

XFC1 Universal Exhaust Fan Controller - 3 Zones ***Self-Contained Interoperable Controller Model UCP-1 for Software Version 3***

SUPERSEDES: New

EFFECTIVE: April 1, 2016

Plant ID: 001-4265

XFC1

The XFC1 Universal Exhaust Fan Controller is a stand-alone microprocessor-based controller for supply and exhaust fan control. The application may require fan control for static pressure, temperature, air quality or ON/OFF control. The fan may be two-state or modulated.

Overview

The Exhaust Fan Controller (XFC) is designed to turn fans on and off and/or modulate them based on a predetermined occupancy schedule, demand input, and input from static pressure, temperature, and/or Air Quality sensors.

In addition to the Smoke Detection and Demand Inputs that are common to all zones, each of the three (3) zones has the following inputs and outputs:

- One digital input for fan status
- One analog input for pressure, temperature or air quality (CO, CO2 or NO2)
- One additional analog input for air quality (CO, CO2 or NO2)
- One digital output for ON-OFF fan control or fan enable
- One analog output for modulated fan control

Features

- Flexible configuration for three independent fan control zones
- Each zone supports multiple control strategies:
 - Static Pressure control with optional Air Quality input
 - Temperature control with optional Air Quality input
 - Air Quality control with two independent air quality inputs
 - Demand (ON-OFF) control with two independent air quality inputs
 - Occupied (ON-OFF) control with two independent air quality inputs
- Air Quality supports detection of CO, CO2, NO2
- All Sensors configured to operate Always, when Occupied or when Demand Input is ON
- Support for both Digital and Modulated Fans
- Support for both Supply and Exhaust Fan positions
- Individual Zone Reset
- Alarm/Event reporting for:
 - Smoke Detection
 - Fan Proof
 - Air Quality
 - High and Low Pressure
 - High and Low Temperature
 - Runtime Maintenance
- Local backup schedule with separate weekend and weekday schedules

- Commissioning mode for direct control
- LonWorks interface to building automation systems and host products
- Automatic configuration with the LCI
- Datapoints exposed through network variables

SPECIFICATIONS

Electrical Inputs

Smoke Detection, Demand: Dry Contact, Normally Open, 5 Volts DC Max

Temperature: Precon Type III 10K Thermistor

Pressure Sensor, Air Quality Sensor: 0-10 Volts DC

Fan Proof Sensor: Dry Contact, Normally Open, 5 Volts DC Max

Electrical Outputs

Fan Modulation: 0-10 Volts DC, 2K Ohm minimum

Digital Fan Enable: 24 Volts AC, 1 Amp at 50 °C, 0.5 Amps at 60 °C, limited by Class 2 supply

Power

Requires: 24VAC (20VAC to 28VAC), requires an external Class 2 supply

Consumes: 7.2W with no external loads, maximum limited by the Class 2 supply rating

Recommended Sensor Wire

Maximum Length: 500 feet (152 meters)

Cable Type	Pairs	Details	Taco Catalog No.
18AWG	1	Stranded Twisted Shielded Pair, Plenum	WIR-018

Recommended LON Bus FTT-10A Network Wire

Speed: 78KBPS

Max Volts: 42.4 Volts DC

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

Cable Type	Pairs	Details	Taco Catalog No.
Level 4 22AWG (0.65mm)	1	Unshielded, Plenum, U.L. Type CMP	WIR-022

Mechanical

Dimensions: 5.55" (141mm) high, 6.54" (166 mm) wide, 1.75" deep (44 mm), ABS

Controller Weight: 0.70 pounds (0.32 kilograms)

Shipping Weight: 1.0 pounds (0.46 kilograms)

Processor: 3150 Neuron 10 MHz

Flash: 48 Kilobytes

SRAM: 8 Kilobytes

Termination: 0.197" (5.0 mm) Pluggable Terminal Blocks, 14-22 AWG

Temperature: 32 °F to 140 °F (0 °C to 60 °C)

Humidity: 0 to 90%, non-condensing

UL Listed for US and Canada, Energy Management Equipment PAZX and PAZX7

FCC Part 15 Class A compliant

CONTROLS MADE EASY®

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