# BAScontrol-E36

CONTEMPORARY CONTROLS

*Installation Guide*

# BASC-E36

## 36-point Edge Controller

The BAScontrol-E36 is a 36-point edge controller which supports BACnet/IP client/server operation over its built-in 2-port Ethernet switch connection or BACnet MS/TP over its EIA-485 port. A wall setter port supports an optional wall setter device. The controller complies with the B-ASC device profile having a convenient mix of sixteen universal inputs, four binary inputs, eight analog outputs, and eight binary outputs. It is designed for the requirements of ASHRAE Guideline 36-2018 High-Performance Sequences of Operation for HVAC Systems (GL-36).

The controller has the necessary computing power and input/output (I/O) points to execute recommended advanced sequences published in GL-36. It utilizes BACnet for communication protocol and Sedona for control. The BAScontrol-E36 runs on a Linux platform and has edge-connected features, such as a cloud connector to Azure IoT Central, a JavaScript Object Notation (JSON)-node programable dashboard, email alarms and notifications, and access to an online weather service.

The device is fully webpage configurable and freely programmable using Sedona's drag-and-drop programming methodology and can be programmed using Contemporary Controls' free BAScontrol Toolset. A Sedona N4 driver is available for programming via N4 Workbench. Rugged design, low profile, and wide temperature operation make it suitable for indoor or outdoor use.


***Electrical*** *(Class 2 Circuits Only)*

| **INPUT** | ***DC*** | ***AC*** |
|---|---|---|
| Voltage (±10%): | 24 V | 24 V |
| Power: | 15 W | 22 VA |
| Frequency: | N/A | 47-63 Hz |

***Environmental***

| | |
|---|---|
| Operating temperature: | –40°C to +75°C |
| Storage temperature: | –40°C to +85°C |
| Relative humidity: | 10–95%, non-condensing |

| ***Functional*** | ***Physical Layer*** | ***Cable length limit*** | ***Comments*** |
|---|---|---|---|
| ***Ethernet*** | 10BASE-T<br>100BASE-TX | 100 m | |
| ***MS/TP*** | EIA-485 | 1200 m (for 9.6-76.8 kbps)<br>1000 m (for115.2 kbps)<br>Jumper selectable bias and termination. | |
| ***Wall Setter*** | EIA-485 | 100 m | |

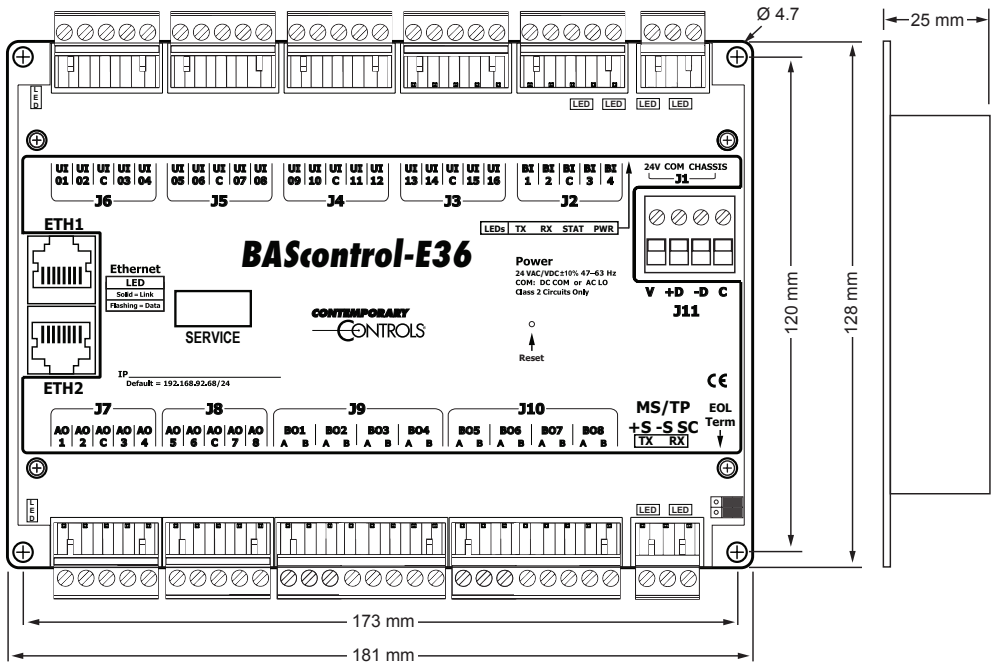
## *Installation*

### *Power*

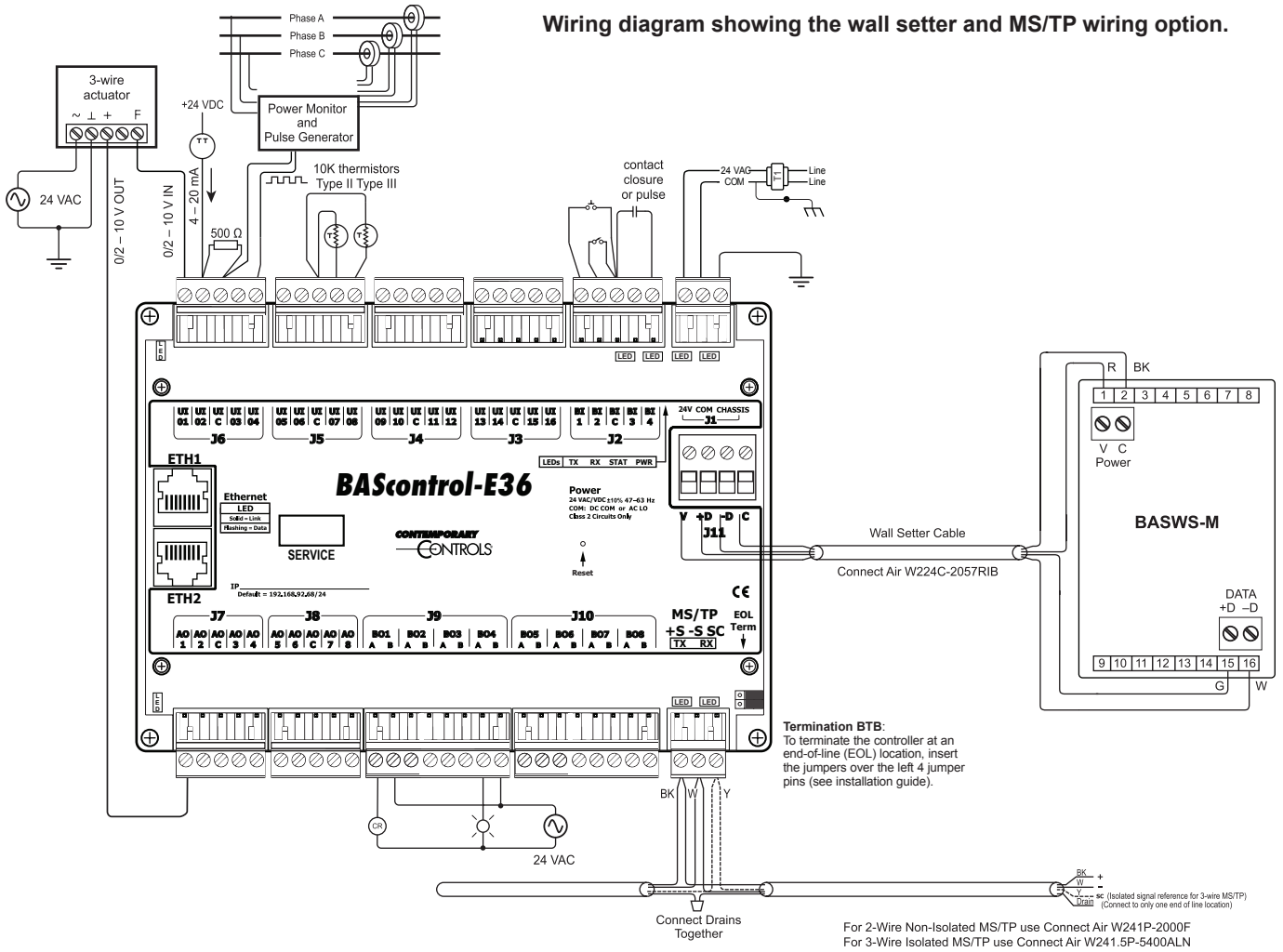
The power source for the internal supply is applied via the two terminals labelled HI and COM. COM is for the power source return and serves as the common ground connection. Primary 24 VAC/VDC (± 10%) power is applied to HI and COM. HI connects to a diode and accomplishes half-wave rectified power—while providing reverse input voltage protection. The recommended power conductor size is 16–18 AWG (solid or stranded). Ground is directly connected to zero volts. Input connections are reverse polarity protected. This device is intended for use with Class 2 circuits. A ground lug is provided to connect the device to either earth or control panel ground. Use a green 16-18 AWG for connection.

**WARNING:** Internally, this device utilizes a half-wave rectifier and therefore can only share the same AC power source with other half-wave rectified devices. Sharing a common DC power source is also possible. Sharing AC power with full-wave rectified devices is NOT recommended. Devices powered from a common AC source could be damaged if a mix of half-wave and full-wave rectified devices exists.

**The dimensions are the same on all models. All units are in mm.**



## *Input/Output Connections*




**Wiring diagram showing the wall setter and MS/TP wiring option.**

**To enable or disable bias/termination, install jumpers as shown.**

***Bias/Termination Enabled***

***Bias/Termination Disabled***

## *Web Page Configuration*

The BAScontrol-E36 contains an interactive web server accessible from any Internet-compatible PC on the local network with recent versions of most standard web browsers such as Microsoft Edge, Mozilla Firefox, Apple Safari, or Google Chrome. To configure the controller, connect it to your PC using an Ethernet cable and set the PC's IP and subnet mask in Local Area Connection –> Properties. In the Internet Protocol Version 4 (TCP/IPv4) settings of your PC, specify an IP address and a Subnet mask in the same subnet as the BAScontrol-E36 (e.g., 192.168.92.5 /24).

BAScontrol-E36 factory settings: *Default IP address is **192.168.92.68** and a Class C subnet mask of **255.255.255.0 (/24)***
*User Name is **admin** and Password is **admin***

***Reset IP*** switch is located on the front, underneath the metal case edge, and also indicated on label. Remove power, then press and hold the Reset IP switch. Apply power again while holding down the Reset IP switch. I/O channels will alternately flash after startup. Log in to the default IP address and set new IP, User ID, and Password. For complete datasheet and details on BAScontrol-E36, support, or compliance information, please visit our product page at: https://www.ccontrols.com/basautomation/bascontrole36.php and click on the Support tab under More Information.