

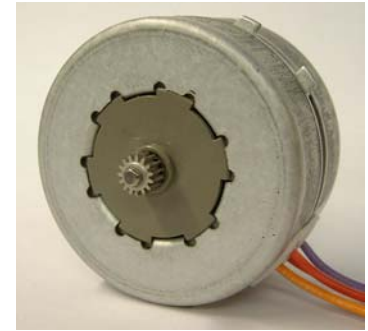
FIBER reversible ac synchronous motor

M50 Series

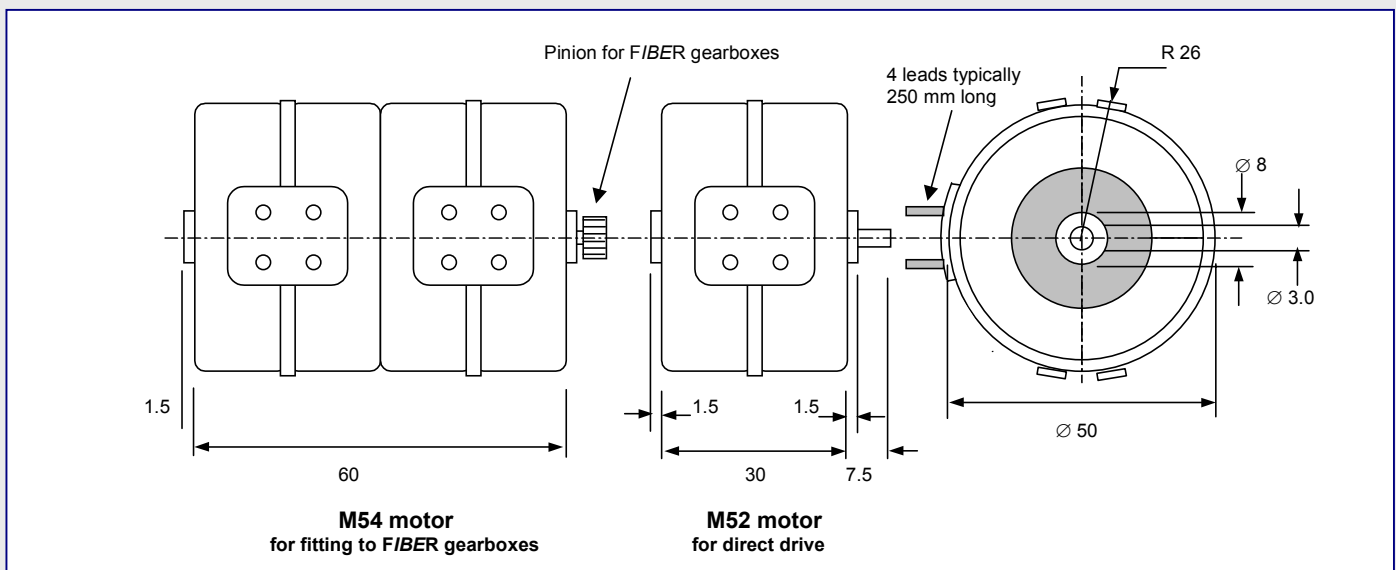
The M50 series reversible ac synchronous motor provides a low cost solution for a wide range of instrumentation drives

Features

- Fixed 500 rpm output speed
- Compact dimensions
- Electrically reversible using capacitor
- Low cost
- 3 years continuous operating life
- Optional low cost gearboxes for increased torque at reduced operating speed
- Suitable applications include:
- Medical and scientific instrumentation
- Timers
- Food processing control



Dimensions mm:



Specification

Supply Voltage:
Power consumption
Output Torque
Mass
Insulation voltage:
Protection:
Operating Speed:
Duty Cycle:
Operating Temperature range
Storage Temperature range
Direction of rotation:

M52 motor

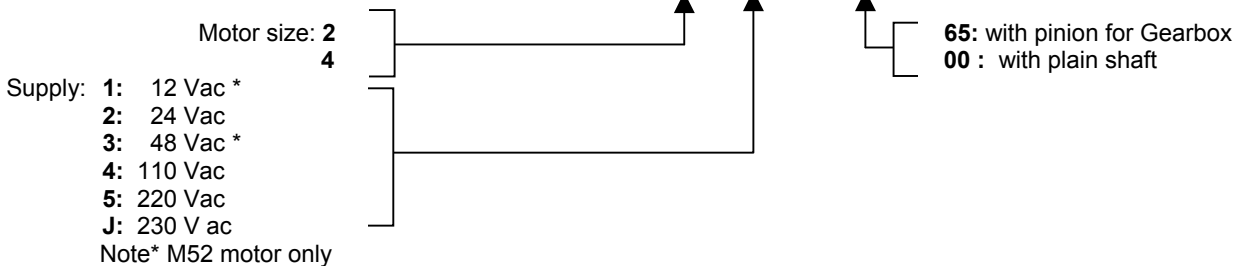
12 – 230 Vac \pm 10% 50Hz
4 VA
1.6 Ncm
180 g
2.5KV @ 50 Hz between coil and stator
IP 50
500 rpm @ 50 Hz
100%
-10° C to +55° C
-30° C to +80° C
electrically reversible

M54 Motor

24 – 230 Vac \pm 10% 50 Hz
6.1 VA
3.2 Ncm
390 g

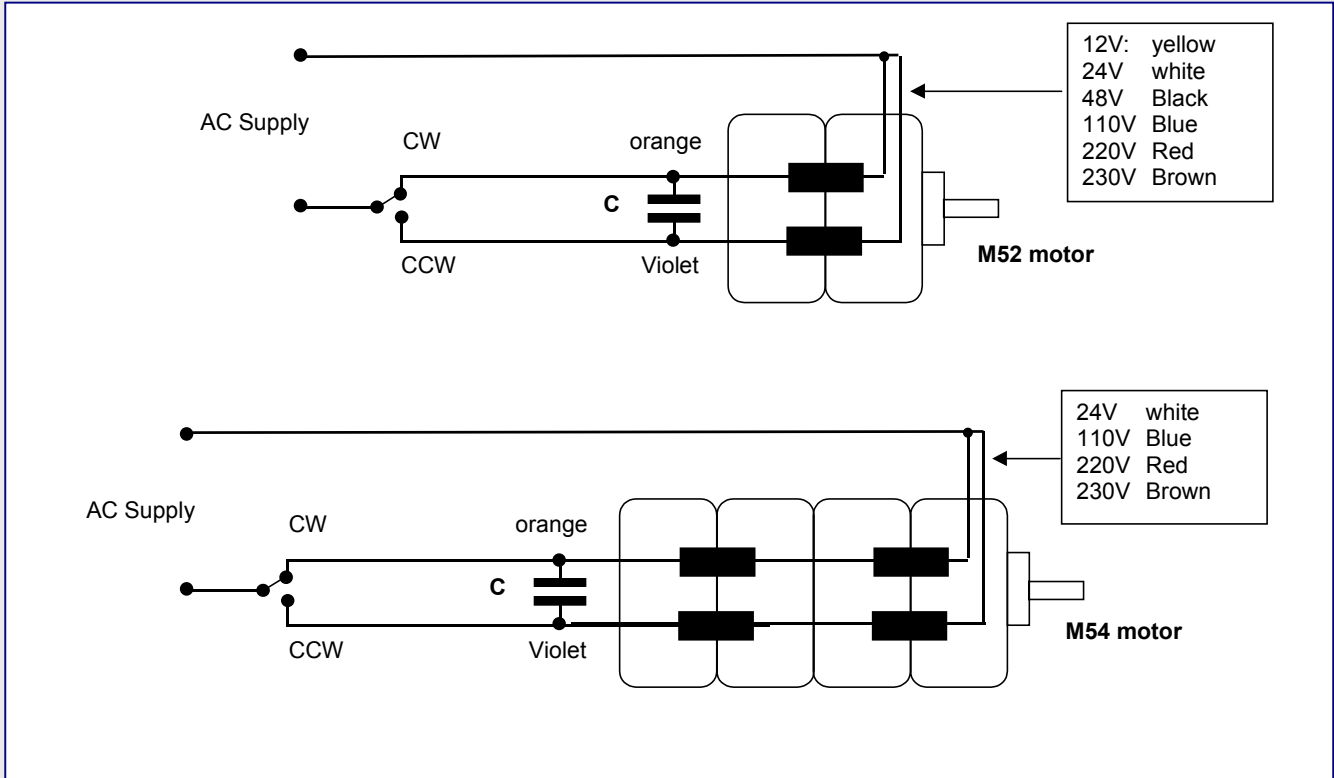
How to Order

typical part number: M 5 2 5 J 0 B 65



Connections:

The M50 series reversible ac motors are provided with 4 leads that are connected to the ac supply using a phasing capacitor that electronically determines the direction of rotation. The direction of rotation may be reversed by means of a switch as shown below:



Typical minimum pause time for reversal using capacitor: 0.1 seconds

Fixed speed operation:

The M50 series reversible motors operate at a fixed speed for loads up to the maximum rated torque value. The speed is determined by the number of poles in the motor (6 pairs) and the ac supply frequency.

For 50Hz operation the motor speed will be 500 rpm while 60Hz operation gives 600 rpm operating speed. A phasing capacitor is used to generate a phase shift between the primary coil (that to which the ac supply is directly fed) and the secondary coil that is supplied via the capacitor. The capacitor value is therefore important to tune the motor circuit to provide optimum torque, smooth starting and running. .

Capacitor values for 50Hz operation:

The appropriate non-electrolytic phasing capacitor may either be ordered with the motor or purchased separately. The table below shows the correct phasing capacitor value for each motor and operating condition:

AC Supply Voltage	M52 Series		M54 Series	
	Motor type	Capacitor type	Motor type	Capacitor type
12 Vac-50Hz	M52.5.1--	44 μF – 40 Vac		
24 Vac-50Hz	M52.5.2--	10 μF – 63 Vac	M54.5.2--	18 μF – 63 Vac
48 Vac-50Hz	M52.5.3--	2.7 μF – 100 Vac		
110 Vac-50Hz	M52.5.4--	0.47 μF – 200 Vac	M54.5.4--	0.82 μF – 200 Vac
220 Vac-50Hz	M52.5.5--	0.12 μF – 400 Vac	M52.5.5--	0.22 μF – 400 Vac
230 Vac-50Hz	M52.5.J--	0.12 μF – 400 Vac	M52.5.J--	0.22 μF – 400 Vac