



AFB0412VHA-A Delta

Brand: Delta

SKU: AFB0412VHA-A

Category: DC Axial Fans

URL: <https://www.fansco.com/item/afb0412vha-a-delta/>

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Product Description

AFB0412VHA-A Delta 40x40x10mm Ball 12VDC 9.25CFM(0.262m³/min)
0.242inchH₂O(6.16mmH₂O) 35.5dB(A) 0.72W 8000RPM 2wireleads fan

The AFB0412VHA-A is a compact DC brushless axial flow fan manufactured by Delta Electronics, designed for efficient cooling in small-scale applications. Operating at a rated voltage of 12VDC (with a wide operation range of 7.0–13.8VDC), it draws a nominal input current of 0.06A (max. 0.12A), resulting in a low power consumption of 0.72W (max. 1.44W). The fan features a high-speed design with a rated speed of 8000 RPM, delivering a maximum air flow of 0.262 m³/min (9.254 CFM) at zero static pressure and a maximum air pressure of 6.160 mmH₂O (0.242 inchH₂O) at zero airflow, making it suitable for low-pressure cooling tasks. Acoustic noise is controlled to an average of 35.5 dB-A (max. 40.0 dB-A), measured 1 meter from the intake in an anechoic chamber under free-air conditions.

Constructed with a UL94V-0 fire-retardant plastic frame and impeller, the fan measures 40x40x10mm and weighs just 14 grams, ensuring lightweight and durable operation. It utilizes a double ball bearing system, providing a long operational life of 70,000 hours under continuous use at 40°C with 15–65% relative humidity. The fan supports a wide environmental range, operating reliably between -10°C and +70°C and storing safely from -40°C to +75°C, with humidity tolerance of 5–90% (operating) and 5–95% (storage).

Safety and protection features include locked rotor protection, which prevents fire risks by withstanding 96 hours of locked rotor conditions at rated voltage, and polarity protection to tolerate reverse connection of power leads. Electrical safety is ensured through an insulation strength of 10 MΩ minimum at 500 VDC and dielectric strength of 5 mA maximum at 500 VAC for one minute between the frame and positive terminal. The fan is RoHS compliant, free of ozone-depleting substances like PBBs and CFCs, and meets UL Class A insulation standards.

Ideal for compact electronic devices, the fan's clockwise rotation and simple wiring (red for positive, black for negative, UL1007-F AWG#28 leads) facilitate easy integration. However, proper polarity connection is critical to avoid damage, and handling precautions are advised to prevent impeller or lead wire damage. With robust reliability tested through thermal cycling, humidity exposure, vibration, and shock resistance, this fan balances performance, durability, and energy efficiency for applications requiring quiet, reliable cooling in constrained spaces.

Technical Specifications

Attribute	Value
Part Number	AFB0412VHA-A
Manufacturer	Delta Electronics
Noise Level	35.5 dB(A)
Material Blade	Plastic
Material Frame	Plastic
Operating Voltage	7 ~ 13.8 VDC
Current Rating	0.03 A
Category	Axial
Weight	0.031 lb (14.06 g)
Bearing Type	Ball Bearing
Voltage Rating	12 VDC
Air Flow	9.25 CFM
Static Pressure	0.242 inchH2O (6.16 mmH2O)
Power Rating	0.72 W
Fan Type	DC
Fan Speed	8000 RPM
Termination	2 wire leads
Dimensions	40x40x10 mm
Air Flow (m3)	0.262 m3/min
Series	AFB
Features	Locked Rotor Protection
Operating Temperature	14 ~ 158°F (-10 ~ 70°C)
Approval Agency	CE, CSA, UL, VDE
Lifetime @ Temp	70000 Hrs @ 40°C





