



Our Famous GOOF PROOF NO Questions Asked Warranty



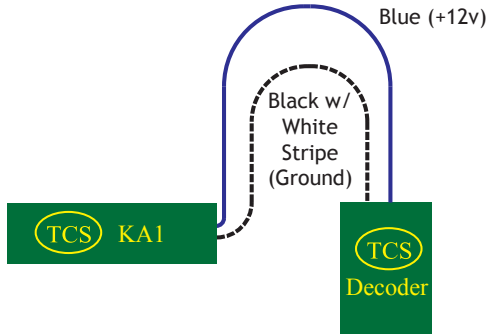
Scale	Input Rating
HO/N	12 to 16V

Dimensions: 1.063" x 0.35" x 0.244" or 27mm x 8.9mm x 6.2mm

Keep Alive® (KA) devices are used to supply power to decoders during times of power interruption due to dirty track or problematic track work. The KA1 will power an HO-Scale locomotive with headlights on for approximately 2 to 5 seconds (depending on the locomotive and the efficiency of the motor). This KA1 will work with Keep Alive® ready decoders and most non-TCS decoders. TCS decoders manufactured after February 2012 are Keep Alive® ready.

### WIRING DIAGRAM

This is an example hookup showing the KA1 connected to a TCS KA ready Decoder



### INSTALLATION

For detailed installation information visit our website where we maintain a constantly growing database of a wide range of locomotives and decoders.



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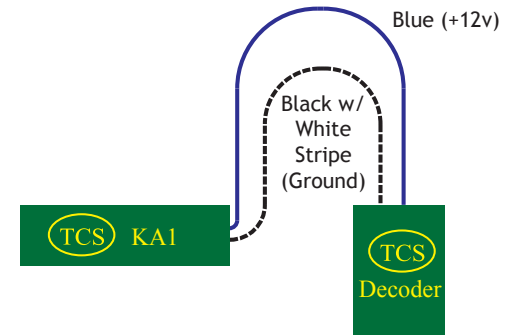
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# TCS Keep Alive®

## Keep Alive® (KA) Decoder Compatibility

The TCS KA's are designed to operate with all TCS or any other Keep Alive® ready decoders. Decoders with a “-KA” suffix include an extra Blue wire and a Black w/ White Stripe wire for hardwiring the KA1 to the decoder. Decoders with a “-KAC” suffix have a 2-Pin Connector for attaching the KA1-C.

## Installation Notes for TCS Decoders

1. ALL TCS decoders are compatible with Keep Alive devices.
2. Connect the Keep Alive® wires to the decoder (Make sure you match the wire colors on the KA to same wire color on the decoder).
3. That's it! Your locomotive is ready to run over the most treacherous of tracks.

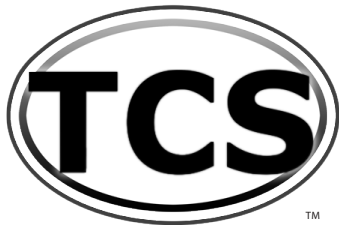
**WARRANTY PROCEDURE:** All Keep-Alives® are covered by a one-year “goof proof” warranty. **Please return your warrantied device in a small box.**

1. You must register the failed Keep Alive® on our website at [www.tcsdcc.com](http://www.tcsdcc.com).
2. Print out a copy of the Warranty Registration and include it with the Keep Alive®.
3. Return Keep Alive® directly to TCS using the address below.

Compatible with NMRA DCC standards.

Made by TCS in the USA.

**Train Control Systems**  
P.O. Box 341  
845 Blooming Glen Rd.  
Blooming Glen, PA 18911



Phone **215-453-9145**  
Fax **215-257-0735**  
Email [tcs@tcsdcc.com](mailto:tcs@tcsdcc.com)  
Web [www.tcsdcc.com](http://www.tcsdcc.com)

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