

MX0662 VAV & FCU Controller Series



The MX0662 Series Controllers are rugged, network centric, high performance Input/Output controllers to accommodate general and specific applications such as VAV and FCU. They support either LONWorks Networks® ISO/IEC 14908-1 (ANSI/CEA 709.1-B and EN14908.1) Control Network Protocol or Modbus Serial.

General Features

Protocols Support

These series supports either LONWork® Networks or Modbus Serial to provide flexible implementation.

Multiple Input/Output Type

The controller has six Analogue Input (3 Resistive and 3 Voltage) six Digital Outputs (Relay), and two Analogue Output (Voltage).

High Accuracy Analogue Channels

High speed 12 bits A/D converter with programmable gain amplifier yields a high resolution and accurate reading on analogue input points. 12 bits D/A provides more accurate analogue output control.

Programmable/Standalone Functionality

The controller can be configured to operate as standalone device. The programmable functions are available, typically I/O, PID, scheduler, and etc.

Status Indicator

Operational activity such as the Power, Operation, Communication, and Commission status are conveniently indicated by LED.

Reset & Service Switch

A Reset Switch has been provided for system reset without power removal (Warm Start operation). The Service Switch allows the controller to broadcast itself to the network during installation and implementation (for LONWork models only).

Thermostat

A thermostat can be connected to allow users to adjust the room temperature.

Online Firmware Upgrade/Configuration

The controller firmware can be upgraded through network connection. Network communication and operation parameters can be changed with the built-in boot-loader and terminal program.

Robust System Operation

The controller has a built-in High accuracy Real Time clock with backup battery. Software and hardware watchdog timer are provided for high reliability operation.

Ease of Installation

All I/Os are connected via field removable terminal block connectors for easy maintenance. The controller casing fits standard DIN rail mounting.

LONWorks Features:

High-Speed Data Rates

Supports LONWork® Networking interface (FT-X3) free topology (Polarity Insensitive) with the transmission speed 78kbps and up to 1250kbps (Depends on network transceiver).

VAV Features:

Integrated Air Flow Sensor

The controller has an integrated MEMS differential pressure sensor.

Device Specifications

Electrical

Power Supply: 24VAC +/- 5%, 3.6VA max, or (24~34) +/- 5%VDC
 Consumption: 300mA max @ 24VDC
 Operating Temperature: 32° to 150° F (0° to 65° C)
 Storage Temperature: -4° to 150° F (-20° to 65° C)
 Operating Humidity: 10% to 95% relative humidity non-condensing

Communication

Physical Interface 1 (Port 1):

- FT-X3 Communication Transformer (Free Topology) Two-wire
- Half Duplex
- Communication Speed: 78k bit/s and up to 1250k bit/s (Depends on network transceiver)
- ISO/IEC 14908 (ANSI/CEA 709.1-B and EN14908.1)
- Application Protocol: LonWorks® Networks
- Multi-drop Capability: Yes, Free topology Support

or

- EIA-485 (BUS A, B) Two-wire
- Half Duplex
- Baud Rate Speed: (9.6k, **19.2k**, 38.4k, 76.8k bit/s)
- Data Bit: (**8 bits**)

Physical Interface 2 (Port 2):

- EIA-232
- Half Duplex
- Baud Rate Speed: (9.6k, **19.2k**, 38.4k, 76.8k bit/s)
- Data Bit: (**8 bits**)

Input/Output Configuration

Analogue Input:

- 3 Channels (12 bits Resolution)
 - Resistance: 0 – 30k (+/- 1% Ohm)
 - Thermistor: 10K, 10K Shunt, 1K Balco, 1K Platinum All (+/- 1%°C)
- 3 Channels (12 bits Resolution)
 - Voltage: 0 – 10V (+/- 1% V)

Digital Input:

- 6 Channels
 - Type: Relay Contacts, SPST NO, 48VA at 24VAC, Pilot Duty

Analogue Output:

- 2 Channels (12 bits Resolution)
 - Type: Voltage: 0 – 10V

Auxiliary Output:

- 5VDC @ 1A

Mechanical

- Dimension: 80mm (L) x 135mm (W) x 45mm (H)
- Material: UL94 ABS
- Weight: TBA

VAV Models

The following models are supplied with factory included VAV sequence of operation programs.

MX0662VL

This model is supplied with LONWorks and RS-232 Interface. It supports the LONWork® Networks Protocol.

MX0662VR

This model is supplied with RS-485 and RS-232 Interfaces. It supports the Modbus Serial Protocol.

Air Flow Input Specification

Air Flow Sensor:

- Measuring range of up to ± 2 inches of water (± 500 Pa).
- High accuracy of ± 3%RD
- Linearized and temperature compensated
- High flow impedance to reduce the influence of bypass configuration
- Port Type: Barb joint, Maximum outside diameter: 4.9 mm

FCU Models

The following models are supplied with factory included FCU sequence of operation programs.

MX0662FL

This model is supplied with LONWorks and RS-232 Interface. It supports the LONWork® Networks Protocol.

MX0662FR

This model is supplied with RS-485 and RS-232 Interfaces. It supports the Modbus Serial Protocol.