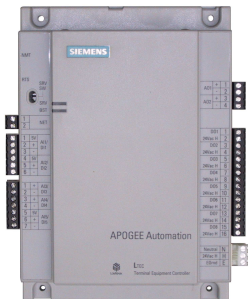


LTEC Heat Pump Controller



Description

The LonMark[®]-compliant LTEC[™] Heat Pump (HP) Controller provides direct digital control of heat pumps. The LTEC HP Controller is designed to reside on the Siemens Building Technologies, Inc. APOGEE[®] for LonWorks[®] network, providing seamless interaction with all LonMark products. The LTEC HP Controller offers cost-effective flexibility by allowing selection of the best point configuration platform for any HP application requirement.

Features

- Conforms to the LonMark interoperability guidelines, enabling information sharing with other LonMark products
- LonMark compliant with Space Comfort Controller functional profile number 8503
- Field-selectable parameters allow entry and updating of set point and control parameters via the APOGEE Interface
- Network-wide monitoring and commanding from the Room Sensor and/or LTEC controller
- Two I/O platform styles allow cost-effective selection to meet your application needs

- Return from power failure without operator intervention
- Advanced PID control minimizes offset and maintains tighter set-point control

Applications

The LTEC HP Controller can be configured to control a variety of air- and water-sourced heat pump applications, including:

- Single-compressor heat pump without reversing valve
- Single-compressor heat pump, mixed air control without reversing valve
- Single-compressor heat pump with reversing valve control
- Single-compressor heat pump with reversing valve and mixed air control
- Multi-stage compressor (1-3) heat pump, mixed air control without reversing valve
- Multi-stage compressor (1-3) heat pump, mixed air control with reversing valve

Additionally, the based upon availability of input and output capacity and occupancy sensors can be controlled via these applications.

Hardware

Controller Board

The Controller Board is available in the following styles:

- 4 Inputs, 6 Digital Outputs, 1 Room Sensor

- 5 Inputs, 8 Digital Outputs, 2 Analog Outputs, 1 Room Sensor

The Controller Board is a Neuron-based platform that executes a zone-level application and allows communication to all LonMark devices. The controllers are shipped with pre-loaded applications reducing engineering start-up time.

Room Sensor Port

The room sensor connection to the Controller Board consists of a quick connect RJ-11 jack. This streamlines the installation and reduces the LTEC's start-up time.

Spare Input/Output Points

The LTEC controller, depending upon the application used, may have up to 3 input and 2 output spare points available. These points can be used to perform local connection and network control for devices located in close proximity to the LTEC controller, therefore reducing costs associated with installation.

Specifications

Specification	
Processor Type	Neuron 3150
Processor Clock Speed	10 MHz - Neuron
Network Communication Speed	TP/XF-10 (78.8K bps)
Memory Size	49 K Flash Memory 8 K SRAM
Local Network Communication Interface	Lon port
Voltage Requirements	24 Vac @ 50/60 Hz
Power Consumption	5 VA plus loads
Ambient Operating Environment	+32°F to +122°F (0°C to +50°C) 5 to 95% RH (Non-condensing)
Agency Listings	UL/CUL 916 PAZX/PAZX7 (Enclosed Energy Management)
Regulatory Compliance	FCC Part 15, Class B CISPR 22 Class B CE Mark
Dimensions:	8.78"H x 6.94"W x 1.85"D (223 mm x 176 mm x 47 mm)
Weight	1.13 LBS (.51 kg)

Wiring Recommendations

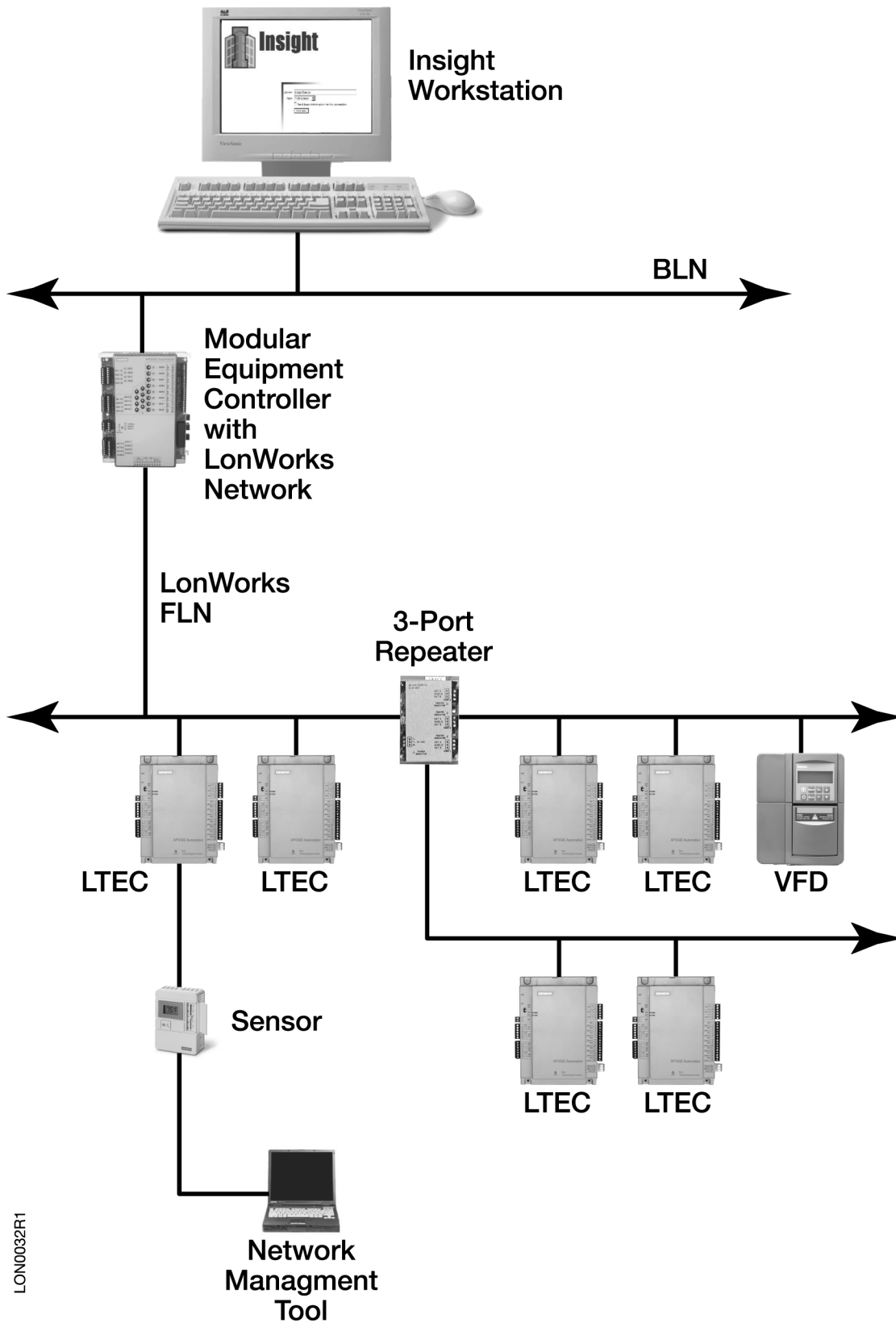
Input/AO	20 to 22 AWG
DO	18 to 22 AWG
Power	16 to 18 AWG
LonWorks Network	22 AWG Level IV per NEMA standards

Transformer Requirements and Recommended Voltages

Type	Class 2, 24 VAC, 50/60 Hz
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Ordering Information

Controllers	
Description	Product Number
LTEC HP Controller 4IN 6DO 4 IN (2) 100 K Ω Thermistor or Dry Contact/ (2) 0-10 Vdc, 4-20 mA or Dry Contact 6 DO 24 Vac, 12VA, Triac 1 RS 10 K Ω Thermistor Room Sensor Module	550-538
LTEC HP Controller 5IN 8DO 2AO 5 INI (2) 100 K Ω Thermistor or Dry Contact/ (3) 0-10 Vdc, mA or Dry Contact 8 DO 24 Vac, 12VA, Triac 2 AO 0-10 Vdc 1 RS 10 K Ω Thermistor Room Sensor Module	550-539
Documentation	
Description	Product Number
LTEC Owners Manual	550-311
LonWorks for APOGEE Library CD	550-312



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