



# Lithionics Battery Internal-Module Cold-Weather Heating Kit User Manual

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**The World's First UL Listed Heater!**  
**Rev 04**

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## Internal/Module Cold-Weather Heating Kit

### Heater Operation Description:

- Proprietary UL Listed direct-cell attached heating kit is installed internal to the Lithium Battery module.
- A solid-state internal thermostat device controls the heater. It is switched ON at 35F and OFF at 40F.
- The heating kit requires 12V to 24V DC input to power the heating element.

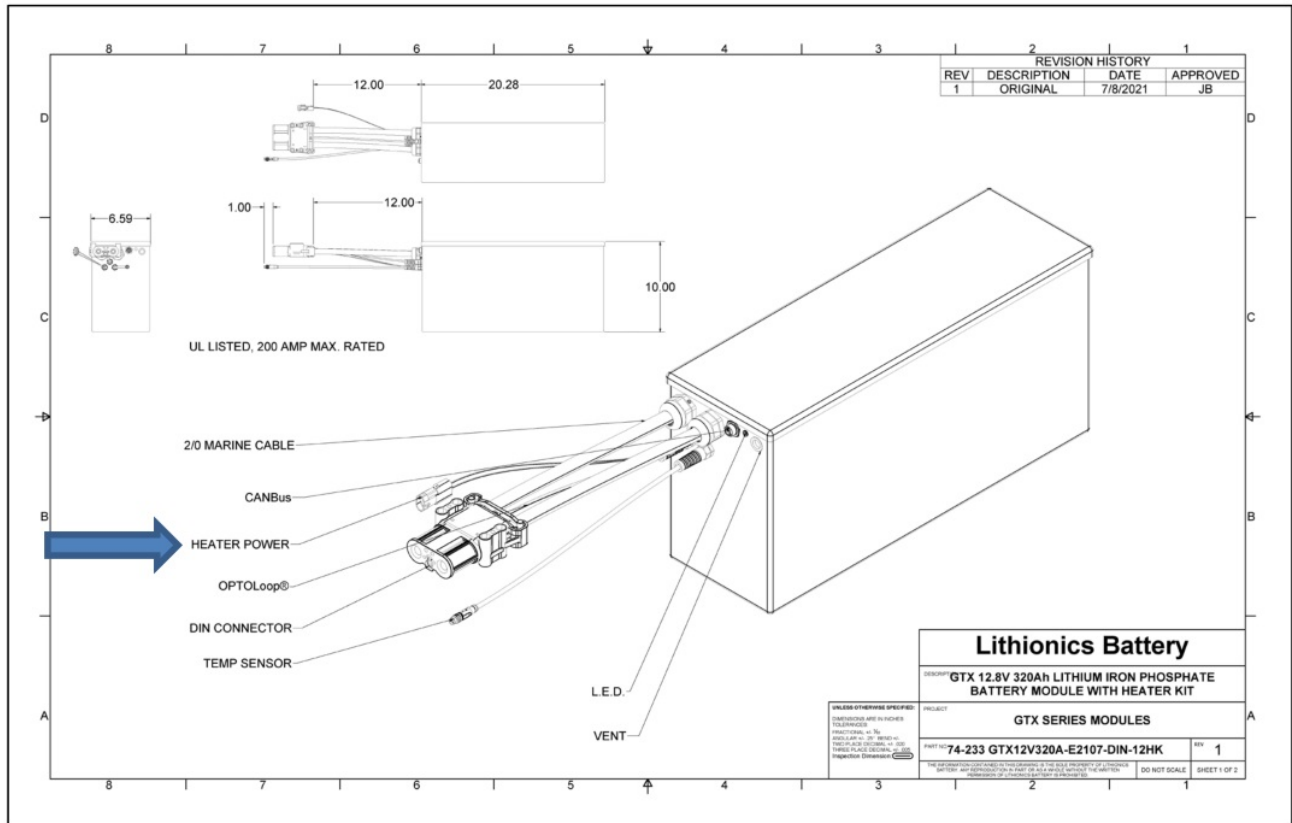
Separate cable leads are provided on the battery module for the heating kit to allow you to connect battery power or a supplemental 12V DC power source (e.g. 12V chassis/alternator power, AC-DC converter from shore power, DC-DC converter from higher battery voltage). Please contact Lithionics Battery® for recommendations on wiring

and powering the heater kit.

### Heater Performance:

- Module Size Vs Max Heater Consumption: 40W for 4000Whr, 80W for 8000Whr, 160W for 16,000Whr
- The typical duty cycle to maintain the lithium core between 35-40F is approximately 50% at -4F sub-zero temperatures- which is much more efficient than an external heating element. At typical temperatures of 15F to 32F, the duty cycle is reduced. Therefore, energy consumption can range from 15 watts to 80 watts per hour.

**Additional note:** This assumes the battery is sitting unused and idle. Any additional charge or discharge loads will cause the battery to self- heat and the required duty cycle of the internal heaters would become less.



Available on the Following Models: GT and GTX Series Modules



### Documents / Resources

	<a href="#">Lithionics Battery Internal-Module Cold-Weather Heating Kit [pdf] User Manual</a> Internal-Module Cold-Weather Heating Kit, Internal-Module, Cold-Weather Heating Kit, Heating Kit
	<a href="#">Lithionics Battery Internal Module Cold-Weather Heating Kit [pdf] Installation Guide</a> Internal Module Cold-Weather Heating Kit, Cold-Weather Heating Kit, Heating Kit

