



IntelligAIRE® III

Third generation advanced microprocessor control and communications technology.





Thermo King's IntelligAIRE: Since 1994

The name you know and trust brings you the next generation of bus microprocessing technology.

Coach and Transit Bus Climate Control has Never Been This Easy!

✓ **Improved diagnostic and troubleshooting that reduces downtime.**

Technicians can override any function to create a specific condition to help identify a problem. All alarm and shutdown codes are stored with a real time date stamp to assist maintenance when diagnosing or troubleshooting a problem.

✓ **Complete and advanced communication capabilities with the CAN based HVAC control system**

allows customers to plug directly into the vehicle's J1939 network, makes more information available and eliminates the gateway module required between the bus controller and the unit controller.

✓ **Reduced setup time for installing and changing program files**

with a flashload option for custom configuration. Users can now load a single file, which can be saved and applied to all buses in the fleet without having to configure each bus individually.

IntelligAIRE III gives you **MORE:**



- Available I/O to monitor and control components
- Multi-zone temperature control flexibility
- Programming simplicity and configurability with the PC interface
- Communications capability
- Weight reduction with elimination of harness



Add Thermo King's IntelligAIRE III to your HVAC specification today

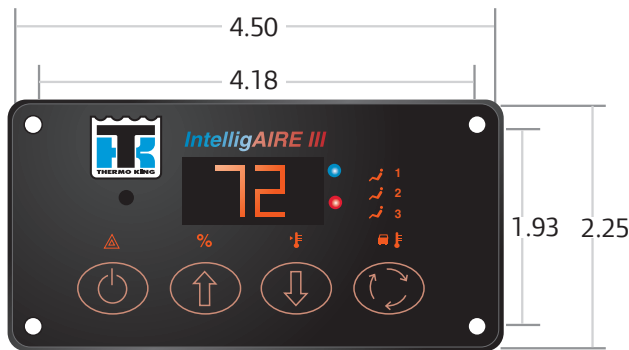
The Thermo King IntelligAIRE III is a 3rd generation advanced microprocessor-based controller for bus climate control systems that can be programmed for either manual or automatic operation. A unique feature of the IntelligAIRE III system is its modular configuration, connected via a CAN 2.0B communications network.

The modular configuration provides the user greater flexibility for customization, reduces the number of electrical connections and significantly reduces weight with the elimination of long multi-wire harnesses.

The IntelligAIRE III system consists of up to (3) Main Modules, Display Module and up to (8) IO Modules. The operator can cool/heat/ventilate up to three zones on the vehicle. The set point, fan speed and fresh air damper can be controlled independently for each zone. These functions can also be controlled independently on the

driver's evaporator/heater unit. All components associated with the cooling, heating and ventilating of the passenger compartment(s) are controlled by a single control system.

The Thermo King IntelligAIRE III comes fully equipped to handle all of your communications needs. The package includes an RS232 port for flash-loading firmware updates, a J1939 port for interface with the vehicle's CAN BUS network and a CAN port for diagnostics and customized configurations. The CAN Diagnostic program provides more diagnostic features and troubleshooting information than any other controller available for bus HVAC systems.



Display Module



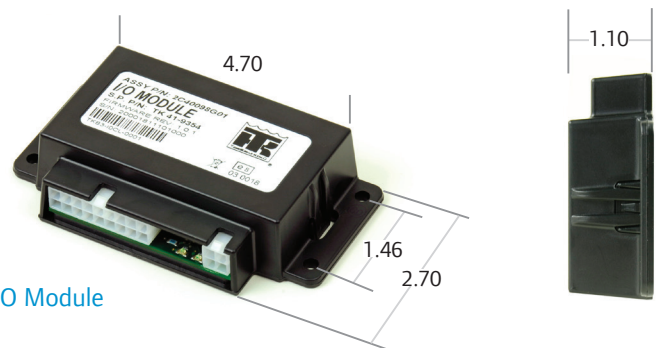
(Dimensions same as Display Module)



Pressure Module



Main Module



IO Module

Worldwide Service Organization

Thermo King backs its equipment and customers with a highly-trained, worldwide service organization. This assures you the support of factory authorized service facilities and a stock of factory parts and factory trained mechanics.

Warranty Summary

Terms of the Thermo King Warranty are available on request from your local Thermo King dealer. Please reference document TK50049 for the Thermo King Bus Unit Warranty.



Four simple modules remove complexity for operators and technicians



Display Module

Display Module

(Optional)

The display module provides an optional user interface for controlling the HVAC on/off, set point adjustment and readout of passenger zone temperatures and outside ambient temperature. The display features touch sensitive operator keys, LED indicators and a 3-digit LED display.



Pressure Display Module

Pressure Display Module

(Optional)

The pressure readout module provides an optional digital readout of suction and discharge pressures. The module features touch sensitive operator keys, LED indicators and a 3-digit LED display.



Main Module

Main Modules

(up to 3 as required by the application)

The microprocessor in the main module(s) provides the primary "intelligence" and acts as the main controller(s) of the system. The main modules, IO modules, display module and pressure module communicate via CAN bus. A second CAN port is included on each main module to provide an optional SAE J1939 interface to the vehicle network.



IO Module

IO Modules

(Up to 8 as required by application)

The IO modules support additional floor heat zones as required by the application. The conditions of all sensors and other inputs are transmitted to the main module. The main module then determines what system actions are required and transmits the appropriate output commands back to the IO modules.



IntelligAIRE III Delivers Industry-Leading Capability with Unmatched Ease-of-Use

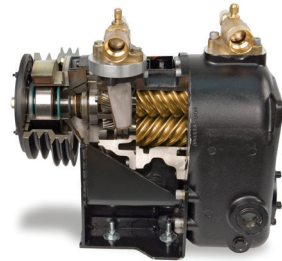
- ✓ Multiple zones can be controlled using identical expansion modules via CAN network and interconnected software
- ✓ Expanded CAN communication capability to plug directly into the vehicle's J1939 network
- ✓ Operator-friendly display and pressure modules for improved control and diagnostics

Energy Efficiency and Sustainability:

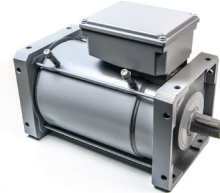
IntelligAIRE III can help you get there!



Second Generation Brushless Motors



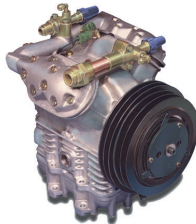
Fuel-Saving Screw Compressor



Power Electronics for Alternator Powered All-Electric HVAC



Energy Management System for Reciprocating Compressors



Electric Scroll Compressor

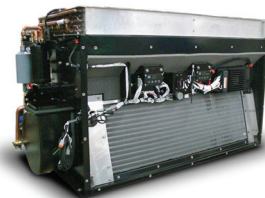


Let IntelligAIRE III Provide Optimum Control of These Energy-Saving Components

*Unmatched versatility with IntelligAIRE III -
One controller for all of our products!*



Athenia Roof Mount



T-Series



Rear Mount All-Electric



RLF Integrated Rooftop

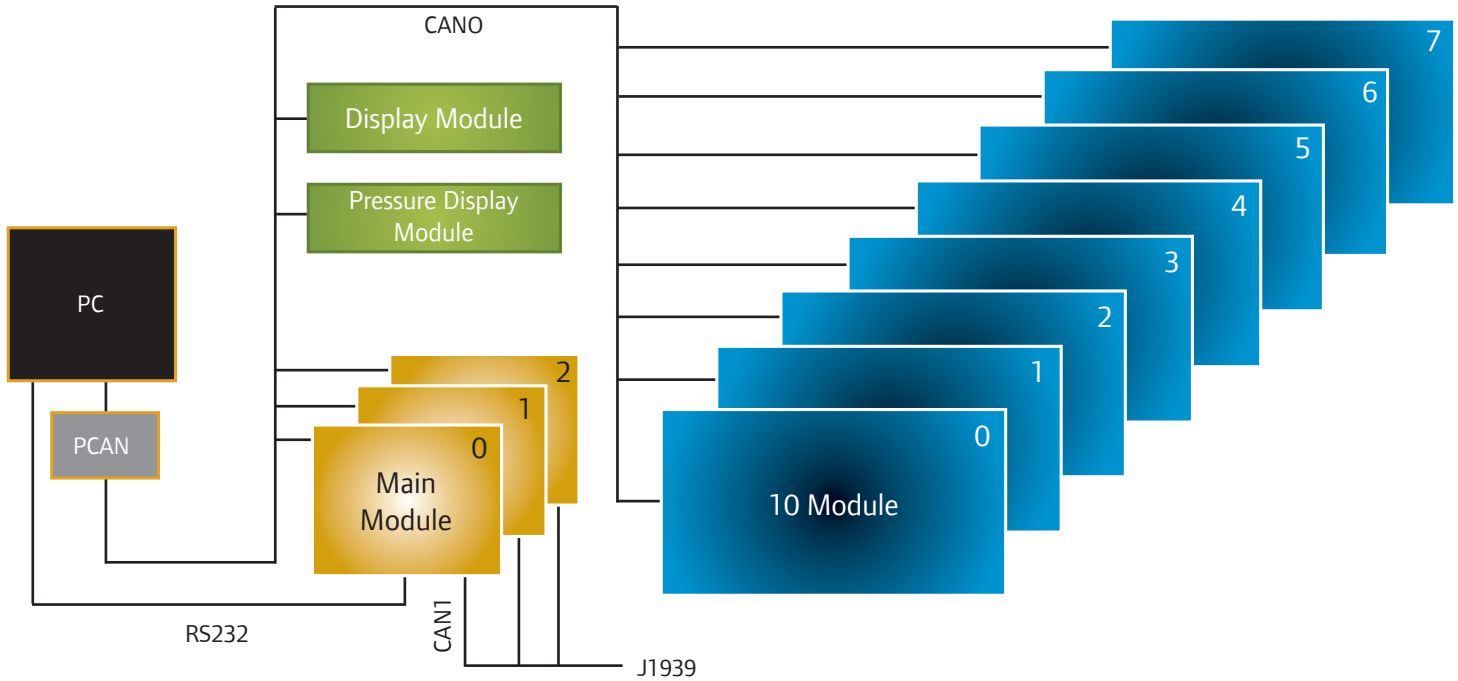


All-Electric

Let the Power of IntelligAIRE III Work for You!

System level block diagram

The IntelligAIRE III is a component-based system that allows system expansion as necessary to incorporate additional features or multiple temperature control zones in applications such as articulated buses.



Toolkit of the future from Thermo King



 **THERMO KING**

Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport temperature control solutions. Thermo King has been providing transport temperature control solutions for a variety of applications, including trailers, truck bodies, buses, air, shipboard containers and railway cars since 1938. For more information, visit thermoking.com or tranetechnologies.com.

