



TEG12VDC-AIR (FORCED AIR COOLING)

The TEG12VDC-AIR has a peak rating of 30 watt . The forced air TEG Generator works up to a hot surface temperature of 455°C (850°F) indirect heat like the top of wood cooking stoves with circular plate removed. Direct flame on the hot side plate like on a cooking stove with a circle plate removed for correct installation. Especially if it is placed on a wood stove you will need a lot of heat to run the unit as solid stove tops are poor heat transfer surfaces. The best is direct propane or infered burners heat. The OUTPUT from the TEG is regulated with a Boost/Buck constant voltage/constant current DC to DC converter that is adjusted at 13.8V . This is ideal for charging 12VDC battery. The Board comes with an optional 5V USB for cell phone & tablet charging.

(OUTPUT BASED ON MAXIMUM HOT SIDE TEMPERATURE and DT).



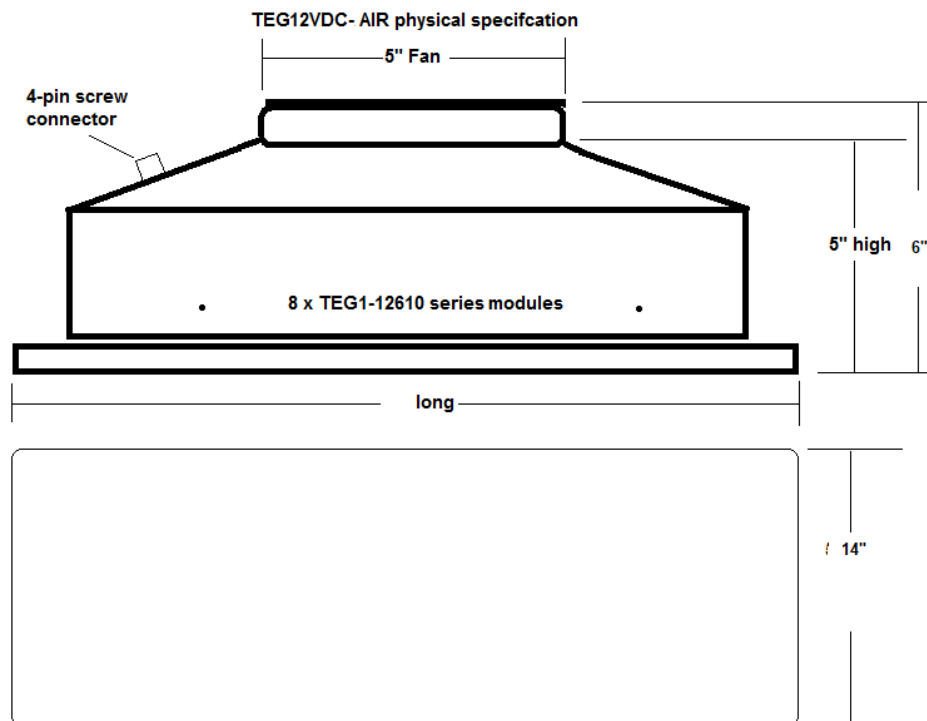
DESIGNED & MANUFACTURED IN CANADA subcomponents from USA

PART NUMBER	TEG12VDC Air
OUTPUT POWER	30 watts MAXIMUM
OUTPUT VOLTAGE	Preset by Factory to 13.8V Charge Voltage for 12VDC
Optional 5V USB	1.2amps@5V
DC to DC Constant Voltage/ Constant Current Converter	output range from terminal 5V to 14.4V
Recommended Maximum Hot side temperature 400°C	
Fan Specification	5 watt 89 CFM 120mm 5" fan IP55
Dimensions	13"(33cm) x 5" (12.7cm) x 4.123" (10.47cm)
Weight	11 lbs.(5 Kgs.)



CRITICAL NOTES FOR OPERATION:

- **Wait 5 minutes after fan starts to allow the unit to have a high Voltage power output!** A diode is included to prevent reverse voltage to DC Converter.
- **GENERATOR REQUIRES cold air** on the fan side for best performance!
 - 1. Creates critical DT that will increase and maintain optimum power generation.
 - 2. Protects the fan from overheating. The fan is rated for 160°F or 70°C maximum.
- Do not exceed 650°F hot side temperature on the hot side or you will damage the TEG modules.
- We also recommend charging a battery and drawing loads (lights, motors, etc...) from the battery NOT from the TEG output directly. **Never place the AIR TEG on a cold stove and allow the TEG to heat up with the stove as both the cold and hot side of the TEG will heat up together as NO DT will be created! Waiting for the heat source to be fully HOT before placing the Air unit on it unless it is a direct flame opening on the cooking stove top. The fan should start in about 1 minute depending on quality of heat source.**
- FAN: 5 inch (120mm) IP55 protection. 3 watt consumption at ideal tested speed or 1.5 watt fan depending on model!



Design and specifications subject to change without notice



Example above of a typical installation

Caution!

It is critical that the surface of the stove already be hot before the TEG is placed on the stove. This is because on stove start-up of the wood stove the stove warms up slowly not allowing a DT to take hold. Therefore, the entire TEG heats up cold and hot side together never allowing a Differential between the hot and cold side to be established. Once heat source is fully engaged then place the TEG air unit so, that the hot side heats up rapidly before the cold side can heat up and the fan will start.

WHAT IS NOT COVERED: Any damage caused by misuse, abuse, accident (dropping or otherwise shocking the Generator) normal wear & tear, or physical damage. Also, any incidental or consequential damage or loss is not covered. Improper installation will null and void any warranty.

There are no warranties of merchantability or of fitness expressed or implied, which extend beyond the description on the face hereof. In no event shall Thermal Electronics Corp. be liable for damages in excess of the purchase price. Thermal Electronics Corp. neither assumes nor authorizes any other person to assume for it any liability in connection with this product.

Abuse, misuse or mistreatment (i.e., if you overheat or drop the Generator) VOIDS all warranties. We do our best to make all of our Generators as durable as possible. However, there is no way for us to fully prevent all damage due to overheating, or dropping. Warranty is limited to replacement of parts at the full discretion of the manufacturer and is limited to 1 year from date of purchase.

Designers of advanced TEG Generators using state of the art heat transfer patented technology

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