

# 250 rpm synchronous motor

## 31813

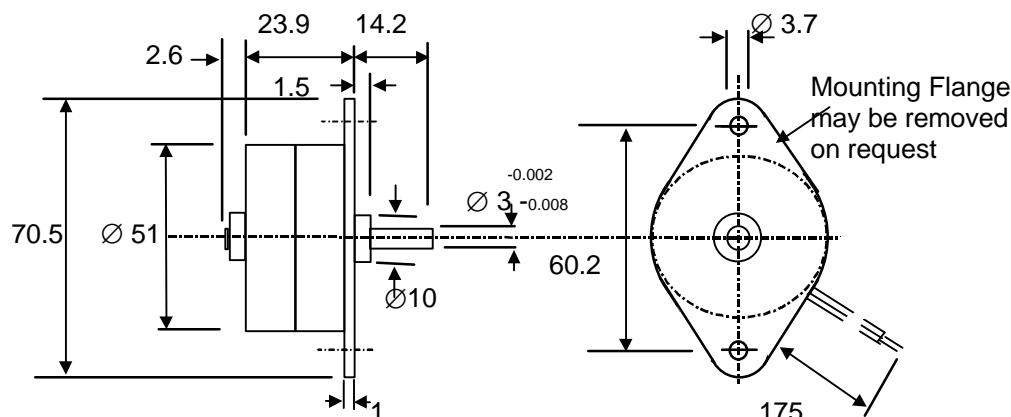
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The 31813 series low speed synchronous motor is a development of the standard industrial series specifically designed for use in high quality record decks which utilise the belt drive principle.

Particular attention has been given to the magnetisation of the 24 pole rotor to optimise smooth running. This, together with the high accuracy of stator pole placement minimises torque ripple and provides low audible noise. The motor which is designed for mounting horizontally with output shaft vertically up is provided with an increased shaft length and a 3 mm diameter to aid the fitment of the drive pulley. When fitting the drive pulley the shaft rear end should be supported to ensure that the axial load limitation is not exceeded.

The windings have been specifically designed to facilitate dual voltage operation, a 6.8K Ohm resistor being used in series when operation from a 220 Vac supply is required.

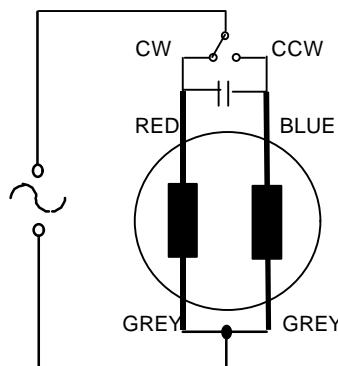
### Dimensions mm.



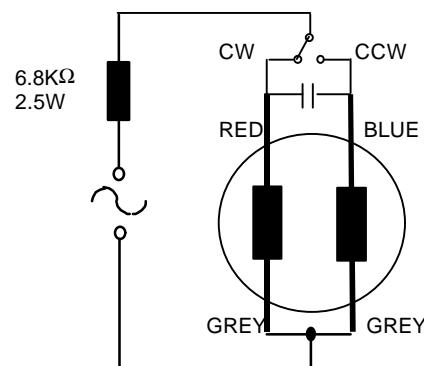
### Specification

Nominal Voltage	Vac	110	Max Working temperature	deg. C	105
Permissible voltage fluctuation	%	-15 / +10	Ambient temperature range	deg. C	-5 to +70
Supply Frequency	Hz	50	Torque derating	%/°C	0.25
Speed @ 50 Hz	rpm	250	Insulation according to CEE10		Class 2
Direction of rotation		reversible	Insulation test voltage	V	2500
Direction control capacitor	μ F	0.22 ( 250 Vac )	Maximum radial force	N	5
Input Power	W	1.8	Maximum axial force	N	1.5
Input current	mA	18	Mass	g	16
Housing		zinc plated	Bearings		slide

### Connections



110 V ac-50Hz : C=0.22μF :speed = 250 rpm  
117 V ac-60Hz: C= 0.18μF :speed = 300 rpm



220 Vac 50 Hz: C= 0.22μF speed = 250 rpm