The Universal Controller (part number 33UNIVCTRL-01) provides auxiliary building control to interface with lighting, fans, pumps and other HVAC equipment in a stand-alone or Carrier-networked environment using closed-loop, direct digital controls. The Universal Controller’s pre-engineered algorithms provide simple building integration for small-to-medium commercial applications with 16 field point capability (8 inputs and 8 outputs).

→ **Features/Benefits**

- Integrates auxiliary building system control.
- Controls non-Carrier equipment and Carrier HVAC equipment not equipped with Product Integrated Controls, using the Carrier communicating network.
- Compatible with all standard Carrier network user interfaces.
- Stand-alone control and monitoring of up to 16 field points, using proven algorithms.
- Two LEDs, conveniently located on the front of the module, indicate processor status (red) and communication bus status (yellow).
- Local connection for Carrier network.
- Three-day backup of clock and data such as Runtime and Consumable.
- Batteries are not required.

**Functions**

- Constant Volume (CV) Cooling and Heating Control
- Dehumidification
- CV Mixed Air Damper Optimization
- Fan Control
- Pump Control
- Lighting Control
- Indoor Air Quality
Features/Benefits (cont)

- Generic PID Control
- Time Scheduling with/without Override
- Analog Temperature Control
- Discrete Interlock
- Discrete Staging Control
- Permissive Interlock
- Nighttime Free Cooling
- Set Point Reset
- Optimal Start/Stop
- Linkage to airside systems

### 8 inputs
- Each input (1 to 8) can be used as a discrete, analog, or temperature input
- Discrete inputs can be dry contact or pulsed dry contact
- Analog inputs can be 4 to 20 mA or 0 to 10 vdc
- Temperature inputs can be 5K or 10K ohm thermistors

### 8 outputs
- Each output (1 to 8) can be discrete or analog
- Discrete outputs are 24 vdc at 80 mA
- Analog outputs are 4 to 20 mA or 0 to 10 vdc (varies with point type)

#### Carrier network features
When included in a network with other network controllers, Option Modules, and user interfaces, the following additional capabilities are possible:
- Alarm processing, messages, and annunciation
- Runtime, history, and consumable data collection and report generation
- Demand limiting
- Broadcast of data such as outside-air temperature, outside air humidity, and time of day
- Timed overrides for use with Tenant Billing
- Airside linkage

#### Enclosure and power supply
The Universal Controller is designed so that it can be easily installed in a field-supplied enclosure (not outdoor rated). The Universal Controller uses any standard, Class II, SELV-compatible, field-supplied 24 vac, 60 va transformer.

#### Specifications

**Power Requirements**
- 60 va at 24 vac ± 15%
- (1.5a at 33 vdc ± 15%)

**Dimensions**
- 14-in. H x 6.5-in. W x 2-in. D
- (35.5 cm x 16.5 cm x 5.1 cm)

**Operating Temperature**
- –40 F to 158 F, Outdoor Rated
- (–40 C to 70 C)

**Storage Temperature**
- –40 F to 185 F (–40 C to 85 C)

**Operating Humidity**
- 10 to 95%, non-condensing

**Discrete output specifications**
- Output Signal: 24 vdc at 80 mA

**Analog output specifications**
- 4 to 20 mA Type
  - Load Resistance: 500 to 600 ohms
  - Resolution: 0.04 mA
  - Accuracy: ±2%
- 0 to 10 vdc Type (varies with point type)
  - Load Resistance: 50 ohms
  - Resolution: 20 mV
  - Accuracy: ±2%

**Discrete input specifications**
- Dry Contacts: Switch Closure
- Pulsing Dry Contacts
  - Repetition Rate: 5 Hz max.
  - Minimum Pulse Width: 100 msec

**Analog input specifications**
- 4 to 20 mA Type
  - Wire type: 2-wire
  - Resolution: 0.025 mA
  - Accuracy: ± 1.5%
- 0 to 10 vdc Type
  - Resolution: 0.0125 V
  - Accuracy: ± 1%
- 5K Thermistor Type
  - Nominal reading at 5,000 ohms: 77 F (25 C)
  - Resolution: 0.2 F
  - Accuracy: + 1 F
- 10K Thermistor Type
  - Nominal reading at 10,000 ohms: 77 F (25 C)
  - Resolution: 0.2 F
  - Accuracy: + 1 F

**Approvals**
The Universal Controller is UL 873 and CE Mark Industrial listed.