

R3G500-FA28-03 ebmpapst 400V 500mm EC Centrifugal Fan

SKU: R3G500-FA28-03

Price: \$1,299.43

Categories: Fans

Tags: ebmpapst

Product Link:

<https://www.elecspares.com/product/r3g500-fa28-03-ebmpapst-400v-500mm-e-c-centrifugal-fan/>

Product Description

The ebmpapst R3G500-FA28-03 is a high-performance 400 V RadiCal EC centrifugal fan with an impeller size of 500 mm, purpose-built to deliver elite-level thermal cooling in high-resistance airflow paths. This unit features a heavy-duty M3G150-FF brushless EC motor capable of sustaining a massive 2850 W power input to drive its specialized 6-blade PP plastic impeller at a consistent 1900 RPM. Engineered specifically for high-efficiency air displacement in centralized ventilation systems, it achieves a static efficiency of 71.1% while maintaining optimized acoustics for large-scale climate control. The mechanical design relies on a precision-shielded dual ball bearing system and a die-cast aluminum electronics housing to ensure continuous operation in demanding environments. Featuring a sophisticated electronics interface supporting MODBUS-RTU, an integrated PI controller, and configurable I/O, this fan is a critical component for large AHUs, data center cooling, and industrial ventilation where maximum energy efficiency and precise air density are mandatory.

R3G500-FA28-03 Fan Parameters

Manufacturer: ebmpapst

Model Number: R3G500-FA28-03

Motor Model: M3G150-FF

Series: RadiCal

Impeller Size: 500 mm

Type: EC Centrifugal Fan (Backward-curved)

Bearing Type: Ball Bearing

Nominal Voltage: 400 VAC (3-phase)

Voltage Range: 380 - 480 VAC

Frequency: 50 / 60 Hz

Weight: 21.5 kg

[Electrical Data]

Input Power: 2850 W (2.85 kW)

Nominal Current: 4.4 A

Nominal Speed: 1900 RPM

Motor Design: EC Motor (Electronically Commutated)

Control Input: 0-10 VDC / PWM / MODBUS-RTU (RS-485)

Logic Voltage Output: 3.3 - 24 VDC (Pmax = 800 mW)

Motor Protection: Thermal Overload, Locked-Rotor, Phase Failure Detection, Soft Start

Insulation Class: Class F

Moisture Protection: H1

Termination: Terminal Box

[Performance & Acoustics]

Max. Air Flow: 6512.6 CFM (11065.0 m³/h / 184.42 m³/min)

Max. Static Pressure: 101.97 mmH₂O (1000.0 Pa / 4.01 inH₂O)

Sound Power Level: 81.0 dB(A)

Number of Blades: 6

Direction of Rotation: Clockwise (viewed toward rotor)

Airflow Direction: Radial

Overall Efficiency (η_{es}): 71.1%

Efficiency Grade: N76.8

[Materials & Construction]

Impeller Material: PP Plastic

Rotor Surface: Painted black

Electronics Housing: Die-cast aluminum

Installation Position: Shaft horizontal or rotor on bottom (Rotor on top on request)

Condensation Drainage: Rotor side holes

Degree of Protection: IP55

[Reliability & Safety Standards]

Min. Ambient Temperature: -40 °C

Max. Ambient Temperature: 40 °C

Standard Compliance: EN 61800-5-1, CE

Approval Agency: UL 1004-7, CSA C22.2 No. 77, EAC

Application

The ebmpapst R3G500-FA28-03 centrifugal fan is used in large-scale air handling units, data center cooling systems, industrial cleanroom ventilation, commercial HVAC systems, and high-capacity heat exchangers.

Product Images







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