



## Boost Charger

*Protect liftgate operation from under-charged batteries and effortlessly extend runtime.*





# Boost Charger

## FEATURES

- Dynamically adjusts charging current according to resistance caused by the tractor-trailer connector (7-pin, 2-way or 1-way) and compensates for electrical loads (lights, brakes, etc.) to maximize battery charge
- Selector switch on the unit ensures optimal charge profile for AGM or flooded lead acid batteries.
  - Three stage battery charging (Bulk, Absorption and Float) maximizes battery life, which allows for a reduction in long-term maintenance costs
- Temperature sensor (included) is mounted directly on the battery post, enabling the unit to compensate the charge voltage to optimize battery recharge levels and life of the battery
- Fully sealed unit is IP67 and IP69K rated so it can be mounted in locations subject to roadsplash.
- Does not interfere with trailer ABS systems and prevents the supply voltage from dropping below the minimum input voltage of 9.5 Vdc, complying with FMVSS 121, SAE J2247, and TMC RP141 (for air brake systems)

## EXTEND MODE

- Lowers the low voltage cutoff from 12.7V to 12.5V DC
  - At 12.5V, the low voltage cutoff activates to retain enough battery energy to enable tractor starting capability, even in cold weather
- The time that the unit will stay in extend mode is dependent on the battery state of charge of the tractor and the load on the charger

## BRAKE INTERRUPT

- Uses an active voltage input monitor to adjust the output charging current as to not drop Aux pin voltage lower than the SAE spec
- Accommodates existing wiring issues and defects that might exist with seven way plugs and cables that might lower the voltage at the aux pin that a switched type of charger could not detect

## APPLICATIONS

- ✓ 20 Amp model suited for 7-way charging
- ✓ 35 Amp model suited for high power stinger cable charging (single or dual pole)
- ✓ Supplemental EON PowerPack charging from the 7-way
- ✓ Refrigerated truck battery isolation  
Provides for electrically isolated reefer start battery when needed but allows for full truck battery charging from reefer
- ✓ Base kits DO NOT come with cable kits
  - Order separately based on application need

# Competitive Comparison

Specification	Thermo King	Competition	Notes :
Environmental Rating	IP69K	IP67	Thermo King can be mounted anywhere on battery box. Internal is preferred, but it can be mounted externally and exposed to direct tire road spray and high pressure wash. Competition must be mounted internal to battery box without exception.
Charging Current	20 Amp & 35 Amp models	10 Amp & 20 Amp models only	Thermo King models have nearly 100% greater charging output than competition; providing greater charge rates on all applications.
Temp Compensated Charging	Yes	Yes	Both systems use battery temperature compensation to adjust charging voltage levels.
ABS Controller Power Preservation	Uses active voltage monitoring	Uses brake light switch cutoff circuit	Using active voltage monitoring is a big advantage over using the brake light circuit. Voltage monitoring allows the system to compensate for other voltage drops caused by corrosion or poor connections, thereby greatly increasing system reliability and operation.
Extend Mode	User selectable	Not user selectable	Thermo King allows for user selecting of extend mode. When off, the system will terminate the connection with the main batteries at 12.7V. When on, extend mode will allow the level to drop to 12.5V, thereby allowing the auxiliary battery pack to operate longer without the tractor running. The competition uses a fixed 25 minute timer which can be detrimental in single-battery systems when connected to the reefer as the main battery. This can greatly decrease reefer battery life.
Battery Type Selection	User selectable	Not user selectable	Thermo King tailors the charging voltage profile to the battery type given the high current charging to optimize battery life. The competition only provides a fixed profile, regardless of battery type, which can be very detrimental to both battery types since it is not tailored to either.
Smart Charging	Built-in 3 stage charging profiles tailored to battery type	Unclear on charging profiles	Thermo King provides 3 stage smart charging for each battery type based on battery selection. Competition provides smart charging based on single battery type that is not optimized for either.
Status Lights	Lights indicate modes and faults	Lights indicate modes and faults	Both units provide on-board status lights indicating charging mode and faults. Thermo King provides an optional remote status indicator.
Corrosion Protection	Corrosion-proof aluminum with black anodized finish	Unfinished aluminum	Thermo King units have superior corrosion protection along with completely sealed water ingress protection. Competition model easily corrodes ,which is why it must be placed inside a box. Warranty is conditional on no corrosion.
Warranty Coverage	2 years-no conditions	1 year-conditional on no corrosion	Thermo King's warranty is unconditional 2 years and covered by an extensive dealer network for certified installation and warranty coverage. Competition is 1 year with conditions based on no corrosion or water ingress.

## SPECIFICATIONS

Max output current: (model dependent)	20A or 35A
Input voltage range:	9.5 -16Vdc
Operating Range:	-40° to 85°C
Pole charging	Dual or Single
Dimensions:	7.5" x 5.5" x 2.5"
Weight:	9 lbs
Warranty:	2 years

## PART NUMBERS

Part	Number
20 Amp Kit	401333
40' Cable Kit (20 Amp)	401335
60' Cable Kit (20 Amp)	401336
35 Amp Kit	401334
40' Cable Kit (35 Amp)	401337
60' Cable Kit (35 Amp)	401338



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