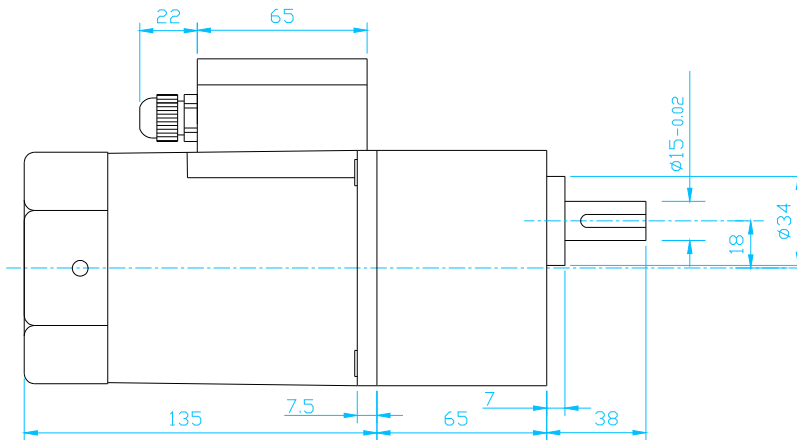
A Coloured background indicates gear shaft rotation in the same direction; a White background indicates rotation in the opposite direction as the motor shaft.

The Speed of Geared Motor is calculated by dividing the motor's synchronous speed ( 50Hz: 1500RPM, 60 Hz: 1800RPM ) by the gear ratio.

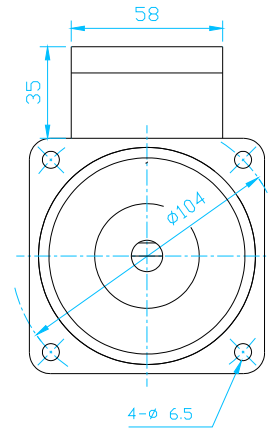
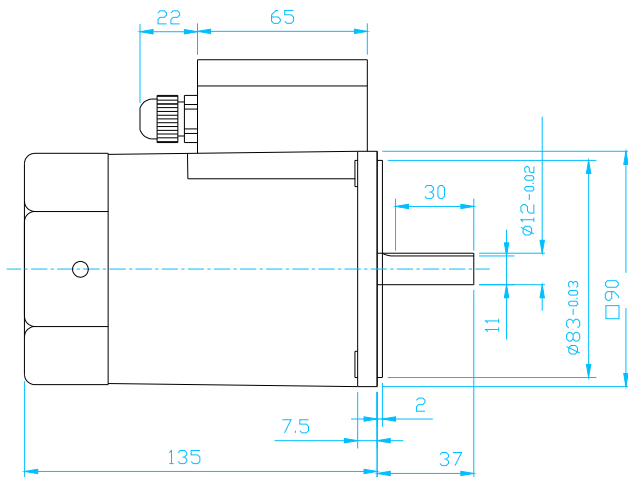
The actual Speed is 2~20 % less than the displayed value, depending on the size of the load. Characteristics, specifications and dimensions are subject to change without notice.

# Dimensions

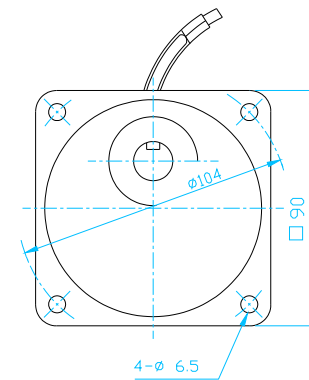
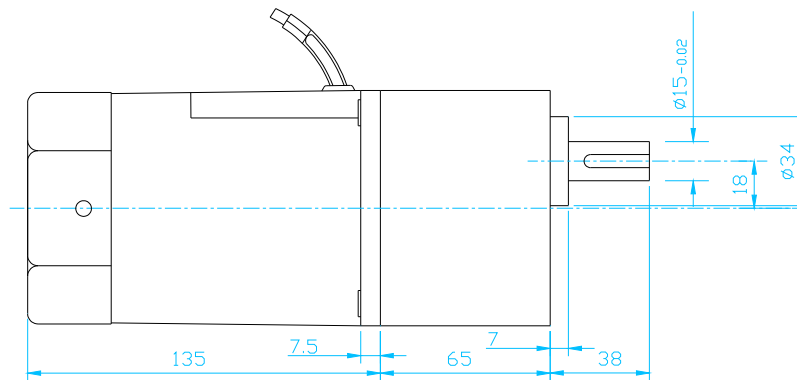
Motor, Gearbox with Terminal Box



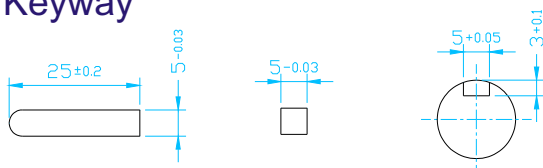
## Motor Round Shaft with Terminal Box



## Motor, Gearbox with Leadwires

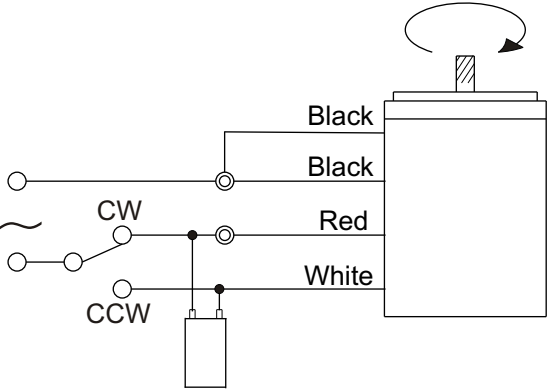
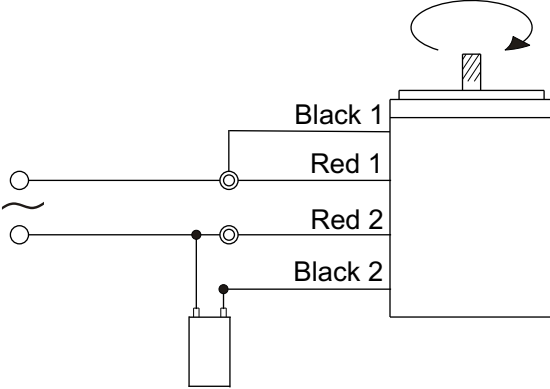


## Key and Keyway

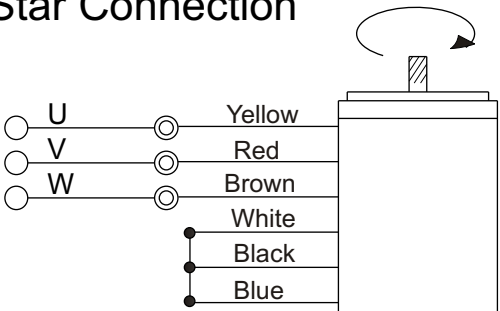
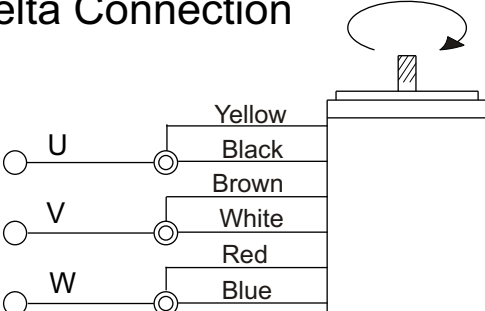


**Weight:** Motor :3 kg  
Gearbox:1.5 kg

## Wiring Diagram for Single Phase Motors

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

## Wiring Diagram for Three Phase Motors

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