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1. Introduction

- The 31v5200-10-A Standard Delta Fan is manufactured by Avid Controls Inc. of Waller, Texas, USA under license from the General Electric Company.
- The fan system is used to cool Air Cooled DELTA power modules with one fan required per each DELTA module.
- The fan locates onto the upper cross rail. The inlet duct assembly provides the upper guide rail for the Air-Cooled DELTA. The fan housing is designed to be removed and/or replaced whilst leaving the inlet duct assembly in place.
- Operational Voltage
 - Nominal Working Voltage 230 VAC
 - Supply Frequency 50/60 Hz



2. Safety Instructions

- Care has been taken with the design of this product to ensure that it is safe. However, in common with all products of this type, misuse can result in injury or death. Therefore, it is very important that the instructions in this technical data sheet and the manual as well as on the product are observed during transportation, commissioning, operation, maintenance and disposal.
- This technical data sheet and the manual must be regarded as part of the product. It should be stored with the product and must be passed on to any subsequent owner or user.
- Local safety laws and regulations must always be observed.
- Persons working on the product must be suitably skilled and should have been trained in that work for these products.
- The product is a component designed for incorporation in installations, apparatus and machines.
- The product must not be used as a single item safety system. In applications where mal-operation of the product could cause danger, additional means must be used to prevent danger to persons.
- Product approvals and certifications will be invalidated if the product is transported, used or stored outside its ratings or if the instructions in the manual are not observed.
- In the European Union:
 - Products within the scope of the Low Voltage Directive, 2006/95/EC are CE marked.
 - The product complies with the essential protection requirements of the EMC directive 2004/108/EC, when installed and used as described in the manual.
 - The requirements of the EMC Directive should be established before any installation, apparatus or machine, which incorporates the product, is taken into service.
 - A machine must not be taken into service until the machine has been declared in conformity with the provisions of the Machinery (Safety) Directive, 2006/42/EC.

3. Disposal

- This equipment or any part of the equipment should be disposed of in accordance with the laws of the country of use.
- Modern high technology materials have been used in the manufacture of the equipment to ensure optimum performance. Care has been taken with the selection of these materials to minimize risks to health and safety. However, some materials require special consideration during the disposal.

4. Related Documents

- This module is one component out of a range of components used for the MVD3000 drive system. This data sheet gives details specifically for the items listed at the start of this document.
- For additional information on the installation, commissioning, operation, maintenance and performance of the complete drive system, please refer to the following document:
 - T1689EN, Technical Manual for MV3000 Air Cooled DELTA Drive System

5. Specifications

5.1 Electrical & Fan Specifications

Function	Specification
Nominal Input Voltage Range	230V AC RMS, Single Phase
Nominal Supply Frequency	50 – 60 Hz
Operating Current	0.68A/0.95A (50/60 Hz)
Start Up Time	Approximately 2 seconds to full speed
Typical max. fan speed	3100 rpm 60Hz
Typical Airflow Characteristics	Approximately 630 m ³ /hour (370 CFM) at a pressure of 275 Pa (1.1 InH ₂ O)
Overall Efficiency	60.1%
Efficiency Grade N	62
Power Input	210 W @ 60Hz

5.2 Mechanical Specifications

Function	Specification
Weight of Fan	29lbs. (13kg)
Physical Dimensions approx..	Height: 12.2in to 13.2in (310mm to 333mm) Width: 8.5in (215mm) Depth: 14.2in (361mm) Depth Including Mounting: 19.8in (503mm) See drawing in section 6 for more details.

5.3 Environmental Specifications

Function	Specification
Environmental	
Operating	
Ambient air temperature range	0 to 50°C (32°F to 122°F)
Relative humidity	5 to 95 % (non-condensing)
Altitude	Normal operating altitude up to 1000 m above sea level. From 1000 m (3280 ft) to a maximum of 2000 m (6551 ft) derate by 7.3% per 1000 m (3280 ft).
Atmosphere	Pollution Degree 2 (IEC 61800-5-1 and IEC 60664-1) i.e. clean, free from dust, condensation and conductive or corrosive gases. If conductive pollution or condensation are expected (Pollution Degree 3), the fan must be placed in an enclosure which achieves Pollution Degree 2 by: <ul style="list-style-type: none"> - excluding the conductive pollution e.g. by the use of filtered air; - preventing condensation e.g. by the use of anti-condensation heaters. In extreme environments dual circuit heat exchangers are recommended.
Atmospheric chemicals (max)	15 ppm H ₂ S 25 ppm NO ₂ 25 ppm SO ₂
Storage	
Temperature range	-25°C to +55°C (-13°F to 131°F)
Relative humidity	5 to 95 % (non-condensing)
Transport	
Temperature range	-25°C to +70°C (-13°F to 158°F)
Relative humidity	≤ 95 % (non-condensing)
Altitude	Will withstand air transport
Enclosure Ingress Protection	IP00 Not Protected, unit protected against accident contact only when installed as described in this instruction sheet. Unit must be mounted in an enclosure with restricted access.

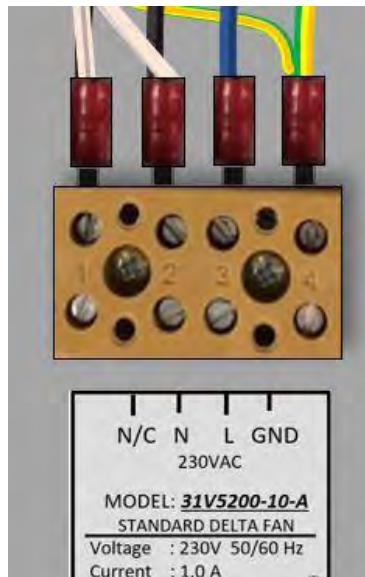
5.4 Power Connections

The fan assembly has a single connector with screw terminals.

Wire Size Limits: 0.5* - 1.5 mm² (20* - 16 AWG).

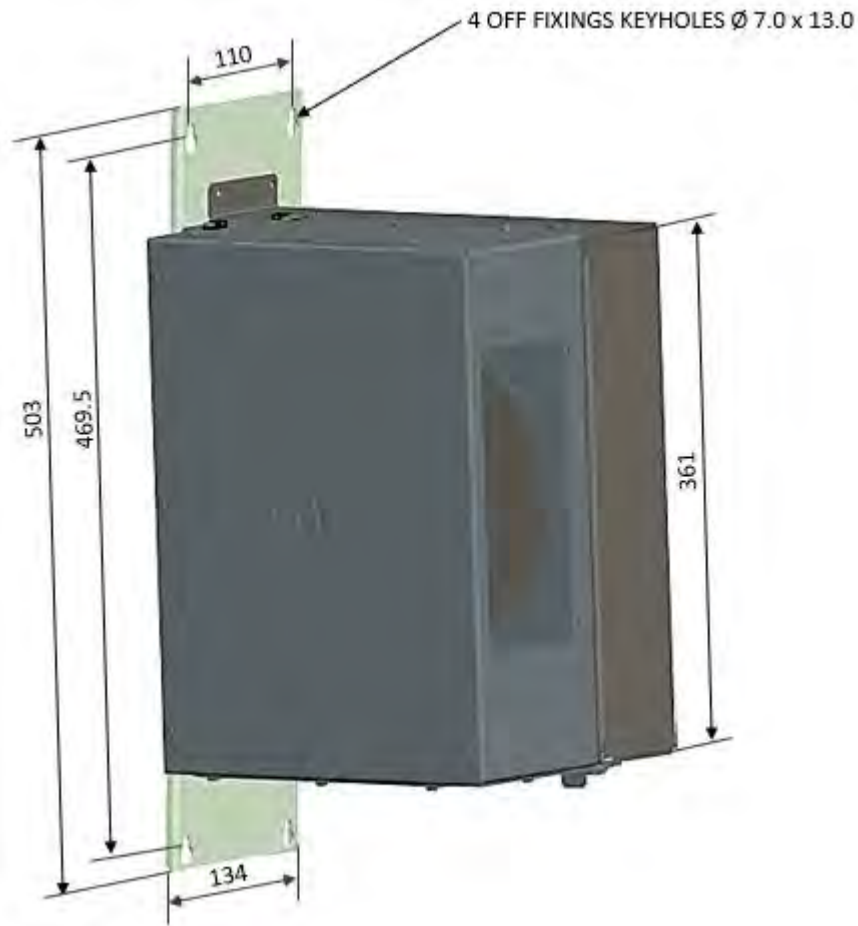
* Use consolidating crimp for smaller wires.

The function of each connection is given below:

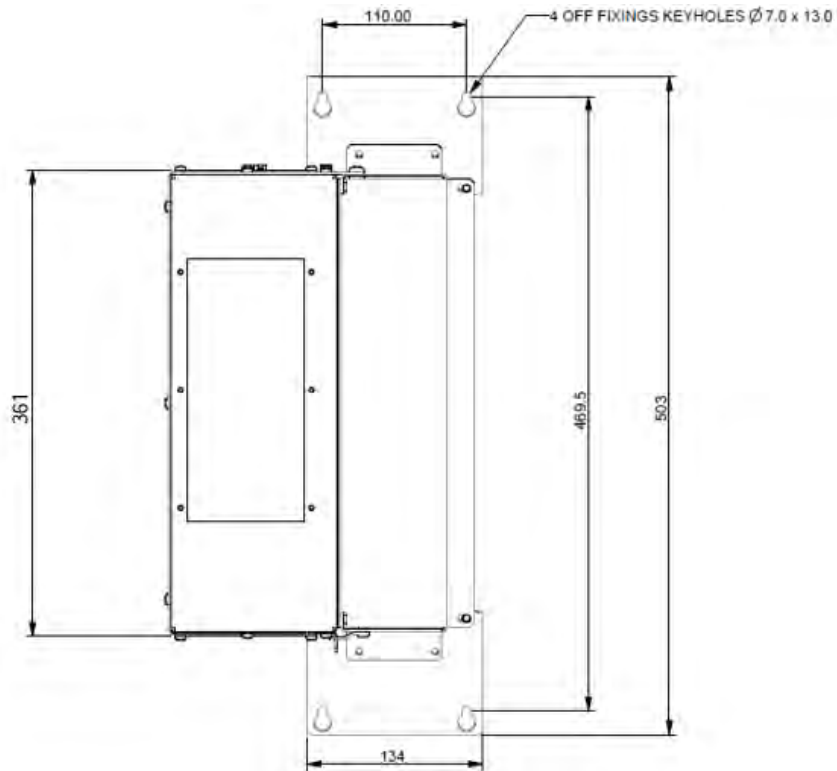
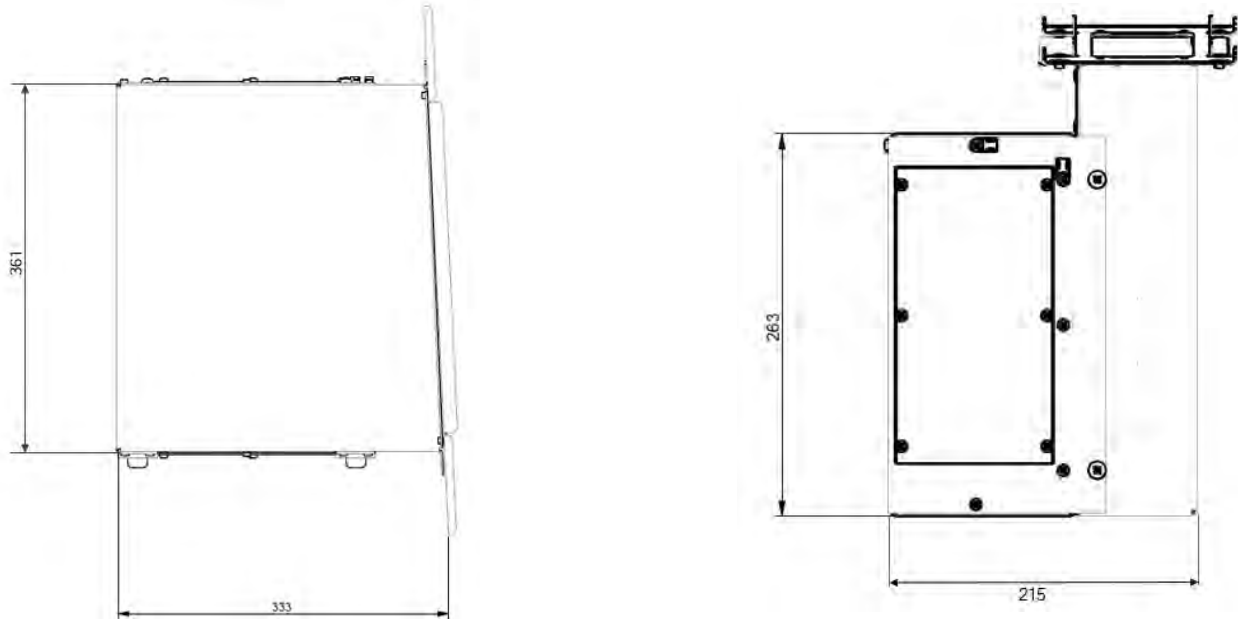


6. Mechanical Installation

The fan assembly is designed to locate onto the upper cross members of the DELTA mounting frame – refer to the Air-Cooled DELTA manual T1689 for full installation details. One fan assembly must be fitted above each Air-Cooled DELTA module with four M6 x 15 mm (⁹/₁₆ in) hexagon headed bolts with plain and spring washers. The fan mounting flange should sit flat against the underside of the two top cross members with the bolts screwing into the threaded inserts in the cross members



Dimensions in mm



WARNING

- **Ensure that access to rotating parts of fans is prevented.**
- **Air used to cool the product is unfiltered. Air ejected from the product may contain foreign particles. Air outlets should be arranged to deflect the air away from the eyes.**
- **The combined audible noise emitted by fans in an installation can be greater than 70dB(A), dependent on the air flow path. Measure the audible noise level in the installation. When the audible noise level exceeds 70dB(A), appropriate warning notices should be displayed.**

High Voltages

**Replace all shrouds and close all doors before energizing the equipment.
Connect this equipment to ground (earth) using the ground terminal provided.
The minimum size of the protective conductor must be in accordance with local safety regulations.**

Caution

Ensure all conductors connected to this product are mechanically restrained.

6.1 Cabling

Ensure all cables connected to this unit are adequately restrained.

7. Contact Details for Sales, Service and Support

- Please refer to your local technical support center if you have any queries about this product.

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8. Document Revision History

Rev.	Date	Author	Changes
00	Jan 11, 2018	Mark Woods	Original Document created
01	Nov 7, 2018	Gary Pace	Dimensions corrected in section 5.2