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Contents

1.	Introduction	4
2.	Key Features of the Avid Extreme Turbine Fan	4
3.	Specifications	5
3.1	Electrical	5
3.2	Mechanical.....	5
4.	Related Documents.....	5
5.	Wiring Connection Diagram	6
6.	Installation Guide	6
7.	Disposal	6
8.	Fan Kit Order Codes.....	7
9.	Contact Details for Sales, Service and Support.....	7
10.	Document Revision History	7

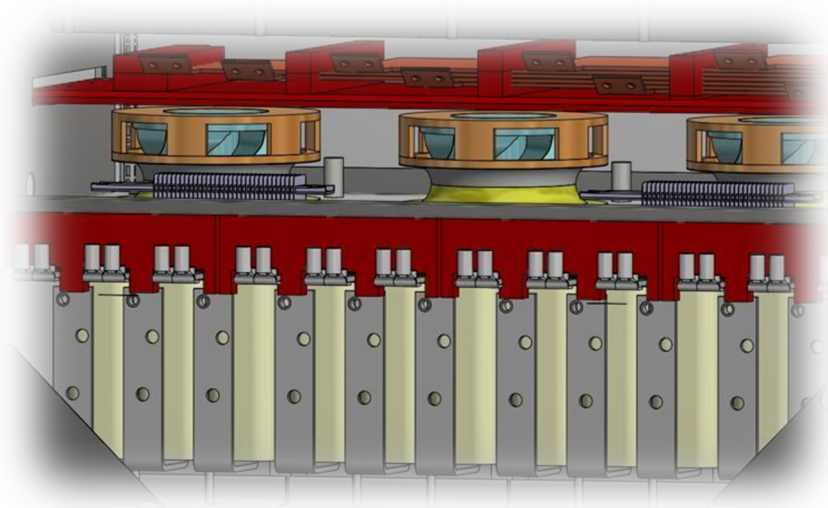
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1. Introduction

The Avid Extreme Wind Turbine Fan has been custom designed to better withstand the harsh environment of the 3.6MW SWT Wind Turbine and is a plug-in replacement for existing fans including those in the 3.0 MW & 2.3MW Converters such as the Type 27/28 series. (SWT Part numbers A9B10095239 & A9B00021029)

Investigation has shown that existing fans fail due to:

- High induced bearing currents causing overheating of the bearing
- Ingress of dust into the bearing causing excessive bearing wear
- Induced high dv/dt from PWM signals causing motor insulation breakdown



The fans in the 3.6 MW nacelle converter operate in the harshest environment due to the proximity of high DC currents both above and in front of the fan plate assembly. There is often a presence of brake dust near the fans.

2. Key Features of the Avid Extreme Turbine Fan

- Sealed Bearings – prevents ingress of dust
- Ceramic Bearings – zero induced bearing currents
- Enhanced insulation system on motor windings providing protection against voltage spikes

3. Specifications

3.1 Electrical

Frequency Hz	50Hz	60Hz
Nominal Supply Voltage AC V	230	230
Typical Current A	0.66	0.86
Max Current A	0.73	0.95
Power W	148	199
Speed RPM	2540	2700
Power Factor	0.975	0.996
Temperature Range	-40 to 70° C	
Capacitor uF	3.5	
Voltage Spike Withstand	1000V/uS	
Insulation	Class F	
Motor Protection	T 150°C UL Auto reset	

3.2 Mechanical

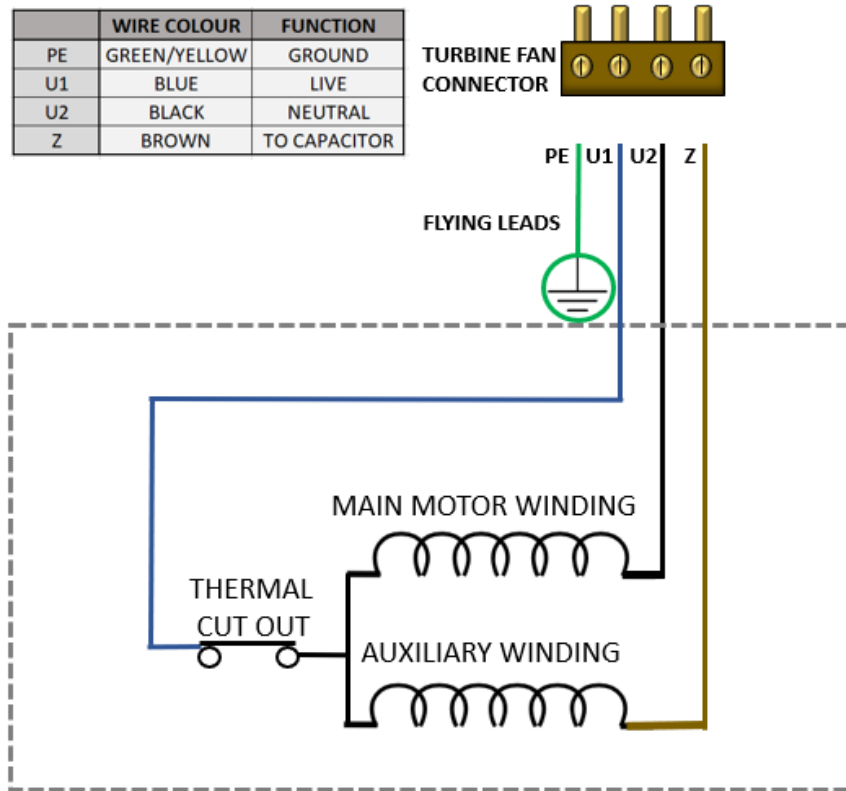
Weight	2.90 Kg / 6.3 lbs
Balance Level	G2.5
Dimension Designation	225 x 63 mm

4. Related Documents

Manuals for Wind Turbine Converters:

- T2053EN 3600kW_FC_N Technical Manual (Network/Grid Converter)
- T2052EN 3600kW_FC-G Technical Manual (Generator Converter)
- T2328EN 2300kW Service Manual
- Other service manuals dependent on SWT type

5. Wiring Connection Diagram



6. Installation Guide

Installation of the replacement fans is given in the wind turbine manuals (see Related Documents) in the chapters entitled FAN MODULE REPLACEMENT – CUBICLE FANS. Ensure all safety precautions are followed and that the converter is powered down and locked off.

7. 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.

8. Fan Kit Re-Order Codes

The Avid Extreme Wind Turbine Fans are sold in kit form as follows:

- 02373-ASY-A Kit of 3 Fans
- 02390-ASY-A Kit of 2 Fans



9. Contact Details for Sales, Service and Support

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10. Document Revision History

Rev.	Date	Author	Changes
00	Feb 27, 2021	Mark Woods	Original Issue
01	July 09, 2021	Mark Woods	Fan Kit reference numbers added