

# T7460A,B,C,D,E,F WALL MODULES

## INSTALLATION INSTRUCTIONS

### BEFORE INSTALLATION

All wiring must comply with local electrical codes and ordinances or as specified on installation wiring diagrams.

Wall module wiring can be sized from 16 to 22 AWG (1.5 to 0.34 mm<sup>2</sup>), depending on the application. The maximum length of wire from a device to a wall module is 1000 ft (305 m). Twisted-pair wire is recommended for wire runs longer than 100 ft (30.5 m).

### COVER DISASSEMBLY

The cover of the wall module is fixed in place using a tab located on the underside of the unit; to disassemble the cover and the sub-base, see Fig. 1.

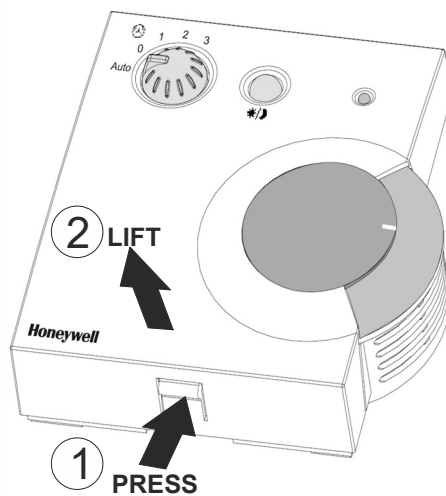


Fig. 1. Cover disassembly

Table 1. Features of T7460 Versions

	Sensor	Setpoint	Bypass/ LED	Fan switch
T7460A	✓	-	-	-
T7460B	✓	✓	-	-
T7460C	✓	✓	✓	-
T7460D	✓	✓	-	5-position
T7460E	✓	✓	✓	3-position
T7460F	✓	✓	✓	5-position

### INSTALLATION

The T7460B,C,D,E,F packages include two setpoint dials. By default, the “Celsius Relative” type is mounted. This can be

easily replaced with the “Celsius Absolute” type by pulling the one dial off and inserting the other one.

Mount the T7460A,B,C,D,E,F Wall Modules on an inside wall approximately 54 in. (1.3 m) from the floor (or in the specified location) to allow exposure to the average zone temperature.

**NOTE:** Maintain a mounting clearance of approx. 4 in. (10 cm) to the left-hand side of the module in order to allow a free airflow for the temperature sensor and accessibility of the setpoint dial.

Do not mount the wall modules on an outside wall, on a wall containing water pipes, or near air ducts. Avoid locations that are exposed to discharge air from registers or radiation from lights, appliances, or the sun.

The T7460D,E,F should not be connected to controllers that do not support fan operation (i.e., the W7751, W7762, W7763, W7704, and XFC2xxxx / XFC3xxxx).

When used with CPO-FB22344R-xxx controllers, either setpoint override or fan-speed adjustment is supported.

Keep wiring at least 1 ft (305 mm) away from large inductive loads such as motors, line starters, lighting ballasts, and large power distribution panels. Run wall module wiring separately from 50 Vac or greater power wiring.

The wall modules can be mounted on a 60-mm wall outlet box using No. 6 (3.5-mm) screws or on a wall (see Fig. 2 and Fig. 5). When mounting directly on a wall, use the type of screws appropriate for the wall material.

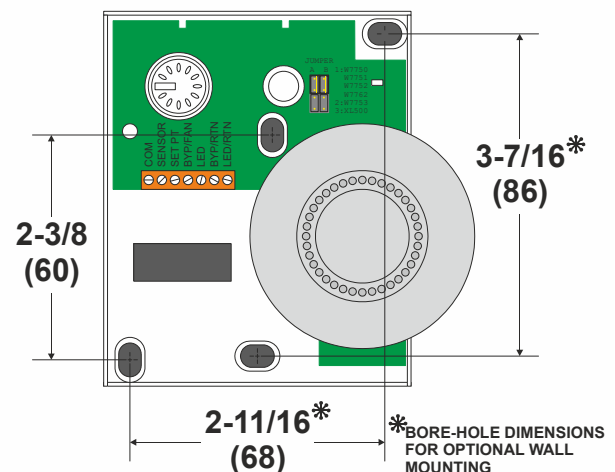


Fig. 2. Bore-holes for T7460 wall modules in in. (mm)

See Fig. 3 for mounting dimensions.

**NOTE:** Graphics depict E/F model. Dimensions are the same for all six models.

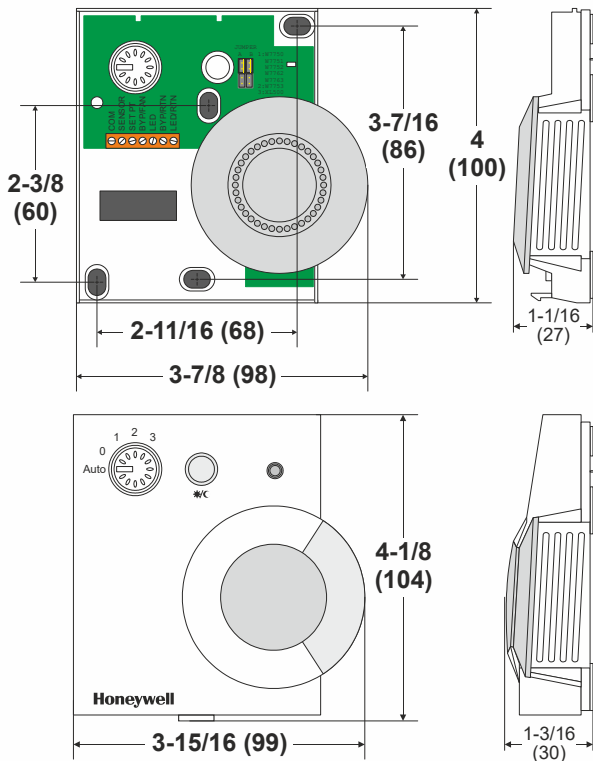


Fig. 3. T7460A,B,C,D,E,F dimensions in in. (mm)

## Mounting Procedure

1. Disassemble the cover as is shown in Fig. 1.
2. (T7460B,C,D,E,F, only) Remove the setpoint dial by pulling it off.
3. a) Mount the wall module onto the wall outlet box, or b) bore wall holes as is specified in Fig. 2 and mount the wall module with appropriate screws.
4. Connect the wires to the terminal block according to the specifications in section "Wiring".
5. (T7460B,C,D,E,F only) With the double-D hole of the potentiometer in the "12 o'clock" orientation (see Fig. 4), hold the setpoint dial such that the "21" (Celsius absolute scale) or "0" (Celsius relative scale) is at the "3 o'clock" position and then insert the dial into the hole.

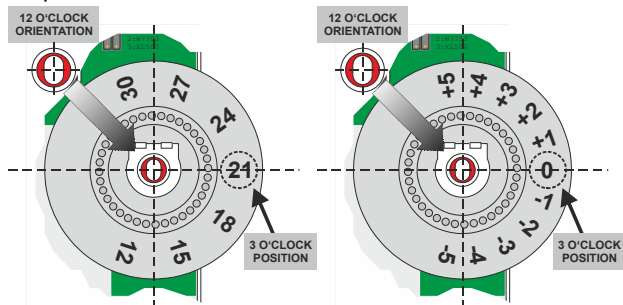


Fig. 4. Mounting position of setpoint dial

6. Remount the cover as depicted in Fig. 5 and make sure that the tab on the underside engages.

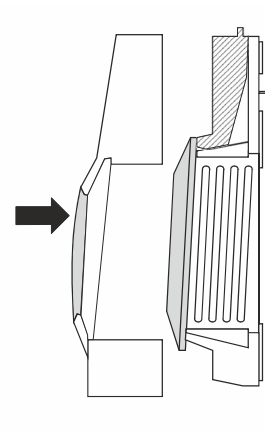


Fig. 5. Mounting cover of T7460 wall modules

## Wiring

Attach the wires from the device sensor terminals to the appropriate wall module terminals and set the jumpers according to the connected controller. See Fig. 7 through Fig. 6.

### IMPORTANT

*Screw type terminal blocks are designed to accept no more than one 16 AWG (1.5 mm<sup>2</sup>) conductor.*

Wire the terminal blocks as follows:

1. Strip 3/16 in. (5 mm) of insulation from the conductor.
2. Insert the wire in the required terminal location and tighten the screw to complete the termination.
3. Verify jumper setting with Fig. 6 and wall module wiring with Fig. 7 and Fig. 8.

Table 2. Wiring terminal references for non-Excel 10/12 devices

signal	T7460A terminal	T7460B terminal	T7460C terminal	Excel 800 XF82x term. (example)	Excel 500 XF52xB term. (example)	Excel 500 XFL52x term. (example)	Excel 100 terminal (example)	Excel 50 terminal (example)	Excel 20 terminal (example)	CPO-FB22344R term. (ex.)	Smart I/O XFC2 / XFC3 term. (ex.)
sensor signal	1	1	2	XF821: 1 (AI)	XF521: 1 (AI)	XFL521: 1 (AI)	1 (AI)	33 (AI)	19 (AI)	39 (AI)	11 (AI)
COM/GND	3	3	1	XF821: 11 (AI GND)	XF521: 2 (AI GND)	XFL521: 18 (AI GND)	55 (GND)	34 (AI GND)	20 (AI GND)	40 (AI GND)	10 (AI GND)
SETPT	--	2	3	XF821: 2 (AI)	XF521: 3 (AI)	XFL521: 2 (AI)	2 (AI)	35 (AI)	21 (AI)	41 (AI)	14 (AI)
BYP/FAN (no fan)	--	--	4	XF823: 1 (DI)	XF523: 1 (DI)	XFL523: 1 (DI)	13 (DI)	23 (DI)	34 (DI)	36 (DI)	6 (DI)
BYP/RTN	--	--	6	XF823: 13 (DI GND)	XF523: 14 (DI GND)	XFL523: 18 (DI GND)	56 (GND)	24 (DI GND)	18 (COM)	37 (DI GND)	5 (DI)
LED (10 Vdc / 3mA permanent)	--	--	5	XF822: 1 (AO)	XF522: 1 (AO)	XFL522: 1 (AO)	37 (AO)	15 (AO)	12 (AO)	19 (AO)	32 (AO)
LED/RTN (0Vdc = LED OFF, 10Vdc = LED ON)	--	--	7	XF822: 2 (AO)	XF522: 3 (AO)	XFL522: 2 (AO)	38 (AO)	17 (AO)	13 (AO)	17 (AO)	35 (AO)

signal	T7460D terminal	T7460D,E,F terminal	Excel 800 XF82x term. (ex.)	Excel 500 XF52xB term. (ex.)	Excel 500 XFL52x term. (ex.)	Excel 100 term. (ex.)	Excel 50 term. (ex.)	Excel 20 term. (ex.)	CPO-FB22344R term. (ex.)
sensor signal	2	2	XF821: 1 (AI)	XF521: 1 (AI)	XFL521: 1 (AI)	1 (AI)	33 (AI)	19 (AI)	39 (AI)
COM/GND	1	1	XF821: 11 (AI GND)	XF521: 2 (AI GND)	XFL521: 18 (AI GND)	55 (GND)	34 (AI GND)	20 (AI GND)	40 (AI GND)
SETPT	3	3	XF821: 2 (AI)	XF521: 3 (AI)	XFL521: 2 (AI)	2 (AI)	35 (AI)	21 (AI)	41 (AI)
BYP/FAN (no fan)	4	4	XF821: 3 (AI)	XF521: 5 (AI)	XFL521: 3 (AI)	3 (AI)	37 (AI)	23 (AI)	altern. to SETPT
BYP/RTN	6	6	XF821: 13 (AI GND)	XF521: 6 (AI GND)	XFL521: 20 (AI GND)	56 (GND)	38 (AI GND)	24 (AI GND)	altern. to SETPT
LED (10 Vdc / 3mA permanent)	--	5	XF822: 1 (AO)	XF522: 1 (AO)	XFL522: 1 (AO)	37 (AO)	15 (AO)	12 (AO)	19 (AO)
LED/RTN (0Vdc = LED OFF, 10Vdc = LED ON)	--	7	XF822: 2 (AO)	XF522: 3 (AO)	XFL522: 2 (AO)	38 (AO)	17 (AO)	13 (AO)	17 (AO)

**NOTE:** In the case of Excel 10/12 wiring, please refer to the respective Excel 10/12 Installation Instructions.

**NOTE:** In the case of the T7460A,B,C, bypass signaling is via digital input. In the case of the T7460D,E,F, bypass signaling (which includes fan-speed signaling) is via analog input.

### Jumper Settings

The jumpers on the PCB of the T7460C,D,E,F must be set according to the type of controller connected. See also Fig. 6.

#### Jumper positions for W77xx: Jumper A = 1, Jumper B = 1

Const. Vol. Air Handling Unit	W7750A,B
(Smart) Variable Air Volume	W7751B,D,F,H
Fan Coil Unit (FCU2)	W7752D,E,F,G
Fan Coil Unit (FCU3)	W7754
Remote Input/Output Device	W7761A
Hydronic	W7762A,B
Chilled Ceiling	W7763C,D,E
Excel 12	W7704xx

#### Jumper positions for W7753: Jumper A = 2, Jumper B = 2

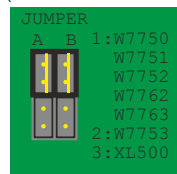
Unit Ventilator	W7753
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#### Jumper positions for XL500: Jumper A = 3, Jumper B = 3

Excel 800	XCL8010A
Excel 500	XC5010x, XC5210x
Excel 100	XL100x
Excel 50	XL50xxxx
Excel 20	XL20x
CPO-FCU	CPO-FB22344R-xxx
Smart I/O	XFC2xxxx/XFC3xxxx

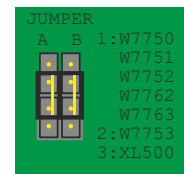
Excel 10/12:  
W7750, W7751, W7752, W7754,  
W7761, W7762, W7763, W7704

JUMPER A IN POS. 1  
JUMPER B IN POS. 1  
(FACTORY DEFAULT)



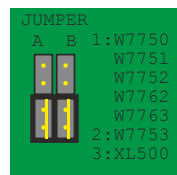
Excel 10:  
W7753A (unit ventilator)

JUMPER A IN POS. 2  
JUMPER B IN POS. 2



Excel 20, 50, 100, 500, 600, 800,  
CPO-FCU, and Smart I/O  
without fan

JUMPER A IN POS. 3  
JUMPER B IN POS. 3



Excel 20, 50, 100, 500, 600, 800,  
CPO-FCU, and Smart I/O  
with fan

JUMPER A IN POS. 1  
JUMPER B IN POS. 3

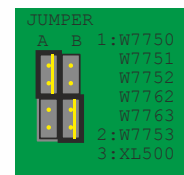
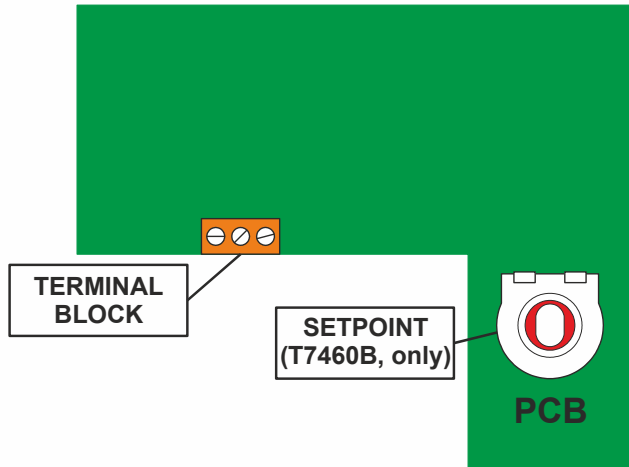


Fig. 6. Jumper settings for T7460C,D,E,F Wall Modules



**IMPORTANT:**  
THE GRAY / SHADED TERMINALS ARE INTERNALLY CONNECTED.  
THE WHITE / UNSHADED TERMINALS ARE NOT INTERNALLY CONNECTED.

**Wiring of Modules:**

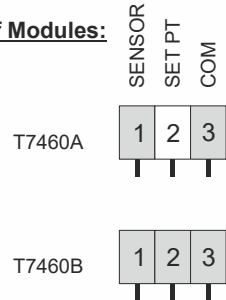
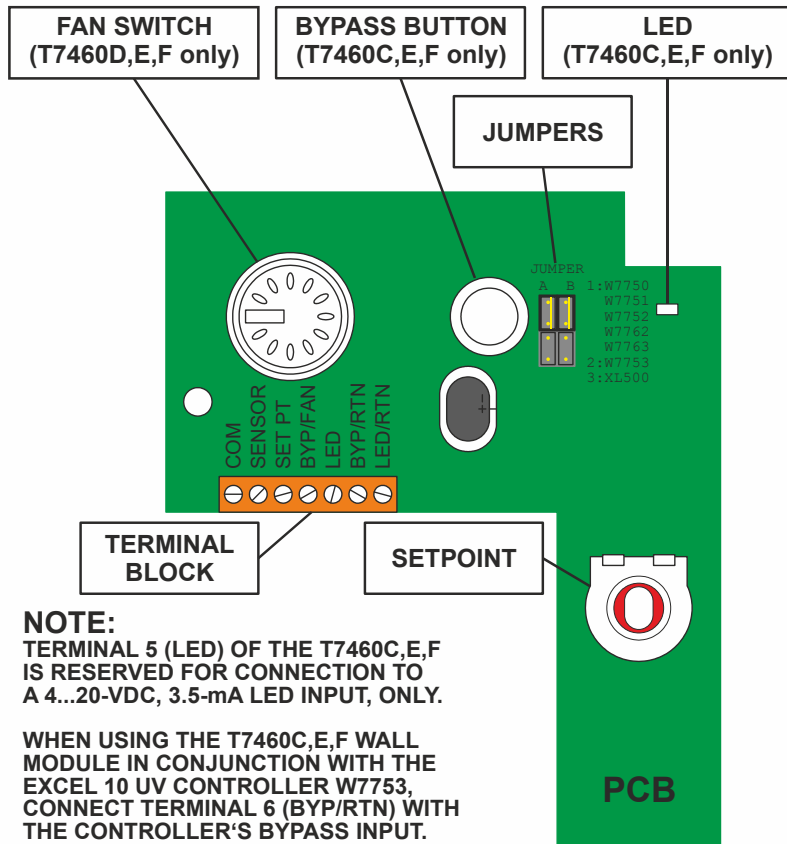
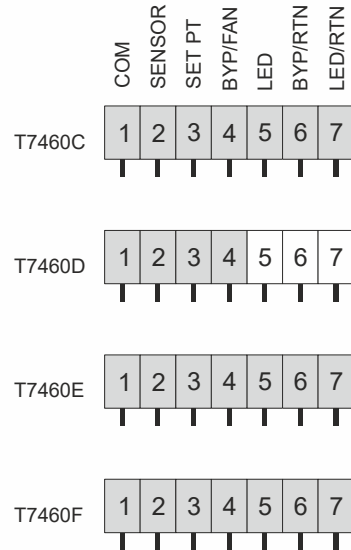


Fig. 7. Wiring diagram for T7460A,B Wall Modules



**IMPORTANT:**  
THE GRAY / SHADED TERMINALS ARE INTERNALLY CONNECTED.  
THE WHITE / UNSHADED TERMINALS ARE NOT INTERNALLY CONNECTED.

**Wiring of Modules:**



**NOTE:**  
TERMINAL 5 (LED) OF THE T7460C,E,F IS RESERVED FOR CONNECTION TO A 4...20-VDC, 3.5-mA LED INPUT, ONLY.

WHEN USING THE T7460C,E,F WALL MODULE IN CONJUNCTION WITH THE EXCEL 10 UV CONTROLLER W7753, CONNECT TERMINAL 6 (BYP/RTN) WITH THE CONTROLLER'S BYPASS INPUT.

Fig. 8. Wiring diagram for T7460C,D,E,F Wall Modules

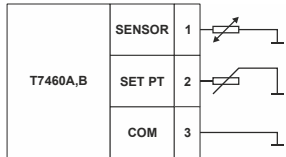


Fig. 9. Circuitry of T7460A,B Wall Modules

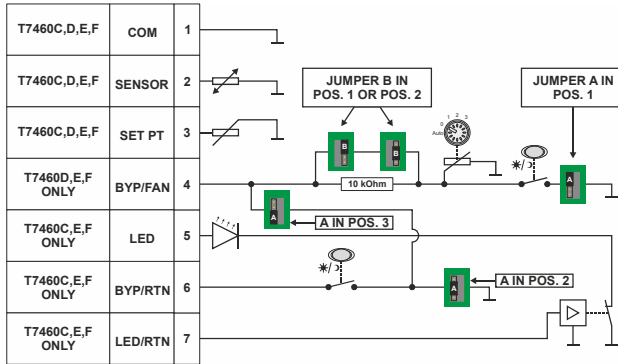


Fig. 10. Circuitry of T7460C,D,E,F Wall Modules

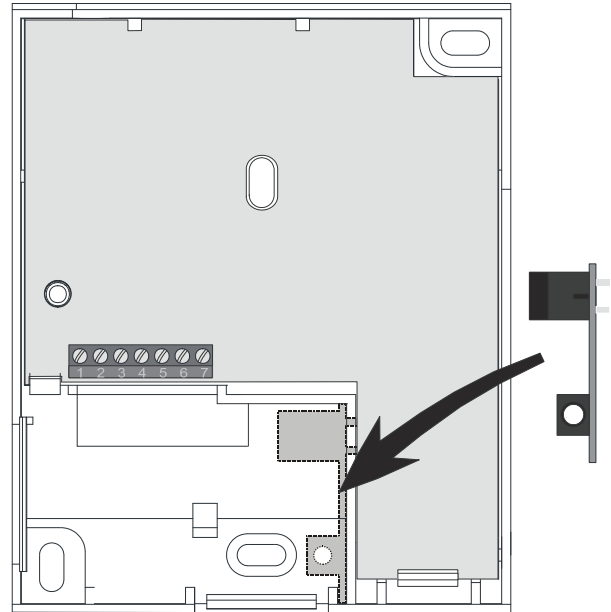


Fig. 12. Mounting T7460-LONJACK

## ACCESSORIES

### T7460-LONJACK

The T7460-LONJACK is a small board allowing easy access to LonWORKS or BACnet via the correspondingly wired wall module (apply appropriate wiring guidelines for LonWORKS or BACnet networks, as the case may be). The T7460-LONJACK provides an additional 3.5 mm jack socket for a 3.5 mm jack plug.

Order quantity: set with 5 pieces

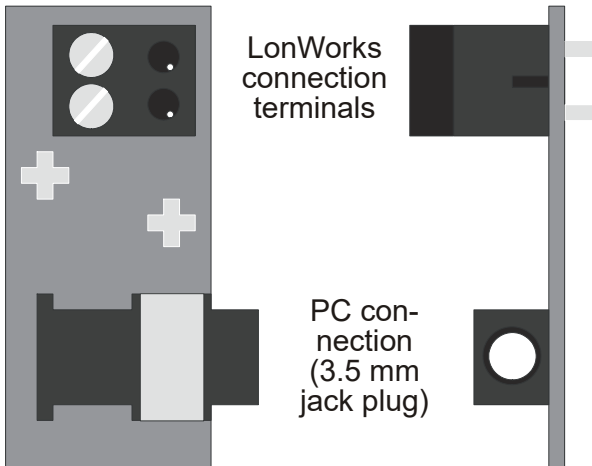


Fig. 11. T7460-LONJACK

### Mounting

Remove the setpoint dial and put in the T7460-LONJACK as shown in the following:



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