

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

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. "

1. Tri-speed input signal with visible LED indicator
2. 3 voltage inputs (110V/220V/277V AC) - one unit fits all
3. Stepless static pressure adjustment (high/low)
4. 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.

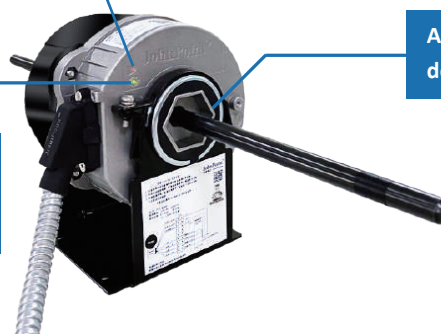
Single-axis DC brushless motor FCU102-60311

- Operating environment temperature : -20~60°C
- Storage environment temperature : -25~80°C

**Stepless static
pressure adjustment**

LED

**Anti-vibration
design**



Extremely long lifespan (excluding bearing life) with even higher energy-saving 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

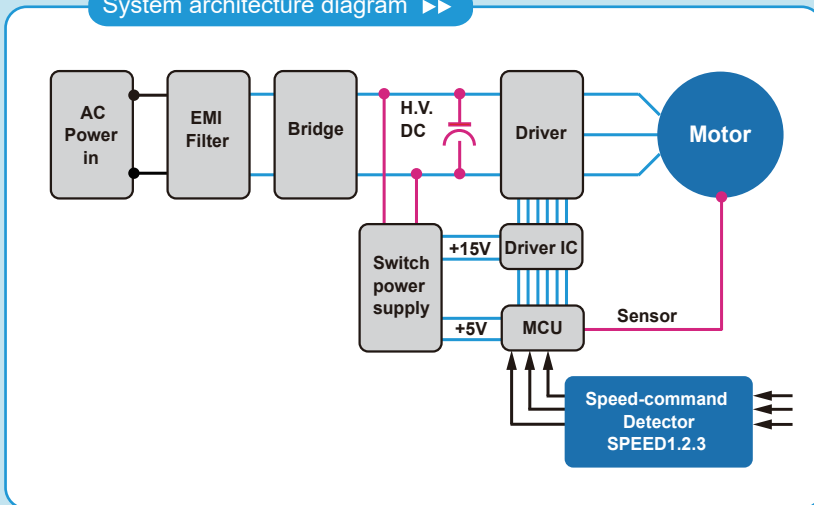
Three-speed RPM gauge			
Speed selection Static pressure mode	H	M	L
RPM	1050 (800~1150)	800 (600~950)	420 (300~700)
Airflow variation		30% - 115%	

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 ▶▶



- 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

Product wiring diagram ▶▶

