

## Excel 10

### W7763C,D,E CHILLED CEILING CONTROLLERS

#### HONEYWELL EXCEL 5000 OPEN SYSTEM

#### INSTALLATION INSTRUCTIONS

### BEFORE INSTALLATION

The Excel 10 Chilled Ceiling Controller is available in the following three models:

1. W7763C—with integral setpoint adjustment, temperature sensor, and bypass push-button.
2. W7763D—with integral setpoint adjustment only.
3. W7763E—no integral setpoint adjustment, sensor, or push-button.

The models all have similar housings and mounting procedures.

#### IMPORTANT

*It is recommended that devices be kept at room temperature for at least 24 hours before applying power to allow any condensation resulting from low shipping/storage temperatures to evaporate.*

### INSTALLATION

W7763 Chilled Ceiling Controllers can be mounted on a panel or wall or onto a standard 60-mm wall outlet box using No. 6 (3.5-mm) screws. See Fig. 1 for outside dimensions and Fig. 2 for subbase mounting dimensions.

The controller can be mounted in any orientation desired; however, for thermal reasons, W7763C Controllers must not be mounted on a ceiling.

### Wiring

All wiring must comply with applicable electrical codes and ordinances. Refer to job or manufacturers' drawings for details.

### Power

Input power provided must be 24 Vac ( $\pm 20\%$ ), 50 or 60 Hz. For US installation, power must come from an energy-limited Class II Power Source (transformers must not exceed 100 VA). More than one W7763 Controller can be powered by a single transformer.



### CAUTION

Turn off power prior to connecting to or removing connections from any terminals to avoid electrical shock or equipment damage.

Use the heaviest gauge wire available, up to 14 AWG (2.5 mm<sup>2</sup>) with a minimum of 18 AWG (1.0 mm<sup>2</sup>) for all power wiring.

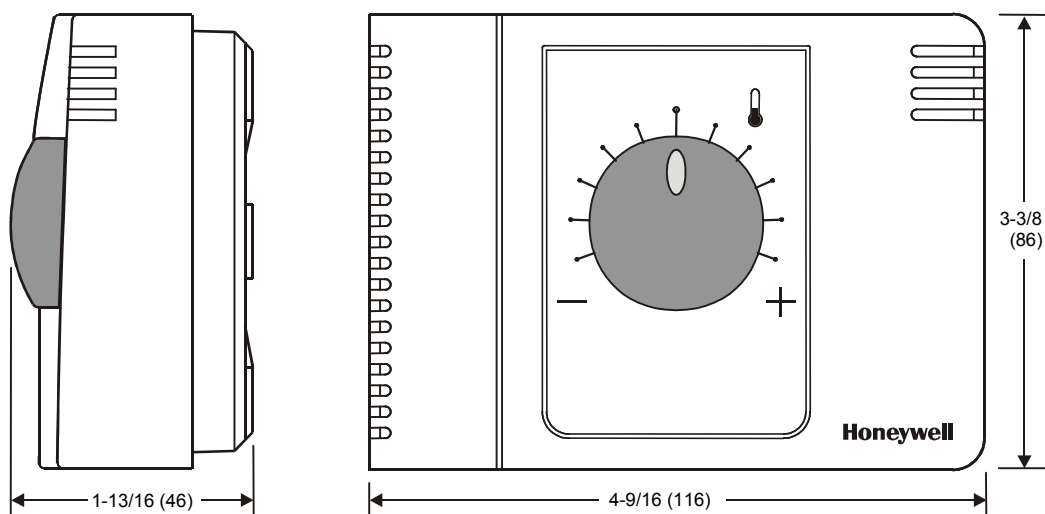


Fig. 1. Excel 10 Chilled Ceiling Controller outside dimensions in in. (mm).

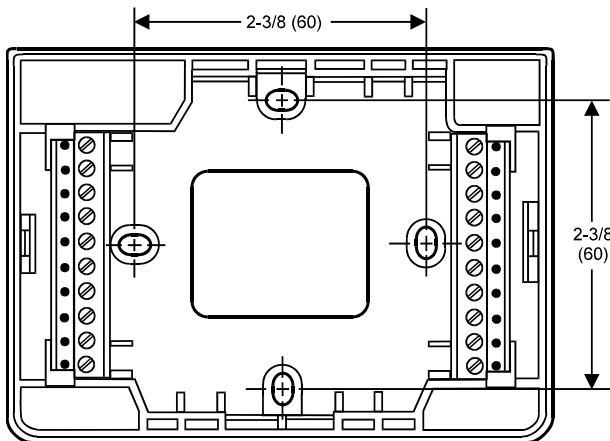


Fig. 2. Subbase mounting dimensions.

**IMPORTANT (US only)**

If the W7763 Controller is used on **UL 1995 Heating and Cooling Equipment** and the transformer primary power is more than 150 Vac, connect the transformer's secondary to earth ground. For these applications, only one Excel 10 controller can be powered by each transformer.

**Communications**

Wire the controller's LONWORKS® network using level IV 22 AWG (Belden part number 9D220150) or plenum-rated level IV 22 AWG (Belden part number 9H2201504) nonshielded, twisted pair, solid conductor wire. When possible, use Honeywell AK3781, AK3782, AK3791, or AK3792 cable (US part numbers). See also LONWORKS Mechanisms – Interface Description (Product Literature No.: EN0B-0270GE51) for more information including maximum lengths.

Pull the cable to each controller on the LONWORKS® network and connect to terminals 19 and 20.

One or two LONWORKS Termination Modules, part no. XAL Term, are required for a LONWORKS network with FTT devices on it, depending upon the configuration. Double termination is required only when the network is a daisy-chain configuration and the total wire length is greater than 1640 ft (500 m). The maximum lengths described in Step 2 must be adhered to for either a daisy chain or free topology LONWORKS layout. See also LONWORKS Mechanisms – Interface Description (Product Literature No.: EN0B-0270GE51) for details.

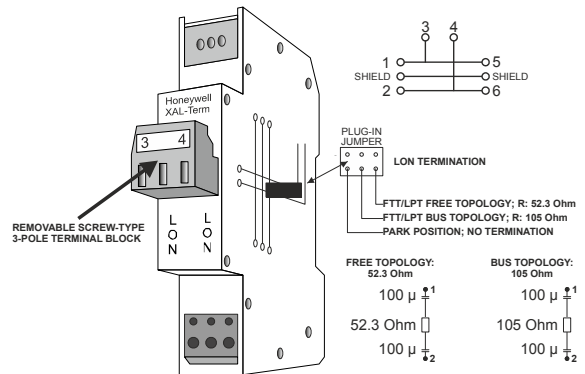


Fig. 1. XAL-Term Connection and Termination Module.

**NOTES:**

- The LONWORKS® network is insensitive to polarity, eliminating installation errors due to miswiring.
- Do not bundle output wires with sensor, digital input or communications bus wires. Maintain a minimum 3 in. (76 mm) separation between LONWORKS® network and Triac output and power supply wiring.
- During installations, try to avoid areas of high electromagnetic noise (EMI).
- Chilled Ceiling Controllers have a 3.5-mm LONWORKS® network jack for easy network access.

**Wall Modules**

A variety of Excel 10 wall modules can be used with W7763 Chilled Ceiling Controllers. See T7460A,B,C,D,E,F Wall Modules - Installation Instructions (Product Literature No.: EN1B-0291GE51); T7560A,B,C Digital Wall Module - Installation Instructions (Product Literature No.: EN1B-0146GE51); and T7770 Wall Modules Installation Instructions (form number 95-7538) for installation details.

**NOTE:** Wall Modules with fan speed switches must not be used with W7763 Chilled Ceiling Controllers.

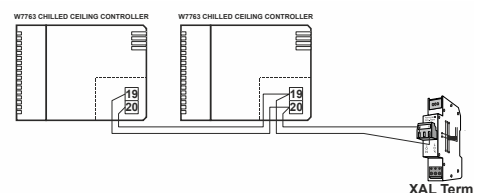


Fig. 3. LonWorks wiring layout for one daisy-chain network segment.

**Wiring Details**

Connections to the Chilled Ceiling controllers are made at two internal terminal blocks accessible beneath the front cover. No tools are required to remove the front cover. Simply pull away from the subbase as shown in Fig. 4.

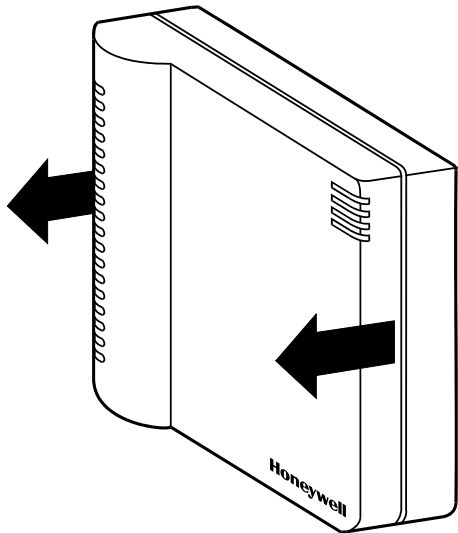


Fig. 4. Terminal cover removal.

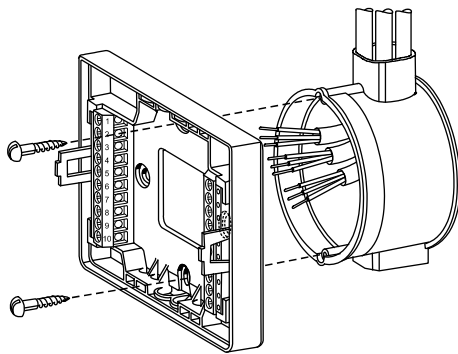


Fig. 5. Mounting on wall outlet box.

Use a minimum wire size of 20 AWG (0.5 mm<sup>2</sup>) for all input / output connections. The maximum length of all input / output cables and wall module interface cables is 65 ft (20 m). Maintain 3 in. (76 mm) minimum spacing between signal lines 1-10 and Triac output and power supply wiring.

Fig. 8 illustrates the terminal assignments of the controllers. Table 1 lists Triac output assignments for various actuator types. Refer to job drawings for specific wiring diagrams.

**IMPORTANT**

Screw type terminal blocks are designed to accept no more than one 14 AWG (2.5 mm<sup>2</sup>) conductor. Multiple wires that are 14 AWG (2.5 mm<sup>2</sup>) can be connected with a wire nut. Include a pigtail with this wire group and attach the pigtail to the individual terminal block.

Wire to the terminal blocks as follows:

1. Strip 1/2 in. (13 mm) insulation from the conductor.
2. Insert the wire in the required terminal location and tighten the screw to complete the termination. Insure that the wire entering the terminal block does not extend above the numbered face of the terminal block to avoid contact between the wires and the printed circuit board on the underside of the front cover (see Fig. 6.)

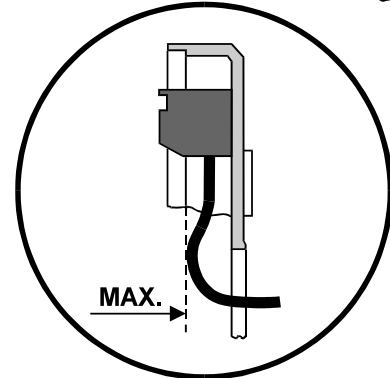
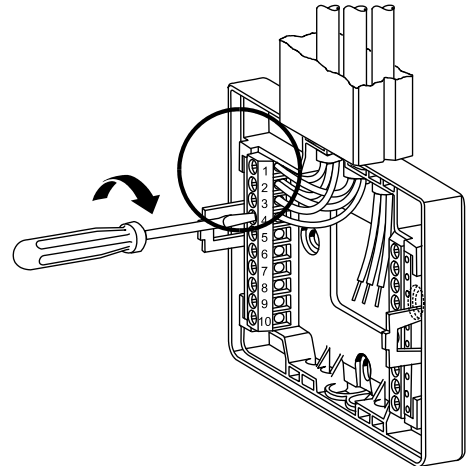


Fig. 6. Terminal block connections.

**IMPORTANT**

When two or more wires are to be attached to the same terminal, be sure to twist them together. Deviations from this rule can result in improper electrical contact. See Fig. 7. Local wiring codes may take precedence over this recommendation.

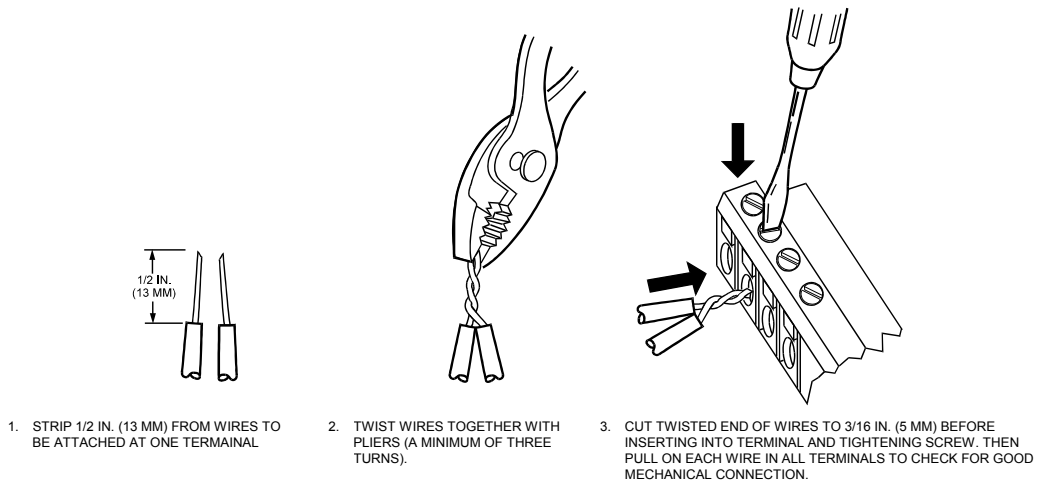


Fig. 7. Attaching two or more wires at terminal blocks.

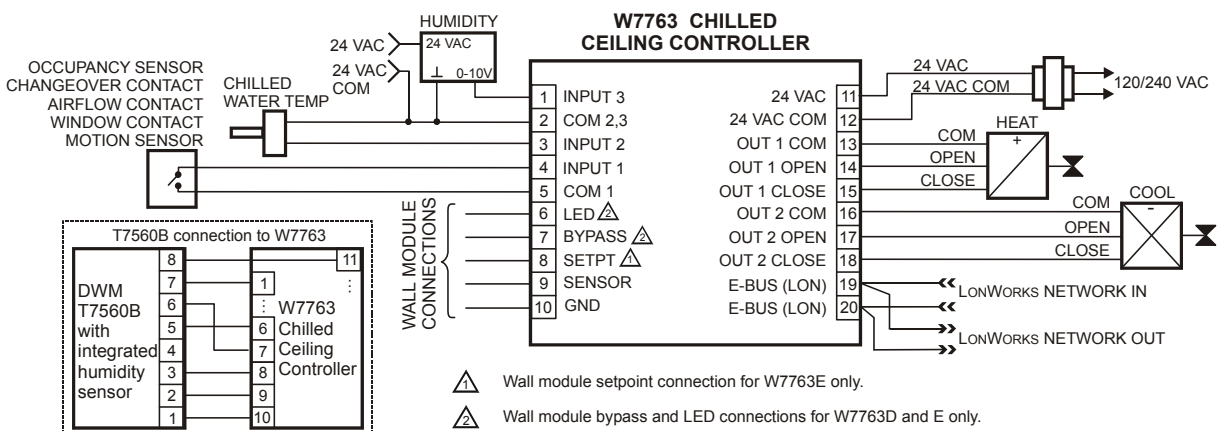


Fig. 8. Chilled Ceiling Controller wiring example.

Table 1. Output assignments for various actuator types.

Output type	Out 1 Terminal			Out 2 Terminal		
	13	14	15	16	17	18
Floating	24 Vac	open	close	24 Vac	open	close
1-stage	24 Vac	on/off	—	24 Vac	on/off	—
2-stage	24 Vac	stage 1	stage 2	24 Vac	stage 1	stage 2
3-stage	24 Vac	stage 1	stage 2	24 Vac	stage 1	stage 2
PWM	24 Vac	PWM	—	24 Vac	PWM	—
Thermal	24 Vac	on/off	—	24 Vac	on/off	—



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