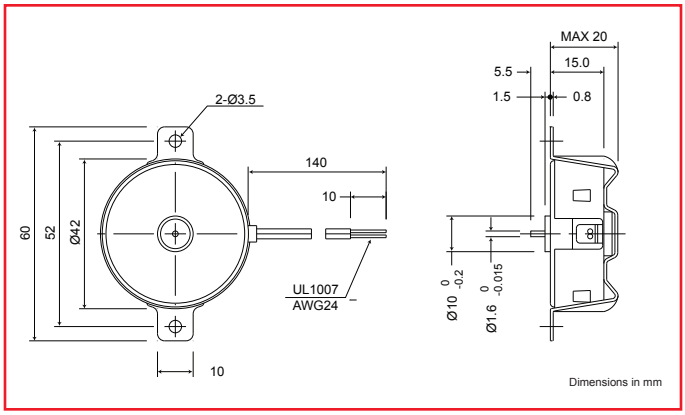
NPM Nippon Pulse
Your Partner in Motion Control

Synchronous Motors
PTM-12E



Specifications

Specifications	Units	PTM-12E	PTM-12EGH (gearhead)							
Rated Voltage	V	12/24/100/117/220/240 ±10%								
Frequency	Hz	50/60								
Rated Current	mA	20/19								
Revolutions @ 50Hz	rpm	500/600	1	2	4	5	6	10	15	20
Rotating Direction		Single Direction (CC/CCW)								
Torque @ 60 Hz	mN·m	1.7	200	200	160	120	100	60	40	30
Temperature Rise	˚K	45								
Operating Temp. Range	˚C	-10 to +50								
Dielectric Strength	V	1500Vac for 10 seconds	1500Vac for 10 seconds							
Weight	g	90	130							
Capacitor	µF	--								

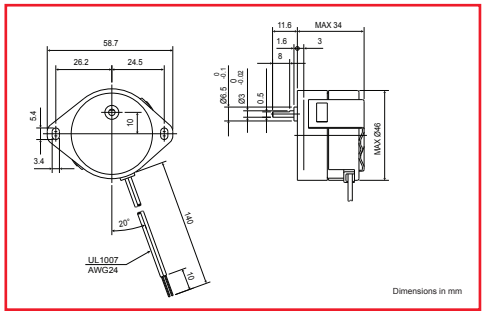
Magnet type: Anisotropic

Torque Characteristics

Model	PTM-12EG		
Speed	Torque	Gear Ratio	
rpm	mN·m	50Hz	60Hz
20	30	1/25	1/30
10	60	1/50	1/60
6	100	3/250	1/100
5	120	1/100	1/120
4	160	1/125	1/150
2	200	1/250	1/300
1	200	1/500	1/600

Geared Models

PTM-12EG



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

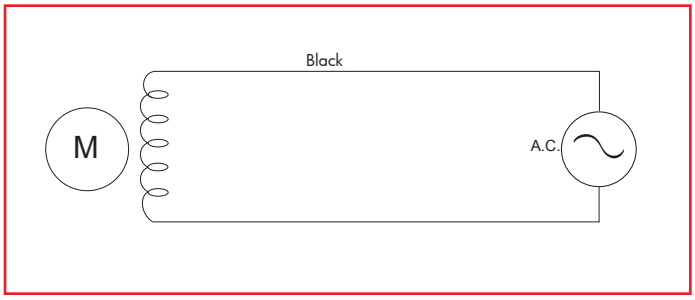
7 - Power Frequency
50, 60, or 50/60Hz

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.