K3G450-PA31-03/F01 ebmpapst

Brand: ebmpapst

SKU: K3G450-PA31-03/F01

Category: EC Fans

URL: https://www.fansco.com/item/k3g450-pa31-03-f01-ebmpapst/

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Product Description

K3G450-PA31-03/F01 ebmpapst 450mm 2480RPM 400VAC 4500W 6.8A IP55 Ball 3 Wire Leads EC centrifugal module RadiPac fan.

The K3G450-PA31-03/F01 is an EC centrifugal module from ebm-papst, renowned for its high - performance and energy - efficient design. It features a backward - curved, single - intake structure with a support bracket, which is widely applicable in various ventilation and air - handling systems.

In terms of electrical specifications, it is equipped with the M3G150 - FF motor, operating on a three - phase power supply. The nominal voltage is 400 VAC, with a wide voltage range from 380 to 480 VAC, and it can work under frequencies of 50 Hz or 60 Hz. The rated speed reaches 2480 rpm, consuming 4500 W of power and drawing a current of 6.8 A. Notably, it has an excellent energy - saving performance. The actual overall efficiency ηes is 69.6%, well above the required 58.3% in 2015. Its efficiency grade N is 73.4%, higher than the 2015 requirement of 62%, and it also supports variable - speed drive, which allows for flexible adjustment according to different working conditions, further optimizing energy consumption.

Regarding physical properties, the module weighs 33.2 kg, and its size is 450 mm. The motor size is 150. The materials used in its components are carefully selected for durability and performance. For example, the electronics housing is made of die - cast aluminum, the impeller is of sheet aluminum, and the support plate and inlet nozzle are made of galvanized sheet steel, while the support bracket is steel painted black. The rotor surface is painted black as well. It has a high - level protection feature with an IP55 degree of protection and an "F" insulation class. The moisture (F)/Environmental (H) protection class is H1. The operating temperature range is from - 40°C to 40°C. Although occasional start - up between - 40°C and - 25°C is permitted, for continuous operation below - 25°C, a fan design with special low - temperature bearings is necessary. During transport and storage, the motor can withstand temperatures from - 40°C to + 80°C.

The module is rich in technical features. It has an operation and alarm display with LED lights, which can clearly show the working status of the device (green for normal operation, orange for warning, and red for failure). There is an external 15 - 50 VDC input for parameterization. It is also equipped with an alarm relay, an integrated PI controller, and configurable inputs/outputs (I/O). The MODBUS V6.0 communication protocol, combined with RS - 485 MODBUS - RTU, enables seamless digital communication and remote control. Other

features like motor current limitation, RFID (compatible with ISO 15693), soft start, and a voltage output of 3.3 - 24 VDC (Pmax = 800 mW) further enhance its functionality and adaptability in complex systems.

In terms of safety and compliance, it has multiple protection mechanisms. The control interface with SELV potential is safely disconnected from the mains. It has thermal overload protection for electronics and the motor, as well as line undervoltage/phase failure detection. The touch current, according to IEC 60990 (measuring circuit Fig. 4, TN system), is less than or equal to 3.5 mA. The electrical hookup is through a terminal box, and the motor has reverse polarity and locked - rotor protection. The protection class is I, but it requires the customer to connect the protective earth. It complies with numerous international standards such as EN 61800 - 5 - 1, CE, EAC, CSA C22.2 No. 77 + CAN/CSA - E60730 - 1, and UL 1004 - 7 + 60730 - 1, ensuring its quality and safety in different markets.

The air performance of the module is measured according to ISO 5801 installation category A. At its optimal efficiency level, the air flow qv is 8710 m^3/h, and the pressure increase pfs is 1212 Pa. The intake sound level is measured based on ISO 13347 (sound power level) or at a 1 - m distance from the fan axis (sound pressure level). However, it should be noted that the actual values may vary depending on the installation conditions.

In conclusion, the K3G450-PA31-03/F01 EC centrifugal module is a high - performance, reliable, and versatile product. Its excellent energy - saving performance, robust construction, advanced technical features, and compliance with international standards make it an ideal choice for a wide range of industrial and commercial ventilation applications, providing efficient and stable air - handling solutions.

Technical Specifications

Attribute	Value
Part Number	K3G450-PA31-03/F01
Manufacturer	ebm-papst
Voltage Rating	400 VAC
Frequency	50/60 Hz
Fan Speed	2480 RPM
Power Rating	4500 W

Current Rating	6.8 A
Weight	33.2 kg
Dimensions	450 mm
IP Rating	IP55
Material Blade	Aluminum
Material Frame	Aluminum
Bearing Type	Ball Bearing
Series	K3G450
Fan Type	EC
Operating Voltage	380 ~ 480 VAC
Approval Agency	EAC UL
RoHS Status	ROHS3 Compliant
Operating Temperature	-40 ~ 176°F (-40 ~ 80°C)
Country of origin	Germany
Termination	3 Wire Leads
Subcategory	EC centrifugal module RadiPac


K3G450-PA31-03/F01
Made by ebm-papst CN(N)
3~ 380-480VAC 50/60Hz (6.8A 4500W) @400V
2480min-1
IP
η=69.6% (A, static) N62 N=73.3 VSD integrated
E15031-55 Ins.Cl.F AO
Electronically-Protected max.60°C
3ph 380-480VAC 50/60Hz max.7.5A max.4.5kW