

4020VA-12N-BT-Y1 NMB 12VDC 40x40x20mm 3-Wire Axial Fan Datasheet



Brand: NMB

SKU: 997835731874

Category: Axial & Centrifugal Fans

Price: \$12.99

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Product Description

The NMB 4020VA-12N-BT-Y1 is a precision-engineered DC axial fan designed for high-reliability industrial thermal management. Utilizing NMB's advanced dual ball bearing architecture, this unit ensures minimal friction and extended operational lifespan under continuous load. The aerodynamic impeller design optimizes airflow while maintaining a low noise profile, effectively reducing thermal impedance in compact enclosures. Constructed with a robust Polybutylene Terephthalate (PBT) frame for structural rigidity, the 4020VA-12N-BT-Y1 integrates a specialized motor drive system that delivers consistent torque and speed stability. This component is specifically calibrated for demanding environments requiring efficient heat dissipation and long-term durability, making it an ideal solution for critical electronic cooling applications.

Model Number: 4020VA-12N-BT-Y1

Brand: NMB (MinebeaMitsumi)

Product Type: DC Axial Fan

Rated Voltage: 12VDC

Voltage Range: 6.0 - 13.8 VDC

Rated Current: 0.14 A

Power Input: 1.68 W

Rated Speed: 8500 RPM

Bearing Type: Dual Ball Bearing

Max. Air Flow: 9.2 CFM (15.6 m³/h / 0.26 m³/min)
Max. Static Pressure: 6.8 mmH₂O (66.7 Pa / 0.27 inH₂O)
Dimensions: 40 x 40 x 20 mm
Weight: 30 g
Life Expectancy: 60,000 Hours at 40°C
Noise Level: 34.0 dB(A)
Speed Control: Tachometer Output (3-Wire)
Housing Material: PBT (UL94V-0)
Impeller Material: PBT (UL94V-0)
Termination: 3-Wire Lead (Red +, Black -, Yellow Signal)
Operating Temperature: -10°C to +70°C
Storage Temperature: -40°C to +70°C
Mounting Orientation: Any
Ingress Protection: IP40
Insulation Resistance: 10M Ohm Min. at 500VDC
Dielectric Strength: 700VAC for 1 Second

This cooling solution is widely utilized in precision industrial automation systems, specifically serving as a critical replacement component for Fanuc equipment and other CNC machinery. The 4020VA-12N-BT-Y1 excels in maintaining optimal operating temperatures within servo drive controllers, power supply units, and compact server racks where space is limited but airflow cannot be compromised. Engineers frequently deploy the 4020VA-12N-BT-Y1 in telecommunications hardware and medical instrumentation, relying on its consistent performance to prevent thermal throttling and ensure system integrity during continuous operation cycles.

Supplemental Images

