

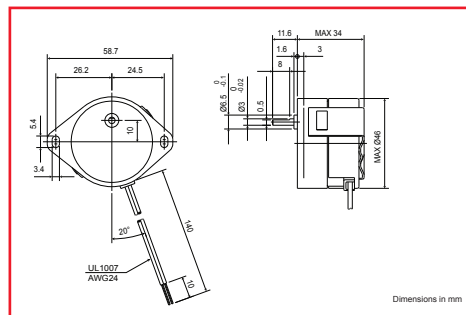
**Specifications**

Specifications	Units	PTM-12K			
Rated Voltage	V	12	24	100	200
Frequency	Hz	50/60			
Rated Current	mA	160/150	110/100	17/16	7.5/7
Revolutions	rpm	500/600			
Rotating Direction		Single Direction (CC/CCW)			
Torque @ 60Hz	mN-m	1.0/0.9			
Temperature Rise	K	35			
Operating Temp. Range	°C	-10 to +50			
Dielectric Strength	V	500Vac for 1 min.		1000Vac for 1 min.	1500Vac for 1 min.
Weight	g	90			

Magnet type: Anisotropic

**Geared Models**

**PTM-12KG**



**Geared Motor Torque Characteristics**

Model	PTM-12KG			
	Speed	Torque	Gear Ratio	
			50Hz	60Hz
rpm	mN-m			
10	50	1/50	1/60	
2	150	1/250	1/300	
1	200	1/500	1/600	

## Single Direction Synchronous Motors

**PTM - 24 B (GII) 100 - 50/60 - 2/2.4 CW**  
 1 2 3 4 5 6 7 8 9

### 1 - Series Designation

PTM: Flying lead joint

### 2 - Number of Poles

12: Speed is 500rpm w/50Hz

Speed is 600rpm w/60Hz

24: Speed is 250rpm w/50Hz

Speed is 300rpm w/60Hz

### 3 - Outer Diameter

B: 35mm

K: 42mm

E: 42mm (high output torque)

### 4 - Gear Head

Blank: No gear head

G: Gear head intergrated

### 5 - PTM-24BGII only

Denotes BG gear type II

### 6 - Supply Voltage

24, 100, 200 Vac  
 voltage depends on model

### 7 - Power Frequency

50, 60, or 50/60Hz

### 8 - Rotating Speed

Line frequency of 60Hz  
 makes the motor speed  
 1.2 times higher than  
 50Hz

### 9 - Direction

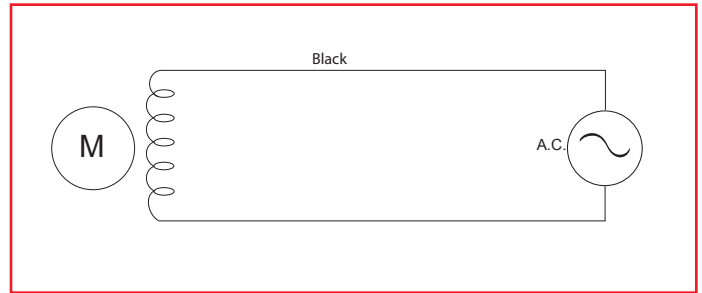
CW - Clockwise

CCW - Counterclockwise

Gear Ratio	rpm w/12 poles		rpm w/24 poles	
	50Hz	60Hz	50Hz	60 Hz
Motor only	500	600	250	300
1/10	50	60	25	30
1/50	10	12	5	6
1/100	5	6	2.5	3

## Single Direction Synchronous Motor

Motors that are driven in just one direction, whether clockwise or counterclockwise, do not require any specific wiring to the AC power supply. A wiring diagram is below. The leadwires have no polarity.



## About Nippon Pulse Synchronous Motors

### No Power or Load Fluctuation Effect

Synchronous motors rotate in synch with supplied power frequency. If power frequency is constant, the motor will rotate at a constant speed (synchronized speed).

### Impedance Protected

Unless otherwise stated, these motors provide high electrical resistance, which prevents overcurrent from flowing to the motor, which would in turn burn the coils.

### No Control Circuit Required

Because these motors are AC motors, they start rotating when a power connection is made.

### Excellent Response

The type of magnet used in these motors ensures excellent response and also ensures the motor will start and stop immediately when power is supplied or removed.