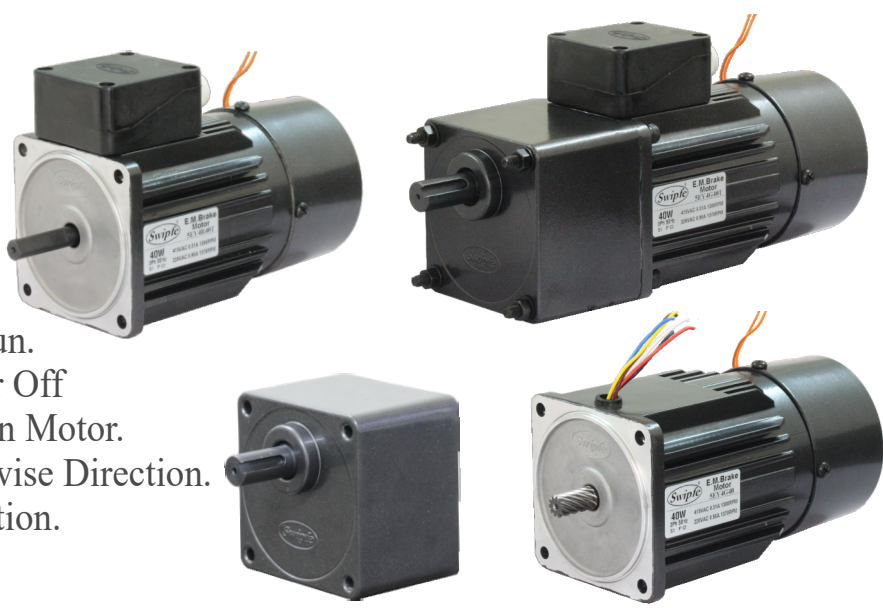


# Electromagnetic Brake Motor

## 40 Watt

Square Flange  
90mm x 90mm

Continuous Rating with Frequent Start Stop, Load Holding & Minimum Overrun.  
Electromagnetic Fail Safe Brake (Power Off Activated) fitted at the Back of Induction Motor.  
Rotates in Clockwise or Counter Clockwise Direction.  
Terminal Box or Lead Wires for connection.



### Motor Specifications:

Model	Supply	Freq. Hz	Stall Torque Nm	Rated Torque Nm	Rated Speed RPM	Rated Current Amp	Cap. $\mu$ F
5EX4□40	Single Phase 230V	50	0.34	0.28	1350	0.27	2
5EY4□40	Three Phase 230V	50	0.56	0.28	1350	0.25	-
5EY4□40	Three Phase 415V	50	0.69	0.28	1400	0.17	-
5EX2□40	Single Phase 230V	50	0.20	0.14	2800	0.25	1
5EY2□40	Three Phase 230V	50	0.22	0.14	2800	0.23	-
5EY2□40	Three Phase 415V	50	0.33	0.14	2850	0.16	-

□ Indicates type of Shaft, G - Gear, R - Round, F - Frame, C - Custom

### Gearmotor Torque Table:

The maximum permissible torque is 20 Nm  
No Load speed of Motor at 50Hz is approx. 1440RPM

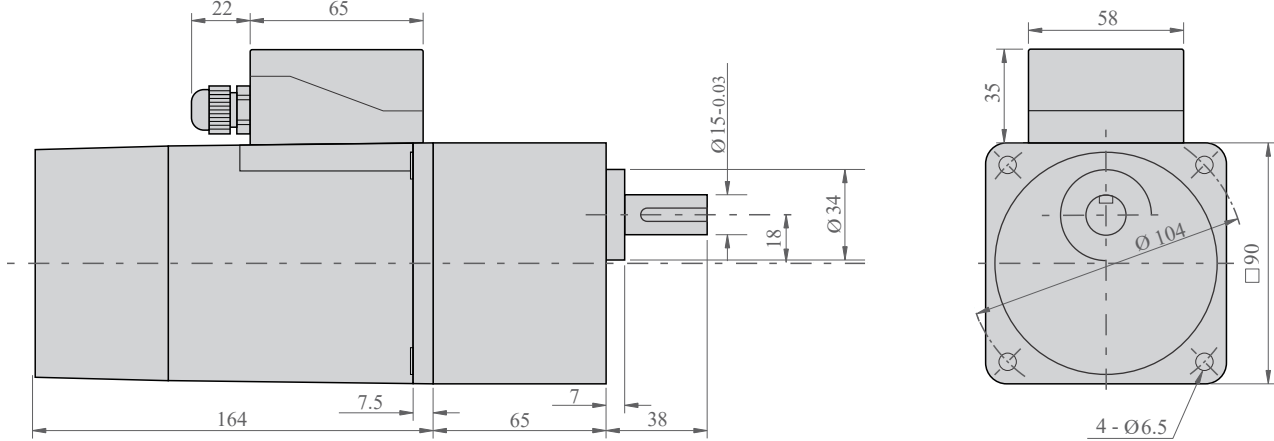
50Hz Unit : Nm

RPM	480	400	288	240	192	160	115	96	80	57	48	40	29	24	19	16	14	12	9.6	8
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	0.72	0.87	1.2	1.4	1.8	2.2	2.7	3.2	3.9	4.9	5.8	7.0	8.8	10.6	13.3	15.9	17.7	20.0	20.0	20.0

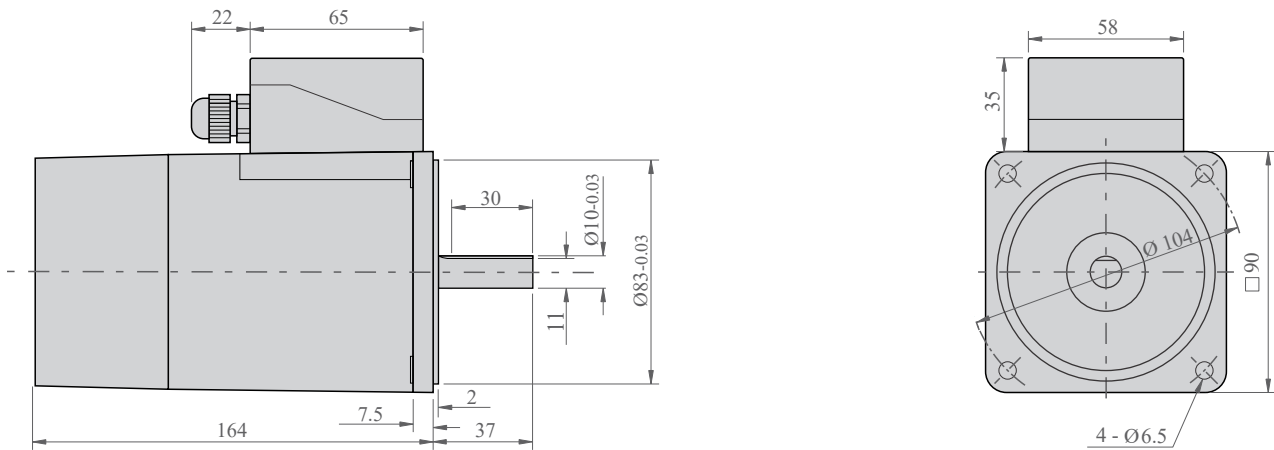
The Gear boxes are sold separately.  
A coloured background indicates gear shaft rotation in same direction as motor shaft.  
A white background indicates gear shaft rotation in opposite direction to the motor shaft.  
The speed of geared motor is calculated by dividing motor's no load speed by the gear 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:

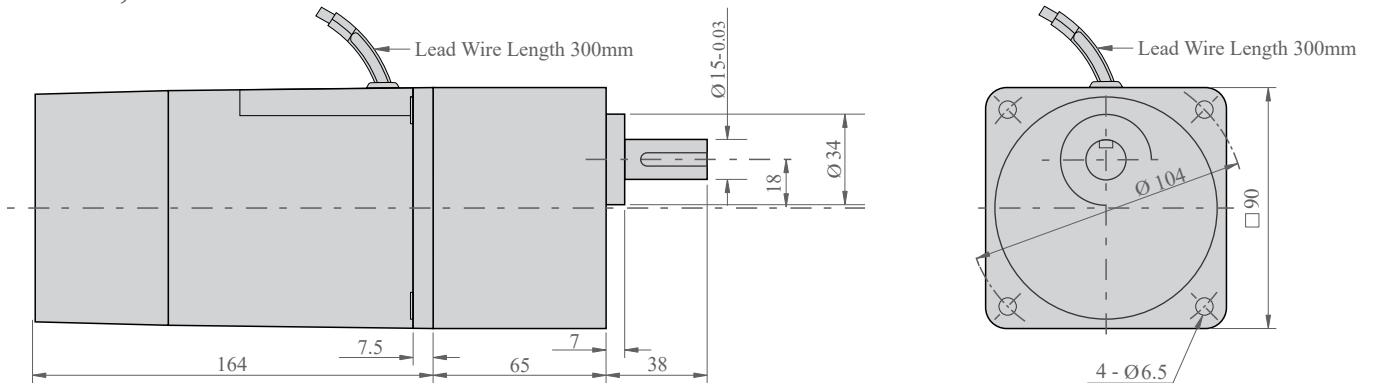
### Motor, Gearbox with Terminal Box



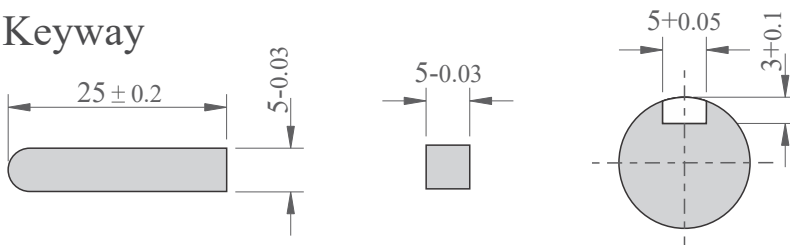
### Motor Round Shaft with Terminal Box



### Motor, Gearbox with Lead Wires



### Key & Keyway

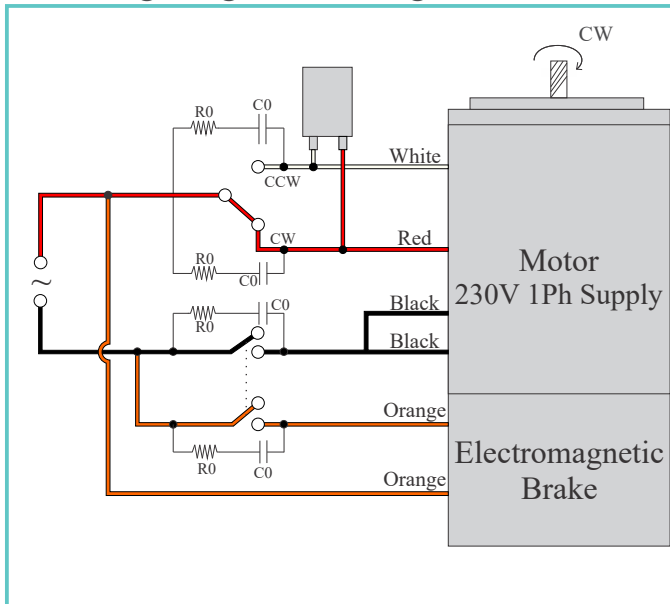


Max. Weight:  
 Motor - 3.3 kg  
 Gear Box - 1.7 kg

# Electromagnetic Brake Motor

## Wiring Diagrams:

### Wiring Diagram for Single Phase Motor



Supply power to motor & brake simultaneously.

When power is supplied to Electromagnetic Brake (Orange Wires) it is released & motor is enabled for rotation.

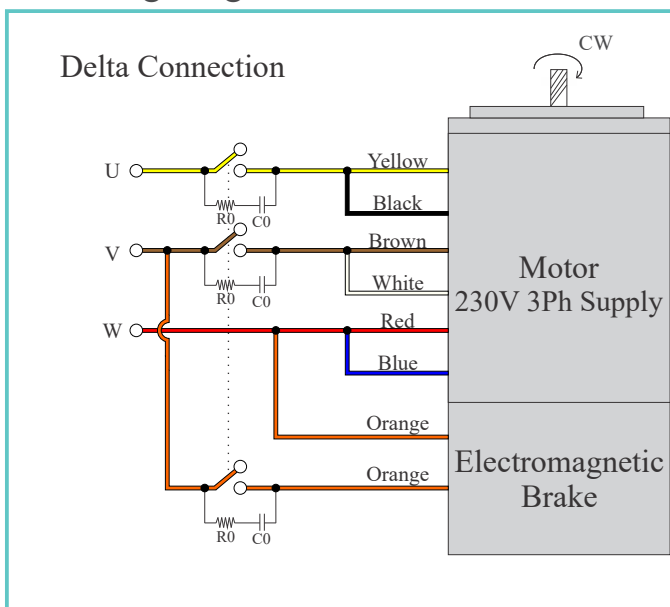
When power is switched OFF then Electromagnetic Brake is applied, stopping the motor immediately & holding the load.

Apply voltage on the orange brake lead wires only, to release the Electromagnetic Brake.

To change the direction, flip CW to CCW.

Figure is shown for 230VAC 1Ph rated Electromagnetic Brake.

### Wiring Diagram for Three Phase Motor



Supply power to motor & brake simultaneously.

When power is supplied to Electromagnetic Brake (Orange Wires) it is released & motor is enabled for rotation.

When power is switched OFF then Electromagnetic Brake is applied, stopping the motor immediately & holding the load.

Apply voltage on the orange brake lead wires only, to release the Electromagnetic Brake.

To change the direction of rotation, interchange any two wires between U, V & W.

Figure is shown for 230VAC 1Ph rated Electromagnetic Brake.

## Wiring Diagram for Three Phase Motor

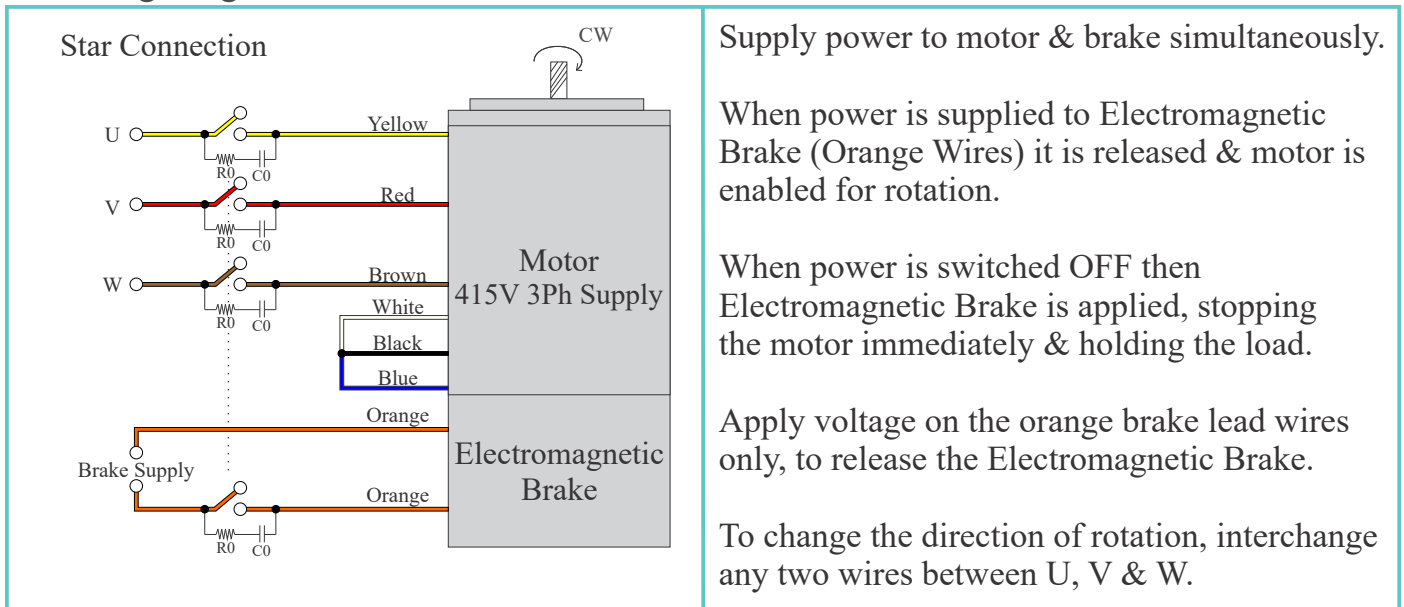


Figure is shown for 230VAC 1Ph rated Electromagnetic Brake.

Brake is rated for 230VAC 1Ph or 24VDC.

For brake rated 230VAC 1Ph, supply is to be connected to the rectifier supplied with the motor.

For brake rated 24VDC, supply is to be connected directly to the orange wires of the brake.

**Make sure that power is supplied to the motor part and brake simultaneously.**

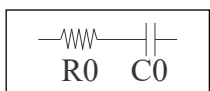
Brake will be released only after supply is given to brake part, enabling motor to rotate.

The motor will not rotate and instead heat up causing it to burn if power supply is given only to the motor part and not to the brake part.

Change the direction of motor only after it stops rotating. If the attempt is made during rotation, motor may not change the direction or change the direction after some time.

### Protection of contact (switch)

If the switch is used for starting/stopping the motor or switching the rotation direction, connect the CR circuit (commonly known as Snubber Circuit) for surge suppression in order to protect the contacts.



R0 = 5 to 200Ω  
 C0 = 0.1 to 0.2 μF 1KV