

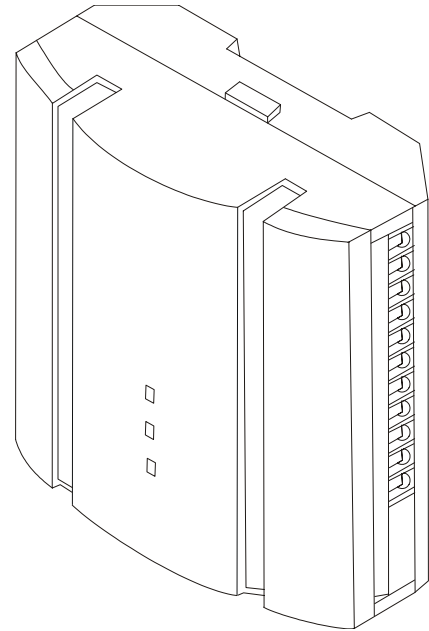
DXU-2

The DXU-2 package unit controller is a stand-alone microprocessor based controller for single zone DX package units with an economizer. The application includes packaged rooftop DX units with up to two stages of heating, four stages of cooling, and an economizer.

Overview

Digital inputs are provided for fan status, mixed air low limit indication, smoke detector, and filter status. Analog inputs are provided for mixed air temperature, return air humidity and supply air temperature. A two-wire serial interface is provided for the thermostat. The controller incorporates digital outputs in the form of triacs for fan start/stop, two heating stages, four cooling stages, and a two-position economizer. Instead of two heating stages, the unit can control a floating point heating valve. In addition, an analog output is provided to control a modulated economizer if required.

The controller is based on LONWORKS® networking technology. It can be networked to a higher-level control system for monitoring and control applications.



Features

- Four stages of cooling
- Two stages of heating, or a floating point heating valve
- Modulated or two-position economizer
- Economizer enabled based on enthalpy or dry bulb calculations
- Minimum cycle timer
- Runtime accumulation for heating, cooling and fan
- Local backup schedule
- Individual temperature setpoints for occupied/unoccupied heat and cool
- Time proportioned control of the staged outputs to reduce cycling
- Proportional + Integral control of the modulated economizer
- LONWORKS interface to building automation systems
- Mixed air low limit protection
- Filter status input
- Smoke detection input
- Thermostat with space temp, setpoint adjust, fan override, occupancy override
- Fan control energized on call for heating or cooling
- Automatic heat/cool changeover
- Remote sensor capabilities
- Automatic configuration with the LCI
- Alarm/Event reporting



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Specifications

Electrical

Inputs

- Cabling: twisted shielded pair, 18 AWG recommended—500 feet max. (152 meters)
- Resolution: 10 bit

Return Humidity

- 0-10 Volt

Mixed Air and Supply Air

- Precon Type III 10K thermistor

Fan Proof

- Dry Contact
- Normally Closed

Filter, Mixed Air Low Limit, and Smoke

- Dry Contact
- Normally Open

Thermostat Network

- 12 Volt nominal, internally limited to 0.04 A

Outputs

C1, C2, C3, C4, Fan, H1, H2 Economizer DO

- 24 Volts AC
- 1 A rms

Economizer AO

- 0-10 Volt
- 2K Ohm minimum load
- 8 bit resolution

FTT-10A Network

- Speed: 78KBPS
- Cabling: Maximum node-to-node distance: 1312 feet (400 meters)
- Maximum total distance: 1640 feet (500 meters)

Table 1: Network Wire Specifications

Cable Type	Pairs	Details	Connect Air Catalog No.
Level 4 22AWG (0.65mm)	1	Unshielded, Plenum, U.L. Type CMP	W221P-2001
Level 4 22AWG (0.65mm)	1	Unshielded, Non-Plenum, U.L. Type CM	W221P-1002

For detailed specifications, refer to the FTT-10A Free-Topology Transceiver User's Guide published by Echelon Corporation. For information on ordering Connect Air items, contact Connect Air International; 4240 B Street; Auburn, WA 98001 <www.connect-air.com>.

Power

Power Requirements

- 24VAC power (requires an external supply)

Power Consumption

- With no external loads: 15 VA

Mechanical

Housing

- Dimensions: 4 3/8" high, 4 5/16" wide, 2" deep (111 mm high, 110 mm wide, 51 mm deep)
- ABS Polycarbonate

Electronics

- Processor: 3150 Neuron 10 MHz
- Flash: 48 Kilobytes
- SRAM: 8 Kilobytes
- Termination: 0.197" (5.0 mm) Pluggable Terminal Blocks, 14-22 AWG

Environmental

- Temperature: -40 °F to 185 °F (-40 °C to 85 °C)
- Humidity: 0 to 95 percent, non-condensing

Agency Listings

- UL916

Agency Compliances

- FCC Part 15 Class A
- CE