

Overview

The L-Series Controllers are microprocessor based configurable and programmable controllers designed to control, optimize and improve energy efficiency for a wide range of commercial and industrial equipment as well as lighting applications. All controller features are adjustable with our no cost OPIX Now™ application development program.

Each L-Series Controller uses the FT-10 transceiver for best-in-class networking over twisted pair. FT-10 networks are polarity and topology free. The network utilizes open standard LonTalk and BACnet/IP protocols for interoperability and ease of data exchange.

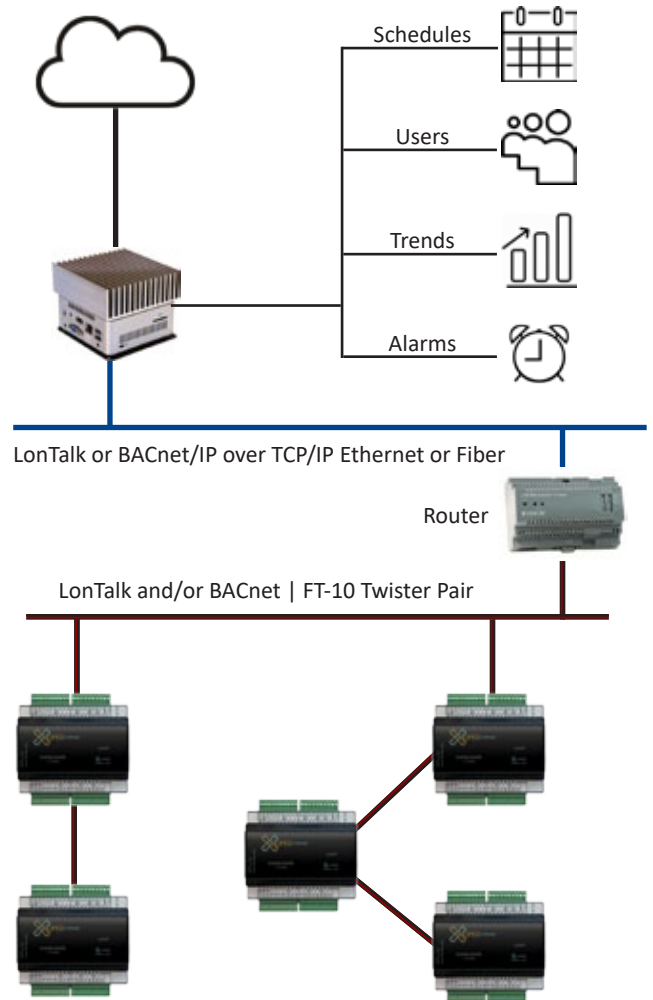
The L-Series Controller features 10 PID loops that are either used by software applications, or when available, are exposed as generic PID for free use with spare I/O.

All L-Series Controllers support a wide variety of sensors including thermistors Type II (recommended), Type III, and custom thermistor arrays. 4-20mA sensors are powered with on-board 20VDC output. All sensors signal types are software configurable.



Applications

- AHU - Air Handling Units
- MZN - Multi-Zone AHU
- CHW - Chillers, Cooling Towers
- HHW -Boilers
- PMP - Pumps
- EF - Exhaust Fans
- FCU - Fan Coil Units
- HPU - Heat Pump Units
- RTU - Roof Top Units
- VAV - VAV and VVT Terminal Equipment
- NRG - Energy Shedding, manager
- BTU -Energy (BTU) Calculator
- IRR -Irrigation
- STG - General Staging
- CMP - Air Compressor
- CMPZN - Compressed Air Zones—Point of use
- LTG - Lighting
- PRG - Programmable
- GEN - Generic I/O

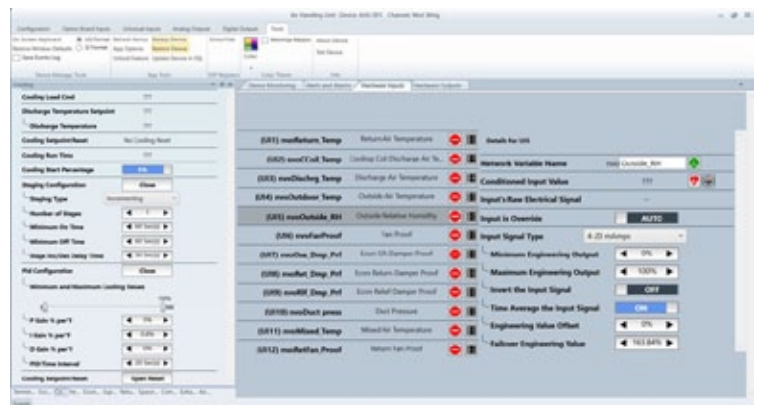
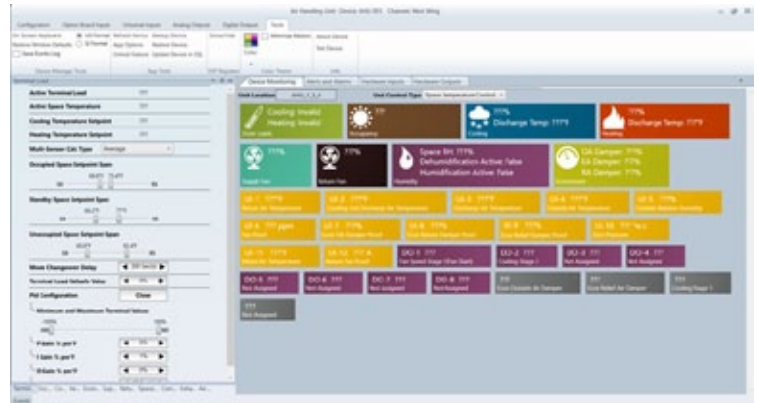


Topology Free, Polarity Free, up to 32,000 Nodes, Fully Isolated Network



Features

- OPIX Now!™ automation system controller applications are compatible with all L Series Logic controllers.
- OPIX Now!™ applications are loaded into the hardware and configured using our free, intuitive and feature-rich network interface.
- All applications can operate stand-alone or in conjunction with other applications and/or an OPIX Now!™ server/network manager.
- When monitored by an OPIX Now!™ server/network manager, you get web-based control and monitoring that includes trending, scheduling and alarming.
- OPIX Now!™ applications are easily interoperable with other open protocol controllers and devices.
- The hardware is built to the highest quality standards and is backed by a one-year warranty.
- All application software is designed and programmed in the USA by building automation experts.
- All of the L-Series Controllers are built around the Neuron FT-5000 microprocessor with no commissioning credit costs. Each controller is built to operate on LonWorks FT-10 twisted-pair channels. Embedded network update throttling is incorporated in each controller.
- Software features include:
 - Configurable network variable types
 - Configurable network object types
 - 10 PID loops
 - Configurable I/O properties
 - Network update throttling
 - Binding of unused I/O for use by other devices/applications



I/O Configuration	
Inputs	
Resistive	Thermistor 10KΩ Type II and Type III (Type II recommended)
	Potentiometer with custom scaling
	Dry contact
Voltage	0-10Vdc (Configurable)
Current	0-20mA DC (Configurable)
Diff. Pressure Sensor Internal Port	20 bit ADC resolution 0-8" w.c. (Highest in Industry)
Outputs	
Digital Outputs	Triac rate 1A @ 24VAV w/external power supply
Analog Outputs	20mA max at 30°C, 8 bit resolution
	0 or 10Vdc Digital/Binary
	0-10Vdc linear modulation
0 20Vdc Output	Loop power for 4-20mA or 0-10Vdc sensors/peripheral devices

Model Configurations	
Model	Description
L-2020	2-IN, 0-UI, 2-Triac, 0 AO
L-2240	2-IN, 2-UI, 4-Triac, 0 AO
L-2452	2-IN, 4-UI, 5-Triac, 2 AO, 20vdc Loop
L-21084	2-IN, 10-UI, 8-Triac, 4 AO, 20vdc Loop
DP	Differential Pressure Sensor
Note*	First 2 inputs reserved for resistive signal

Indicator Lights	
Device Status	Pulsing Green = Normal Off = No Power or Fault
Service Pin	OFF = Normal, running ON = No application

Agency Approvals	
Safety Certifications	UL916 Energy Management Equipment CSA C22.2#205 Issue 1983/06/01 (R2009) Signal Equipment standard

Mechanical	
Hardware	
Processor	FT-5000, 8 bit, 80Mhz
Memory	48k Application memory
Transceiver	FTT-10, 78kbps
Indicators	Multicolor LED (Power, Status)
Comm Ports	RJ11, LON, TTL
Power	
Supply Voltage	24VAC, 50/60Hz, Class II
Max	30VA
Typical	6VA plus peripherals
Fuse	1.85 A auto-resettable
Enclosure	
Material	ABS
Color	Black
Installation	35mm DIN
Connectors	Removable (green)
Environment	
Temperature	0°-70°C (32°-158°F)
Humidity	0-90% non-condensing
Storage	-20°-70°C (-4°-158°F)

