

LX-VAVCF-1

LX Series Programmable VAV Controllers

Description

The LX Series Programmable VAV controller (LX-VAVCF) uses the latest technology to provide more flexibility and reliability. The programmable Variable Air Volume (VAV) controller can be programmed very easily using Facility Explorer. The controller features a drift-free differential pressure sensor that resists loss of accuracy over time due to dust particle accumulation. The LX-VAVCF controller uses the LonTalk® communication protocol.

Features

- robust communications object - Complies with LONWORKS® technology for interoperability and peer-to-peer communication between controllers without the necessity of intermediary agents.
- free programmable object - allows you to view all internal points using 10 UNVT and 15 values of each object. The LX-VAVCF controller offers many programming tools like Proportional plus Integral plus Derivative (PID), timers, and optimum start

- hardware - allows you to use any commercially available thermistor type (100 ohm to 100k ohm) and setpoint potentiometer type. Features extremely accurate on-board airflow sensor for pressure independent single duct VAV applications. Can read differential pressure as small as 0.04 milli-inches of water.
- software - features 18 Network Variable Inputs (NVIs) and Network Variable Outputs (NVOs) with changeable types and lengths, supports fan-in binding for zoning applications, and all objects (programming, schedule, real-time clock) are configurable through their own wizard.



LX-VAVCF-1 Controller

Repair Information

If the LX-VAVCF controller fails to operate within its specifications, replace the unit. For a replacement, contact the nearest Johnson Controls® representative.

Selection Chart

Code Number	Description
LX-VAVCF-1	Programmable VAV controller, actuator w/feedback, flow sensor, 10 I/O (4 Universal Inputs [UIs], 4 triac Digital Outputs [DOs], 2 Universal Outputs [UOs]) and wizard.

Technical Specifications

LX-VAVCF Controllers		
Product Code		LX-VAVCF-1
Power Requirements	Voltage	24 VAC/DC; 15%, 50/60 Hz, Class 2
	Protection	3A removable fuse for triac when using the internal power supply
	Consumption	5 VA
	Maximum Consumption	10 VA (normal), or 85 VA if internal power supply is used for triac (special application)
Ambient Storage Conditions	Ambient Operating Temperature	0 - 70°C, (3 to 158°F)
	Ambient Storage Temperature	-20 to 70°C (-4 to 158°F)
	Ambient Storage Condition	0 to 90%
General	Processor	Neuron® 3150®, 8 bits, 10 MHz
	Memory	Non-volatile Flash 128k (storage) (APB application, Non-volatile Flash 64k (APB application)
	Media Channel	TP/FT-10, 78 Kbps
	Communication	LonTalk® protocol
	Transceiver	Echelon® FTT-10
Enclosure (housing)	Material	FR/ABS Resin
	Dimensions (with screws)	4.88 x 8.9 x 2.48 in. (124 x 226 x 63 mm)
	Shipping Weight	2.30 lb (1.05 kg)

LX Series Programmable VAV Controllers (Continued)

LX-VAVCF Controllers		
Inputs	Quantity	4 universal software configurable
	Input Types	Digital: Dry Contact, Analog Voltage: 0 to 10 VDC, Accuracy: $\pm 0.5\%$, Analog current: 4 to 20 mA with 249 ohm external resistor
	Resistor Support	Thermistor: 100 ohm (PT100), 1 K (RTD I K Type 85), 10 K (Type, 2, Type 3), Range: -40 to 125°C, (-40 to 257°F) Accuracy: $\pm 0.5^\circ\text{C}$, $\pm 0.9^\circ\text{F}$ Resolution: 0.1 to 0.18°F (10K ohm to 10K ohm supported using translation table)
	Potentiometer	10k ohm or 100K ohm, translation table (21 points)
	Differential Range	0-250 Pa (0-1 in. H ₂ O)
	Pressure Sensor	(VAV model only): Resolution 0.04 milli-inches H ₂ O,
	Accuracy	$\pm 0.3\%$ full scale
	Input Resolution	16-bit analog/digital converter
Hardware Outputs	Quantity	6 Hardware 4 Digital: Triac 0.75 A at 24 VAC, External or Internal power supply 2 Universal: 0-10 VDC linear, digital 0-10 VDC linear, digital 0-12 VDC (Analog or Digital) or PWM 20 mA max, Maximum load 600 Output Resolution: 10-bit digital/analog converter
Damper Actuator	Torque	35 in-lb, 4 N-m Angle of Rotation: 95° adjustable Fits Shaft Diameter: 5/16 to 3/4 in. (8.5 mm to 18.2 mm) Power Supply: from controller