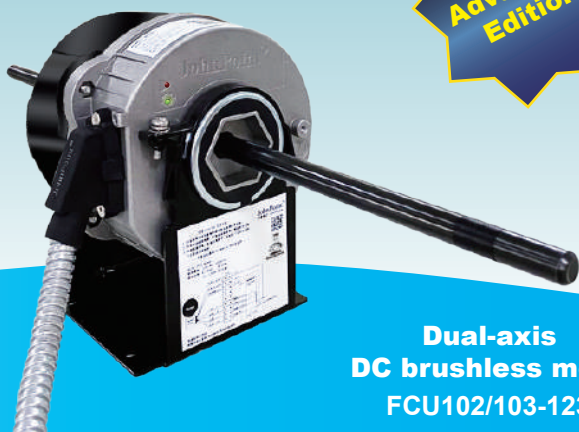


**Advanced
Edition**



**Dual-axis
DC brushless motor
FCU102/103-12311**

Protect the Earth, advocate the use of renewable energy

Dedicated for Fan Coil Unit (FCU) in chilled water systems

EC Brushless Motor

Energy-saving and carbon reduction

Green energy :

Open-source & Efficiency

"ESG commitment drives corporate sustainability."

- ◆ Tri-speed input signal with visible LED indicator
- ◆ 3 voltage inputs (110V/220V/277V AC) - one unit fits all
- ◆ Stepless static pressure adjustment (high/low)
- ◆ Vibration-proof & IP55 splash-proof - safe for fan cleaning

Can be integrated with our IQ-500 series products for DDC digital network control (Direct Digital Control).

FCU fan upgraded
to DC EC motor
**Saves 40+% Energy
(80+% at low Speed)!**



Scan this QR-Code
for the manual.

EC (Electronically Commutated)
- the most efficient motor technology,
also called BLDC motor.

6 Powerful Advantages

Features

1

Easiest retrofit solution

Compatible with AC motors for direct replacement—ideal for repairs and replacements.

Features

2

Keeps old thermostat

The original AC thermostat can be retained, and the original control system remains unchanged.

Features

3

3-speed for all pressures

Three-stage fan speed (adjustable rotation speed to meet high and low static pressure demands).

Features

4

Proudly made in Taiwan !

EC Motor : 40-80% energy savings (low temp/speed).

Features

5

Metal protective conduit

Power cord with metal protective conduit, compliant with building regulations.

Features

6

Ultra-quiet motor

Resin-sealed motor body with high-efficiency drive design, ensuring quieter and low-noise operation indoors.

**Single-axis
DC brushless motor
FCU102/103-60311**



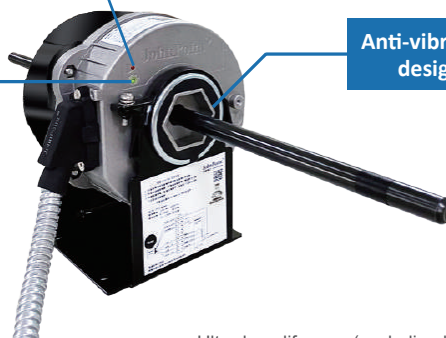
- Operating Temperature : -20°C to 60°C
- Storage Temperature : -25°C to 80°C

LED

Stepless static
pressure adjustment



Static Pressure Control
(FCU103 without)



Anti-vibration
design

Ultra-long lifespan (excluding bearing life)
with enhanced energy efficiency.

Control methods ▶▶

- Speed switching : three speed levels for control.
- Signal input pin positions :
 - (1) H_SPEED to COM
 - (2) M_SPEED to COM
 - (3) L_SPEED to COM
- Input signal format : AC90~264V
- Input signal frequency range : 50~63Hz

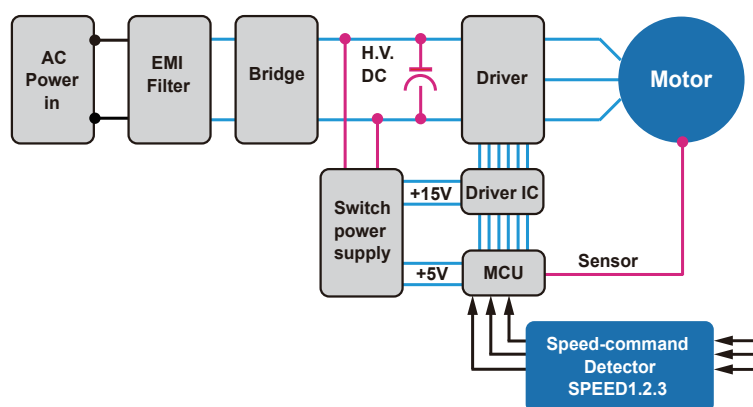
Three-speed RPM gauge			
Speed selection Static pressure mode	H	M	L
RPM	1050 (800~1150)	800 (600~950)	420 (300~700)
Airflow variation		30% - 115%	

Product specifications ▶▶

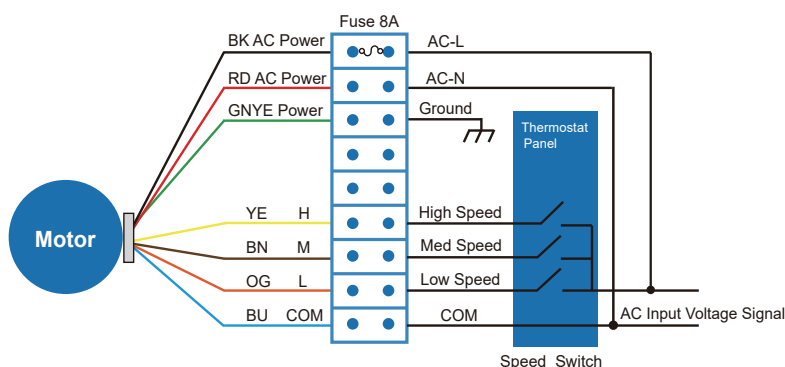
- Input characteristics :
 - (1) Dual-axis - BAA02043 :
120W / 110V 、220V 、277V
 - (2) Single-axis - BAA02045 :
60W / 110V 、220V 、277V
- Motor shaft height : 105mm±2
- The motor is sensorless and has overcurrent protection; it has a Class B insulation rating.
- The motor drive technology uses sinusoidal wave control, with a drive frequency of 20kHz.
- Applicable range : This product includes a driver and a DC brushless motor, suitable for DC motor applications.

Item	Minimum	Nominal	Maximum	Unit
Input voltage	110	220	277	VAC
Enter frequency	50~63			Hz
Input current	Dual-axis<2 Single-axis<1			A
Input power	Dual-axis<160 Single-axis<90			w
Scope of treaty	350~1050			r.p.m
Operating temperature	-20~50			°C
Dielectric strength	DC500V/100MΩ↑			MΩ

System architecture diagram ▶▶



Product wiring diagram ▶▶



- The (H) height of the FCU fan impeller diameter corresponding to the motor shaft :
 Impeller Ø160mm = H105mm (Common in Taiwan)
 Impeller Ø150mm = H100mm
 Impeller Ø140mm = H95mm
 Impeller Ø130mm = H90mm



Remarks

- FCU102 :
Field-adjustable VR for stepless static pressure/speed control.
- FCU103 :
Pre-configured at factory : CT (torque mode) or CS (constant speed mode), rotation direction, and optimized for +/- pressure environments.
Power options : 1/7, 1/4, 1/3 HP (Contact support for details).