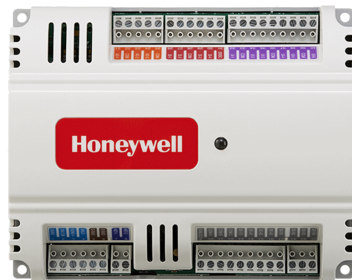
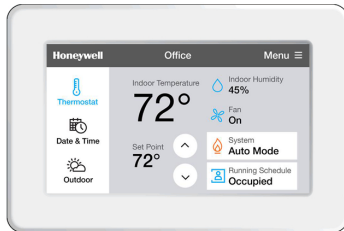


Honeywell

LCBS Connect Controller and Wall Module

SPECIFICATION DATA



GENERAL

The LCBS Connect controller and wall module combination have been designed to control Constant Volume Air Handling Unit, Heat Pump application, and their configurations. With the embedded control logic and integral temperature, humidity sensors, they control the space temperature in a given zone by regulating the heating and cooling equipment that delivers conditioned air to that space. In addition to standard heating and cooling control, they provide advanced control options making them a state-of-the-art commercial building control solution. The control can be done as a stand-alone operation, however, when implemented with network communication capabilities, optimal functional benefits are achieved. These additional features are available through the connection to an LCBS Connect gateway which will enable access to the Honeywell cloud.

SPECIFICATIONS

Electrical

Rated Voltage: 20-30 Vac; 50/60 Hz
Power Consumption:
100 VA for controller and all connected loads
Controller only Load: 5 VA maximum
External Sensors Power Output: 20 Vdc \pm 10% @ 75 mA maximum

Environmental

Controller Operating & Storage Temperature Ambient Rating:
Minimum: -40° F (-40° C); Maximum: 150° F (65.5° C)
Relative Humidity: 5% to 95% non-condensing

Wall Module Operating Temperature: 32° F to 122° F (0° C to 50° C)

Wall Module Storage Temperature: -4° F to 150° F (20° C to 65° C)

Relative Humidity: 5% to 95%, Non-condensing

Controller Real Time Clock

Operating Range: 24 hour, 365 day, multi-year calendar including day of week and configuration for automatic daylight savings time adjustment to occur at 2:00 a.m. local time on configured start and stop dates
Power Failure Backup: 24 hours at 32 to 100° F (0 to 38° C), 22 hours at 100 to 122° F (38 to 50° C)
Accuracy: \pm 1 minute per month at 77° F (25° C)

Wall Module Accuracy

Temperature: \pm 0.36° F at 77° F (\pm 0.2° C at 25° C)
Humidity: \pm 3% RH from 20-80%RH

Approval Bodies

UL/cUL (E87741) listed under UL916 (Standard for Open Energy Management Equipment) with plenum rating.

CSA (LR95329-3) listed.

Meets FCC Part 15, Subpart B, Class B (radiated emissions) requirements.



31-00124-01

Meets Canadian standard C108.8 (radiated emissions).

EMC Directive: 2014/30/EU:

Standards Applied:

- IEC 61000-4-8:2009
- IEC 61000-4-11:2004
- EN 61000-6-1: 2007; EN 61000-6-3:2007/A1:2011; EN 61000-6-3:2007/A1:2011/AC: 2012
- EN 60730-2-9: 2010, EN 60730-2-14: 1997 + EN60730-2-14/A1: 2001.
- In conjunction with EN 60730-2-9:2010 and in conjunction with EN 60730-2-14:1997 and amendments: EN 60730-1: 2000 + A1: 2004 + A16: 2007 + A2: 2008 -Annex H.26.

RoHS Directive: 2011/65/EU

Standards Applied:

- EN 50581: 2012

Regulatory Compliance Mark (RCM) declaration in Australia

Inputs and Outputs

Each controller has a combination of universal inputs (UI), digital inputs (DI), analog outputs (AO), and digital outputs (DO).

Digital Input (DI) Circuits

Voltage Rating: 0 to 30 Vdc open circuit

Input Type: Dry contact to detect open and closed circuit

Operating Range: Open circuit = False; Closed circuit = True

Resistance: Open circuit > 3,000 Ohms; Closed circuit < 500 Ohms

Digital Relay Output (DO) Circuits

Voltage Rating: 20 to 30 Vac @ 50-60Hz

Current Rating: 0 mA to 1A continuous, 3.5A inrush (AC rms) for 100 milliseconds

Analog Output (AO) Circuits

Voltage Output Range: 0 to 10.0 Vdc

Maximum Output Current: 10.0 mA

Universal Input (UI) Circuits

See Table 1 for the UI specifications.

Table 1. Universal Input Circuit Specifications.

Input Type	Sensor Type	Operating Range
Discharge Air Outdoor Air Mixed Air Temperature	20K Ohm NTC	-40° F to 199° F (-40° C to 93° C)
Voltage Input	Transducer, Controller	0-10 Vdc

HARDWARE

Dimensions

See Fig. 1 and Fig. 2 for dimension drawings.

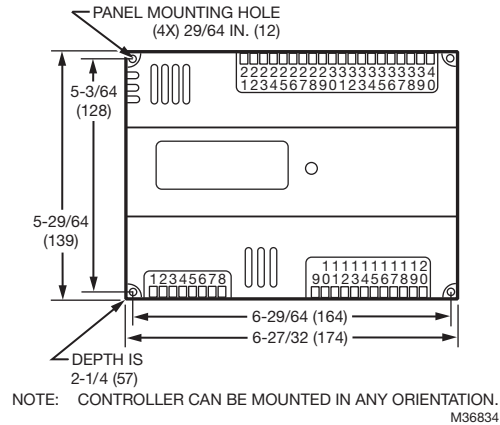


Fig. 1. Panel mounting – controller dimensions in inches (mm).

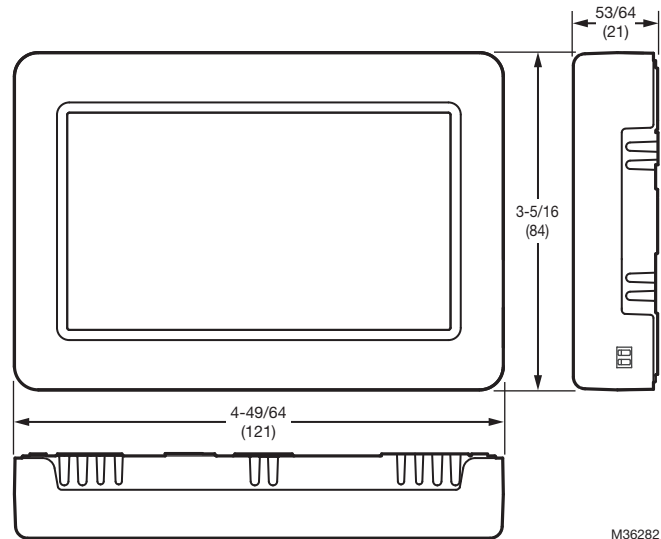


Fig. 2. Dimensions in in. (mm).

CPU

Each controller uses a Texas Instruments MSP430 family microprocessor. The processor contains on-chip FLASH program memory, FLASH information memory, and RAM.

Memory Capacity

Flash Memory: 116 kilobytes with 8 kilobytes available for user program. The controller is able to retain FLASH memory settings for up to ten (10) years.

RAM: 8 kilobytes

Communications

Each controller uses an FTT transformer-coupled communications port. The controller's Manchester encoded data is presented to other controllers and devices on the LONWORKS® Bus at 78 kilobits per second (kbs) via Echelon® communication protocol. The transformer-coupled communications interface offers a much higher degree of common mode-noise rejection while assuring dc isolation. The LONWORKS® Bus is polarity insensitive, eliminating installation errors due to miswiring.

The maximum LONWORKS® Bus network length is 4,600 ft. (1,400 m). For LONWORKS® Bus network lengths greater than the above, see "LONWORKS® Bus Wiring Guidelines," form no. 74-2865.

There can be 30 controllers (max) connected to a single LCBS Connect gateway. Any additional controllers after this limit require another gateway. When viewing this on the cloud, all controllers are displayed on a single building view.

Honeywell-provided cable types for LONWORKS® Bus communications wiring are Level IV 22 AWG (0.34 sq. mm) plenum or non-plenum rated unshielded, twisted pair, stranded conductor wire.

- For non-plenum areas, U.S. part AK3798 (single-pair stranded) can be used.

- For plenum areas, U.S. part AK3797 (single-pair stranded) or U.S. part AK3799 (two-pair stranded) can be used.

Contact Echelon Corp. Technical Support for the recommended vendors of Echelon approved cables.

Refer to the "LONWORKS® Bus Wiring Guidelines," form 74-2865, for a complete description of LONWORKS® Bus network topology rules and approved cable types.

Sylk™ Bus

Sylk is a two wire, polarity insensitive bus that provides both 18 Vdc power and communications between a Sylk-enabled sensor and a Sylk-enabled controller. Using Sylk-enabled sensors saves I/O on the controller and is faster and cheaper to install since only two wires are needed and the bus is polarity insensitive. The Sylk bus is used to connect the LCBS Connect controller and wall module.

In addition to one wall module, the Sylk bus can handle other temperature, humidity, and/or CO₂ sensors. Each sensor will have a unique address that will need to be set using the onboard dip switches.

Accessories

Refer to the Honeywell LCBS Connect Installation Guide (31-00130) for a full listing of applicable accessories.

By using this Honeywell literature, you agree that Honeywell will have no liability for any damages arising out of your use or modification to, the literature. You will defend and indemnify Honeywell, its affiliates and subsidiaries, from and against any liability, cost, or damages, including attorneys' fees, arising out of, or resulting from, any modification to the literature by you.

Home and Building Technologies

In the U.S.:

Honeywell

1985 Douglas Drive North

Golden Valley, MN 55422-3992

customer.honeywell.com

® U.S. Registered Trademark
© 2017 Honeywell International Inc.
31-00124-01 M.S. 06-17
Printed in United States

Honeywell