

F310R Nidec Copal 5V 30x30x10mm 3010 DC Axial Fan

SKU: F310R

Price: \$16.99

Categories: Fans

Tags: Nidec

Product Link:

<https://www.electspares.com/product/f310r-nidec-copal-5v-30x30x10mm-3010-dc-axial-fan/>

Product Description

The Nidec Copal F310R is a high-performance 05 V ultra-miniature axial fan with dimensions of 30 x 30 x 10 mm, purpose-built to deliver elite-level thermal cooling in high-resistance airflow paths. This unit features a heavy-duty brushless DC motor capable of sustaining a 0.35 W power input to drive its specialized 5-blade impeller at a consistent 6000 RPM. Engineered specifically for air displacement in micro-enclosures, it utilizes a 10 mm slim-profile housing to provide effective heat dissipation for high-density mobile electronics. The mechanical design relies on a precision-shielded sleeve bearing system and a fiberglass-reinforced PBT housing to ensure 30,000 hours of continuous operation at a 25 °C ambient temperature. Featuring a robust 3-wire electrical interface with a dedicated Tachometer (FG) output for real-time speed monitoring, this fan is a critical component for compact medical sensors, micro-projectors, and handheld diagnostic equipment where space-saving design and precise system feedback are mandatory.

F310R Fan Parameters

Manufacturer: Nidec Copal Electronics

Model Number: F310R

Series: F Series

Industry Size Code: 3010

Type: DC Axial Fan

Bearing Type: Sleeve Bearing

Nominal Voltage: 05 VDC

Voltage Range: 4.5 - 5.5 VDC

Starting Voltage: 3.5 VDC

Dimensions: 30 x 30 x 10 mm

Weight: 8.5 g

[Electrical Data]

Input Power: 0.35 W

Nominal Current: 0.07 A

Max. Current: 0.11 A (Peak startup current)

Nominal Speed: 6000 RPM (Tolerance $\pm 15\%$)

Motor Design: Brushless DC Motor

Signal Output: FG (Frequency Generator/Tachometer)

Motor Protection: Polarity Protection, Impedance Protection

Insulation Class: Class E

Insulation Resistance: >10M ohm at 500 VDC

Dielectric Strength: 500 VAC for 1 minute

Termination: 3-Lead wires (AWG 28, Red/Black/White)

[Performance & Acoustics]

Max. Air Flow: 3.2 CFM (5.4 m³/h / 0.09 m³/min)

Max. Static Pressure: 2.55 mmH₂O (25.0 Pa / 0.10 inH₂O)

Sound Pressure Level: 21.0 dB(A) (Measured at 1 meter)

Number of Blades: 5

Direction of Rotation: Clockwise (viewed toward rotor)

Airflow Direction: Intake over struts

[Materials & Construction]

Frame Material: Plastic (PBT reinforced with 30% glass fiber, UL94V-0)

Impeller Material: Plastic (PBT reinforced with 15% glass fiber, UL94V-0)

Installation Position: Any

Degree of Protection: IP20

[Reliability & Safety Standards]

Min. Ambient Temperature: -10 °C

Max. Ambient Temperature: 60 °C

Storage Temperature: -20 °C - 70 °C

Life Expectancy (L10): 30,000 hours at 25 °C

Standard Compliance: RoHS compliant, EN 60950-1

Approval Agency: UL, CE, CSA

Application

The Nidec Copal F310R axial fan is used in handheld medical sensors, compact laser projectors, portable CO₂ monitors, VR headset internal ventilation, and micro-telecommunications hardware.

Product Images



Scan for product details:



