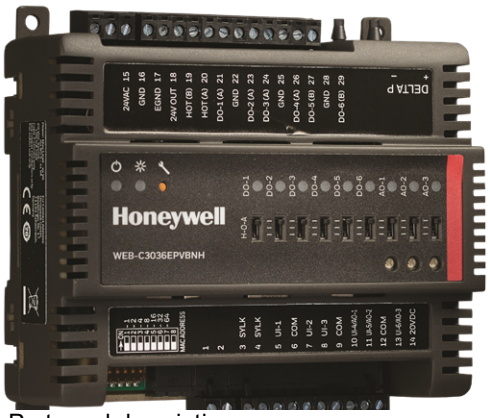
CIPer Model 30

Installation Instructions



Introduction

The Honeywell CIPer Model 30 is a compact, Internet Protocol (IP) edge controller for VAV, Unitary and Plant applications. With its native Niagara N4 on-board programming platform; the CIPer controller provides Internet connectivity, Web serving capability, integrated control, data logging, alarming, trending, and scheduling management. The controller can be used to aggregate information (including real-time data, alarms, trends, and history) and integrate this data to the Sentience Cloud for value-added data analytics.

Table 1 Parts and description

Model number	Description
WEB-C3036EPUBNH	Honeywell CIPer - IP controller with 3 universal inputs, 6 Binary Outputs, 3 Universal I/O and HOA switches
WEB-C3036EPVBNH	Honeywell CIPer - IP controller with 3 universal inputs, 6 Binary Outputs, 3 Universal I/O, VAV airflow sensor and HOA switches
WEB-O3022H	IO module with 3 universal inputs, 2 Binary Outputs, 2 Universal I/O and HOA switches
WEB-O9056H	IO module with 9 universal inputs, 6 Binary Outputs, 5 Universal I/O and HOA switches

Specifications:

- Power consumption: AC: Max 100VA
- Rated voltage: 20-30 VAC; 50/60Hz
- Ambient temperature: -4 to 131F (-20 to 55C)
- Storage temperature: -4 to 150F (-20 to 65C)
- Humidity: 5% to 95% non-condensing
- Differential pressure sensor range (VAV model): 0-2” WC (0 to 374 Pa) 32 to 122F (0 to 55C)
- Universal Inputs / Analog Outputs (configurable): 6 UI / 3 configurable as AO
- Flexible UI’s to connect external sensors like 20KNTC, PT1000 and other resistive sensors
- Digital Output type / rating: Solid-State Relay, 1.5A Continuous, 3.5A inrush for 100 mS.
- Digital Output voltage rating: 20 to 30 VAC @ 50/60 Hz
- Pulse Inputs: 100Hz max, minimum duty cycle: 5 mS ON / 5 mS OFF.

Before Installation

WARNING! Install all equipment in accordance with the National Electric Code and in a manner acceptable to the local authority having jurisdiction. Read these instructions and the CIPer Model 30 controller Installation Instructions (31-00183-01) carefully before installing equipment. Failure to follow all instructions may result in equipment damage or a hazardous condition.

Attention! Installez tout le matériel en conformité avec le Code national de l'électricité et d'une manière acceptable pour l'autorité localecompétente. Lisez ces instructions et le guide d' installation et fonctionnement de l'ACM (LT-ACMIOG) avant l'installation du matériel. Le non respect des instructions peut entraîner desdes dommages matériels ou une situation dangereuse.

WARNING! The CIPer 30 controller and its components may be susceptible to electrostatic discharge (ESD). Use appropriate ESD grounding techniques while handling the product. When possible, always handle the product by its non-electrical components.

The CIPer 30 controller is available in two models (See table 1).
Review the power, input, and output specifications before installing the controller.

Installation

The CIPer Model 30 controller must be mounted in a position that allows clearance for wiring, servicing, removal, connection of the terminal blocks and access to the MAC address DIP switches. It may be mounted in any orientation.

Mounting

The CIPer controller mounts on a standard DIN rail in one of two ways:

- ♦ vertically, with the connections on the right and left sides of the unit.
- ♦ horizontally, with the connections on the top and bottom of the unit.

The controller also has a locking clip, as do both type of I/O expansion modules. Mounting on DIN rail ensures accurate alignment of connectors between all modules. The controller can also be screw-mounted using the four mounting tabs, accessible under the covers. These mounting tabs may be broken off if needed to save space when DIN rail mounting.

Note: Mount the controller prior to mounting any necessary items (I/O modules).

WARNING! Be sure the CIPer controller does not have power connected while mounting.

Attention! Assurez-vous que l'appareil n'est pas connecté à l'alimentation lors du montage.

To mount the CIPer controller on a DIN rail:

1. Holding the controller with its top tilted in towards the DIN rail, hook the two top flex snaps on the back of the controller onto the top of the DIN rail.
2. Push down and in to latch the two bottom latching tabs of the controller onto the DIN rail.
3. Properly ground the panel, then terminate grounded components of power, communications, and I/O wiring.

To remove the CIPer controller from the DIN rail:

1. Push straight down from the top to release the bottom tabs.
2. Rotate the bottom of the controller out towards you and pull the controller up and away from the DIN rail to release the bottom latching tabs.

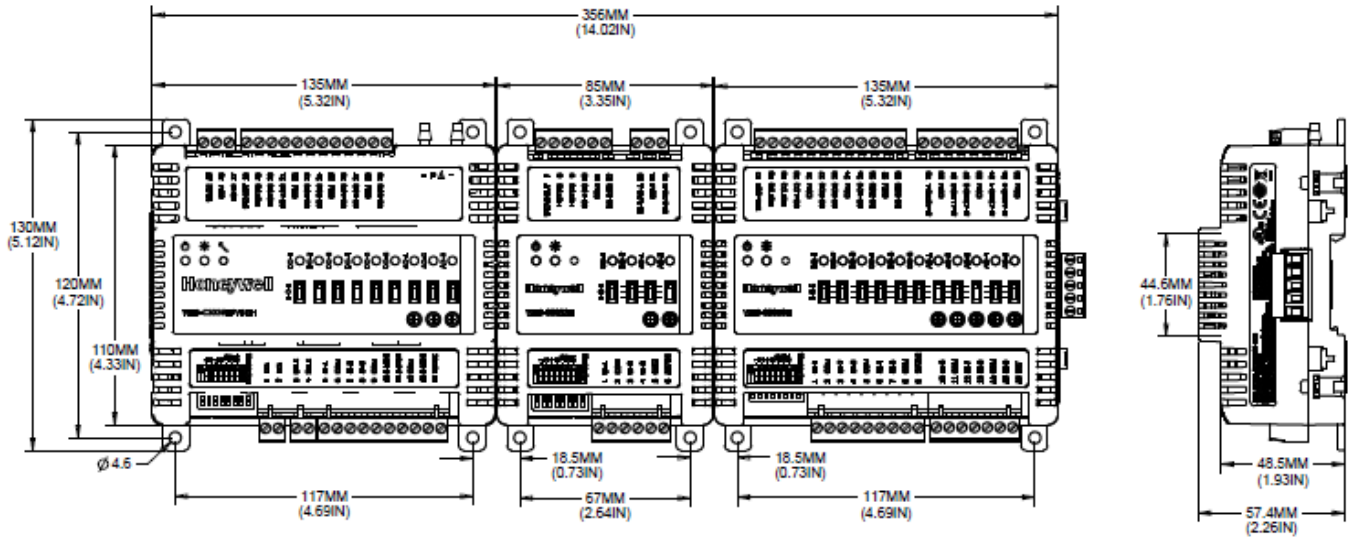


Fig. 1 Panel mounting - controller dimensions in mm (inches)

IMPORTANT! Avoid mounting in areas where acid fumes or other deteriorating vapors can attack the metal parts of the controller, or in areas where escaping gas or other explosive vapors are present.

Power

The CIPer controller requires 20-30 VAC, 50/60Hz. Power consumption is based on the sum of the VA rating for each controller and should not exceed 100VA. If additional modules are required then they must be powered from a separate transformer. Refer VA rating for each module in the note below.

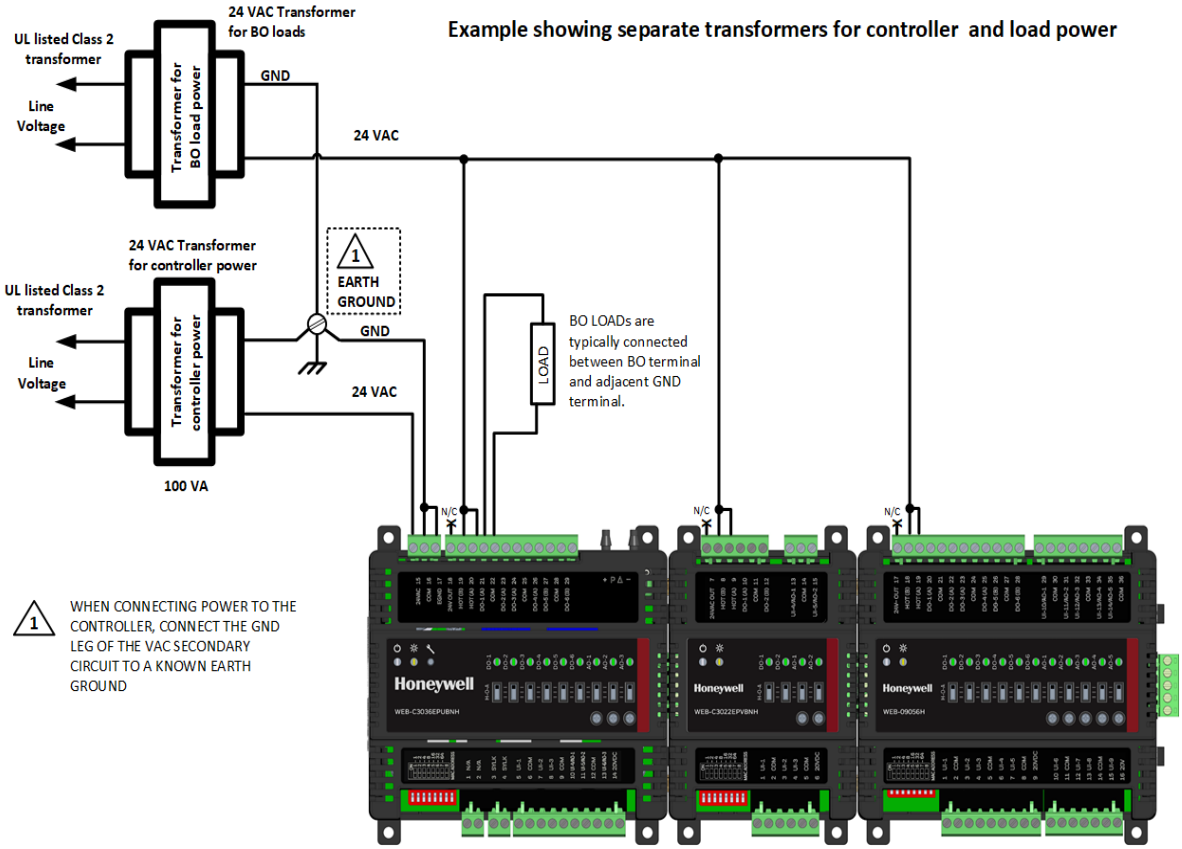


Fig. 2 Use separate transformers for controllers and load power

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Note: Transformer VA load for module power only (no BO loads)
a) WEB-C3036EPVBNH = 50VA
b) WEB-O9056H = 35VA
c) WEB-O3022H = 15VA

Using Terminal blocks

The CIPer controller uses removable terminal blocks to simplify field wiring of power and cabling. If desired, you can remove the terminal blocks from the unit, terminate cable, and reset the block when you finish.
To terminate cable:

1. Strip a wire jacket from the end of the cable.
2. Use a small screwdriver to turn the adjustment screw fully counter-clockwise. The clamps in the wire slot separate as you turn the screw.
3. When the clamps in the wire slot are fully open, insert the stripped end of the cable (the insulation end must be flush with the terminal block). Be sure to insert all cable strands into the wire slot.
4. Hold the cable in place and turn the adjustment screw clockwise to tighten it until the clamps in the wire slot secure the cable. Tug gently on the cable to ensure that it's securely terminated

5 Both type of I/O modules WEB-O3022H and WEB-O9056H can be connected directly to the WEB-C3036EPVBNH controller as shown in Fig. 3.

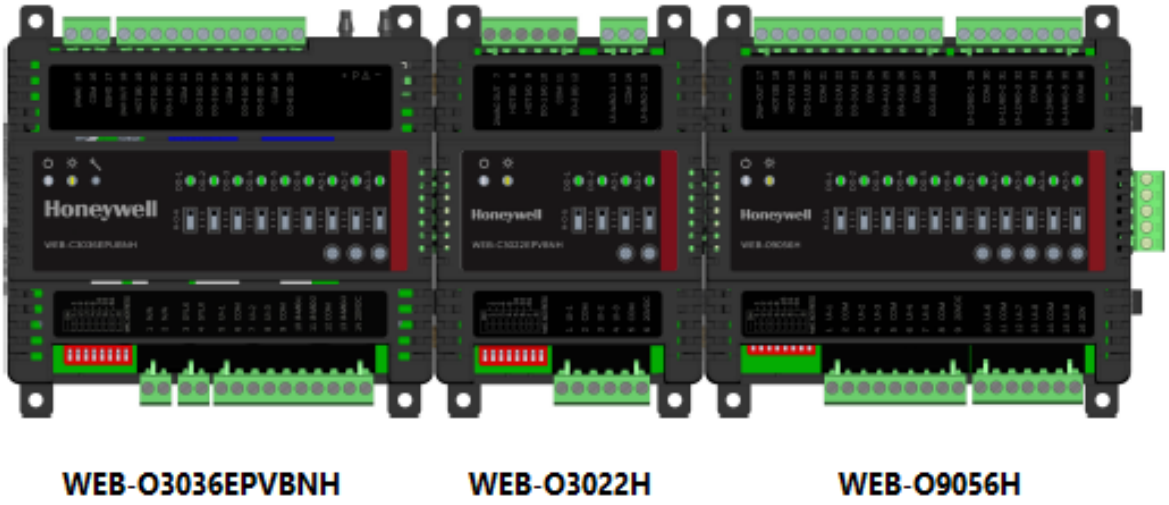


Fig. 3 Stacked Controller and IO modules

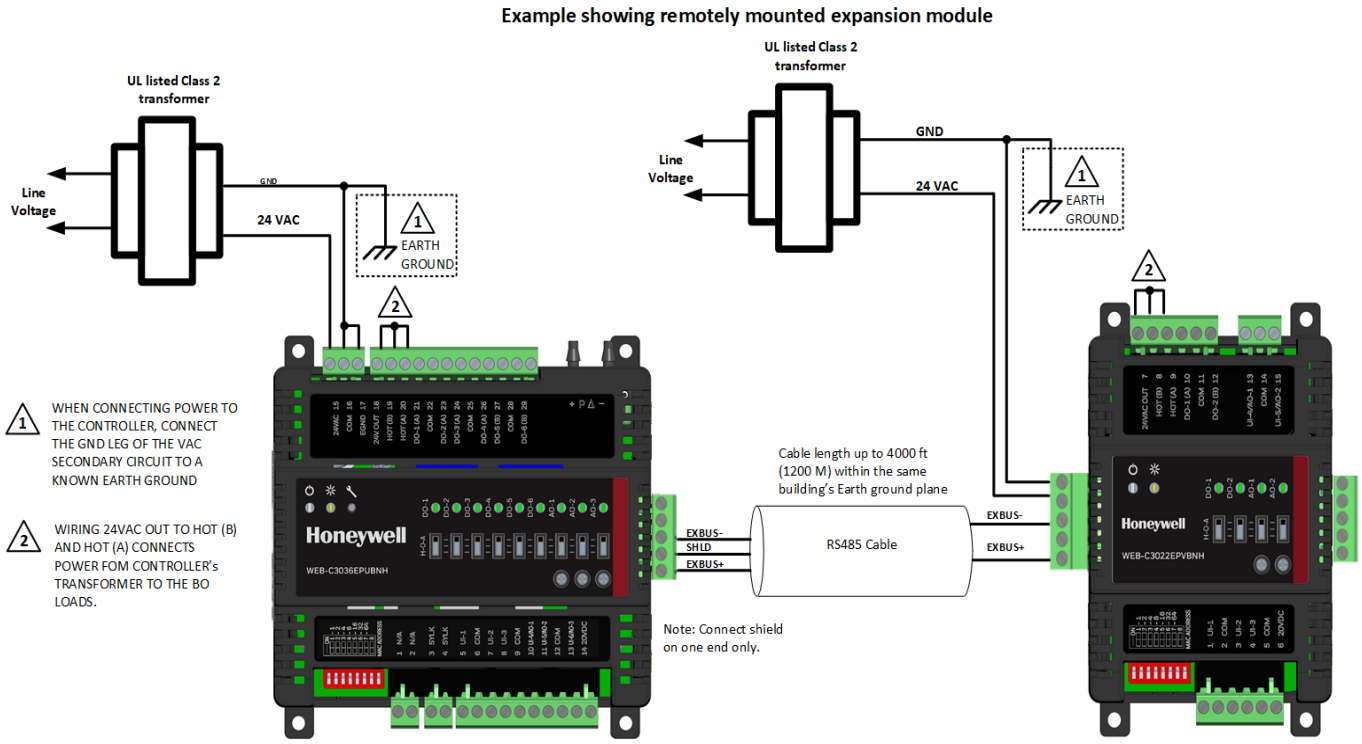


Fig. 4 Remotely mounted expansion module

Table 2 Terminal Description for WEB-C3036EP controller

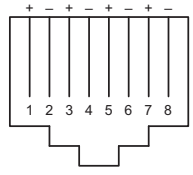
Terminal	Description
1,2	Not used
3, 4	2 wire SYLK bus to connect SYLK modules
5, 7, 8	Universal inputs UI-1 to 3. Software controlled input type selection supports 10k Thermistor (type II), Dry Contact, 0-10Vdc, 0-20mA, Microset (In-0), and Pulse (In-1, -2, -3)
6	COM terminal for UI-1 & UI-2
9	COM terminal for UI-3 & UI-4/AO-1
10, 11, 13	Universal Inputs/Outputs as UI-4 to 6 Analog Outputs: selectable 0-10vDC or 0-20mA
12	COM terminal for UI-5/AO-2 or UI-6/AO-3
14	Supplies 20V DC
15	Controller input supply voltage 24VAC
16	Supply voltage GND
17	Electrical grounding / Earth
18	24VAC output from controller's power (terminal 15) for DO devices
19	HOT B. Supplies power to common side of controller's DO (For DO 5,6)
20	HOT A. supplies power to common side of controller's DO (DO 1, 2, 3, 4)
22, 25, 28	GND terminal for DO-1&2, DO-3&4, DO-5&6 respectively
21, 23, 24, 26	DO-1 to DO-4
27, 29	DO-5, DO-6

Ethernet Connections

Fig. 5 Ethernet Connections

CIPer controller has a built-in four-port Ethernet switch that supports 10BASE-T (10 Mbps), 100BASE-TX (100 Mbps), and 1000BASE-T (1000 Mbps) Ethernet connections. It automatically operates at 1000 Mbps if other devices and cabling support it.

Table 3 Ethernet Connections

Ethernet RJ-45 jack	An RJ-45 jack for connection to Ethernet is on top of the CIPer controller. Pin designations for the RJ-45 jack are shown.		
		**Pin**	**Assignment**
		1	Bi-directional pair A+
		2	Bi-directional pair A-
		3	Bi-directional pair B+
		4	Bi-directional pair C+
		5	Bi-directional pair C-
		6	Bi-directional pair B-
		7	Bi-directional pair D+
		8	Bi-directional pair D-
Cable type and length	Use an approved Category 5e or better Ethernet drop cable with RJ-45 plugs. Use professionally manufactured cables of no more than 328 feet (100 meters).		

Disposal

The product should not be disposed of with other household waste. Check for the nearest authorized collection centers or authorized recyclers. The correct disposal of end-of-life equipment will help prevent potential negative consequences for the environment and human health. Do not burn this device.

Conformance statement

This Class B digital apparatus complies with Canadian ICES-003.

This device complies with Industry Canada licenseexempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Cet équipement a été testé et jugé conforme aux limites de Classe B pour un appareil numérique, en vertu de l'article 15 de la réglementation de la FCC. Ces limites

ont été instaurées pour fournir une protection raisonnable contre toute interférence nuisible dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l'énergie radiofréquence. S'il n'est pas installé et utilisé conformément aux instructions, il peut provoquer des interférences sur les communications radio. Cependant, il n'est pas garanti que des interférences ne se produiront pas dans certaines installations. Si cet équipement cause des interférences à la réception radio ou télévisée (ce qui peut être vérifié en éteignant l'appareil puis en le remettant sous tension), l'utilisateur peut tenter de les résoudre en suivant une ou plusieurs des mesures ci-après:

- Réorienter ou déplacer l'antenne réceptrice.
- Augmenter l'espace entre l'appareil et le récepteur.
- Brancher l'appareil à une prise de courant différente de celle sur laquelle le récepteur est branché.

Pour obtenir de l'aide, contacter le vendeur ou un technicien radio/télévision expérimenté.

Notice

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.