HONEYWELL EXCEL 5000 OPEN SYSTEM

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 mm²), 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.
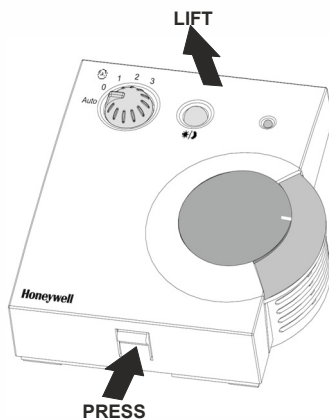

Fig. 1. Cover disassembly

Table 1. Features of T7460 Versions

	Sensor	Setpoint	Bypass/ LED	Fan speed
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.
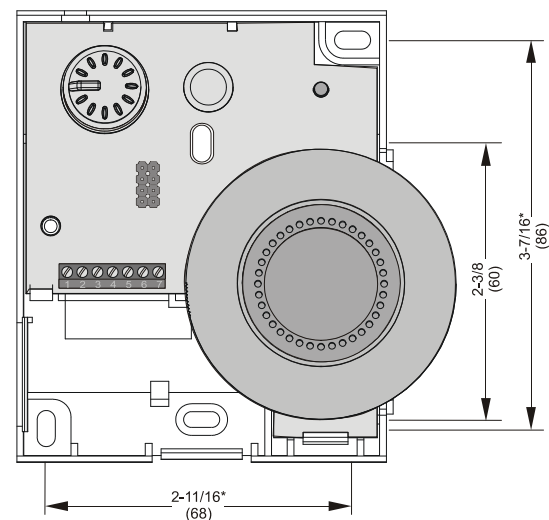
* bore-hole dimensions for optional wall mounting

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.
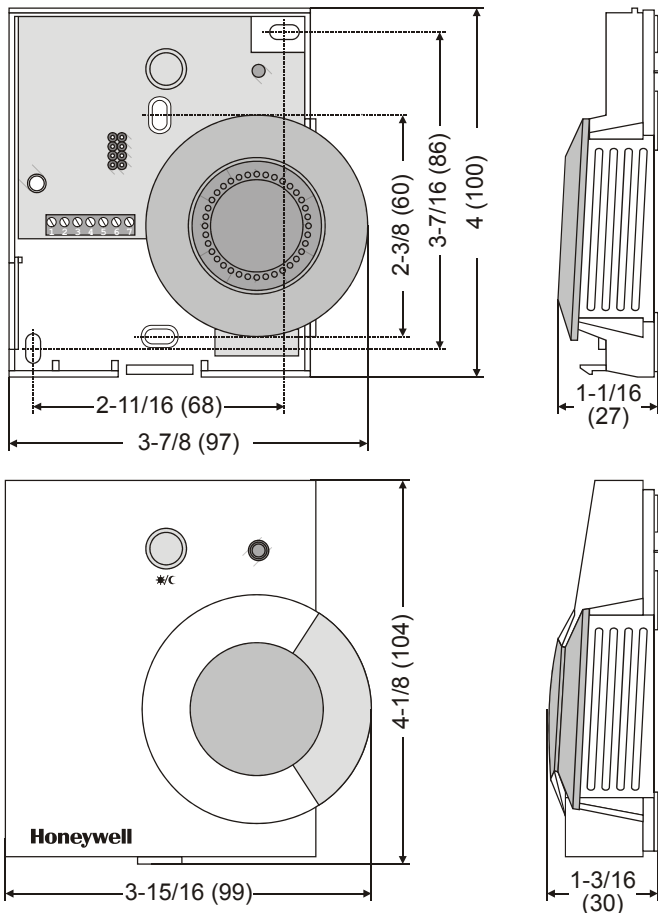
CE

EN1B-0291GE51 R1211B

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) Insert the setpoint dial and turn it clockwise as far as possible.
6. (T7460B,C,D,E,F only) Make sure that the dial's position is such that the 30 (Celsius absolute scale) or the +5 (Celsius relative scale) point to the right-hand side of the wall module (see Fig. 4).
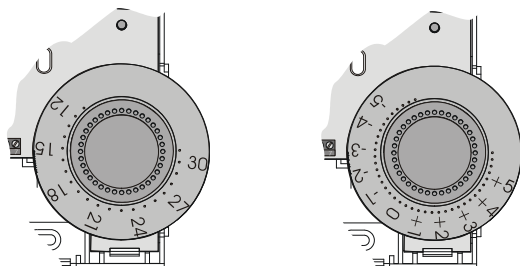

Fig. 4. Mounting position of setpoint dial

7. (T7460B,C,D,E,F, only) If the dial does not have the correct position, pull the dial off again and reinsert it with the correct orientation.
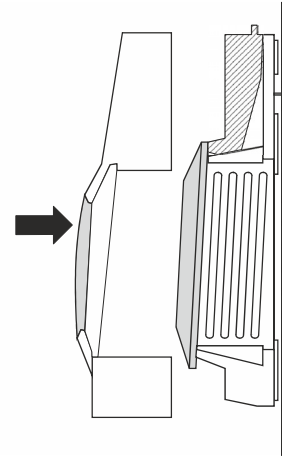8. Remount the cover as depicted in Fig. 5 and make sure that the tab on the underside engages.

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. 6 through Fig. 8.

IMPORTANT

> *Screw type terminal blocks are designed to accept no more than one 16 AWG (1.5 mm²) 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. 8 and wall module wiring with Fig. 6 and Fig. 7.

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

signal	T7460A terminal	T7460B terminal	T7460C terminal	Excel 800 XF82x terminal (example)	Excel 500 XF52xB terminal (example)	Excel 500 XFL52x terminal (example)	Excel 100 terminal (example)	Excel 50 terminal (example)	Excel 20 terminal (example)	CPO-FB22344R terminal (example)	Smart I/O XFC2 / XFC3 terminal (example)
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 (10Vdc/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 terminal (example)	Excel 500 XF52xB terminal (example)	Excel 500 XFL52x terminal (example)	Excel 100 terminal (example)	Excel 50 terminal (example)	Excel 20 terminal (example)	CPO-FB22344R terminal (example)
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)	alternatively 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)	alternatively to SETPT
LED (10Vdc/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

See also Fig. 8. The jumpers on the PCB of the T7460C,D,E,F must be set according to the type of controller connected.

Jumper Setting 1 for W77xx

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 Setting 2 for W7753

Unit Ventilator   W7753

Jumper Setting 3 for XL500

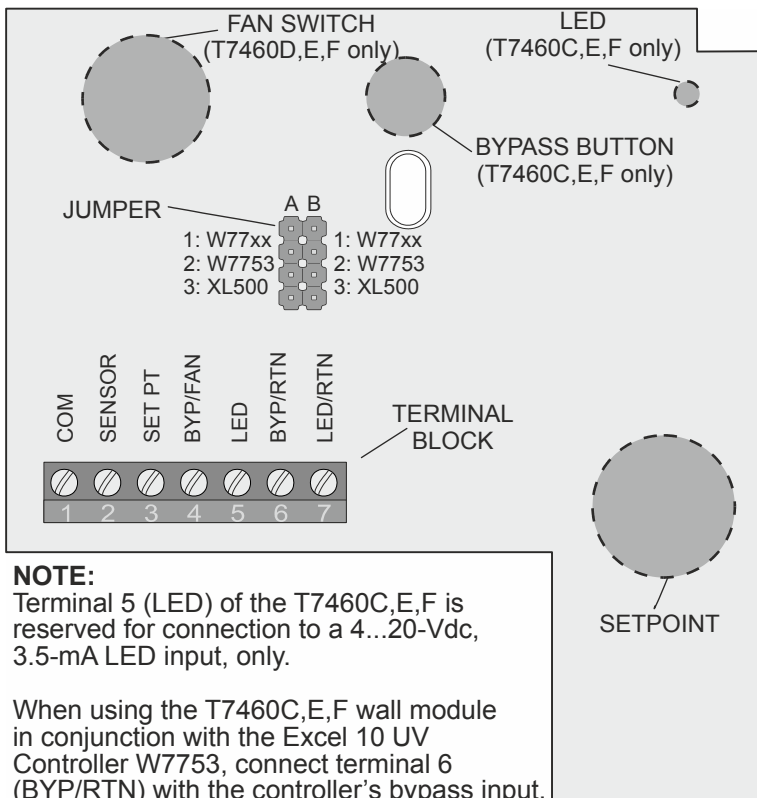|	
Excel 800	XCL8010A
Excel 500	XC5010x, XC5210x
Excel 100	XL100x
Excel 50	XL50xxxx
Excel 20	XL20x
CPO-FCU	CPO-FB22344R-xxx
Smart I/O	XFC2xxxx/XFC3xxxx
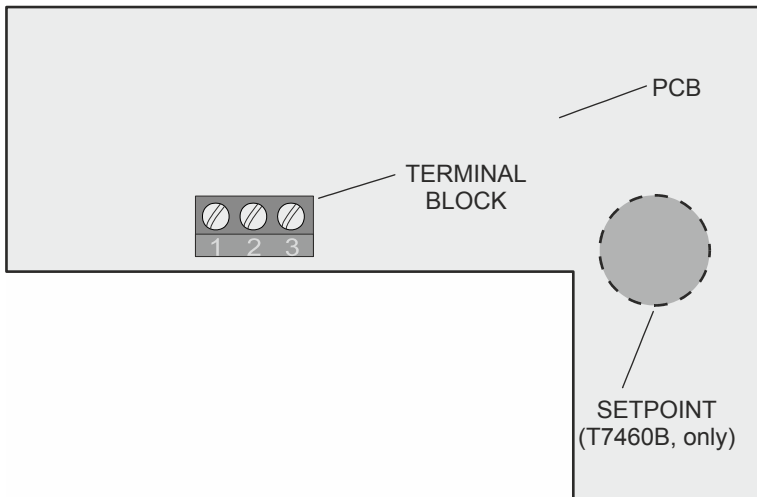
IMPORTANT:
The gray/shaded terminals are internally connected.
The white/unshaded terminals are not internally connected.

Wiring of Modules:

	SENSOR	SET PT	COM
T7460A	1	2	3
T7460B	1	2	3
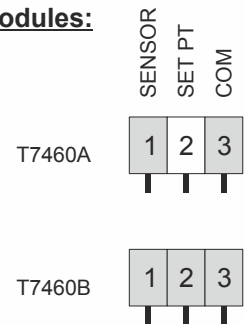
Fig. 6. Wiring diagram for T7460A,B Wall Modules

FAN SWITCH (T7460D,E,F only)

LED (T7460C,E,F only)

BYPASS BUTTON (T7460C,E,F only)

JUMPER   A B

1: W77xx   1: W77xx
2: W7753   2: W7753
3: XL500   3: XL500

TERMINAL BLOCK

COM | SENSOR | SET PT | BYP/FAN | LED | BYP/RTN | LED/RTN
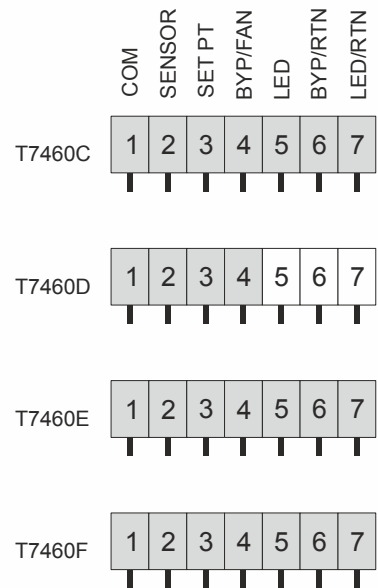1 | 2 | 3 | 4 | 5 | 6 | 7

SETPOINT

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.

IMPORTANT:
The gray/shaded terminals are internally connected.
The white/unshaded terminals are not internally connected.

Wiring of Modules:

	COM	SENSOR	SET PT	BYP/FAN	LED	BYP/RTN	LED/RTN
T7460C	1	2	3	4	5	6	7
T7460D	1	2	3	4	5	6	7
T7460E	1	2	3	4	5	6	7
T7460F	1	2	3	4	5	6	7

Fig. 7. Wiring diagram for T7460C,D,E,F Wall Modules

Excel 10/12 Controllers: W7750, W7751, W7752, W7754, W7761, W7762, W7763, W7704	Excel 10 Controllers: W7753A (unit ventilator)
1: W77xx ▮▮ 1: W77xx 2: W7753 ▮▮ 2: W7753 3. XL500 ▦▦ 3. XL500 factory default	1: W77xx ▦▦ 1: W77xx 2: W7753 ▮▮ 2: W7753 3. XL500 ▮▮ 3. XL500
Excel 20, 50, 100, 500, 600, 800, CPO-FCU, and Smart I/O Controllers without fan	Excel 20, 50, 100, 500, 600, 800, CPO-FCU, and Smart I/O Controllers with fan
1: W77xx ▦▦ 1: W77xx 2: W7753 ▮▮ 2: W7753 3. XL500 ▮▮ 3. XL500	1: W77xx ▮▮ 1: W77xx 2: W7753 ▮▮ 2: W7753 3. XL500 ▮▮ 3. XL500

Fig. 8. Jumper settings for T7460C,D,E,F Wall Modules

ACCESSORIES
T7460-LONJACK

The T7460-LONJACK is a small board and allows 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.
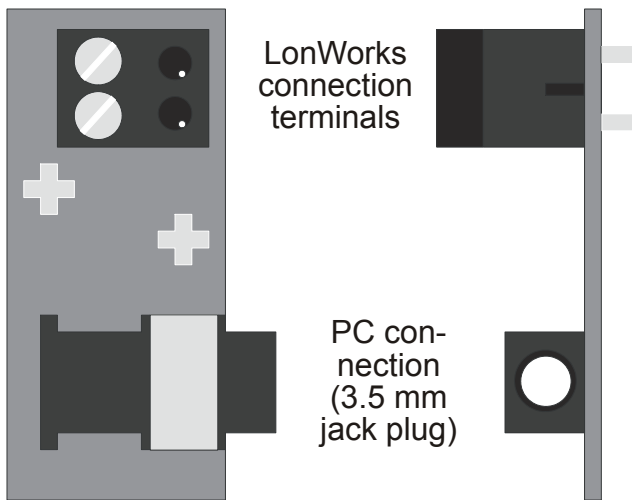
Order quantity: set with 5 pieces

LonWorks connection terminals

PC connection (3.5 mm jack plug)

Fig. 9. T7460-LONJACK

Mounting

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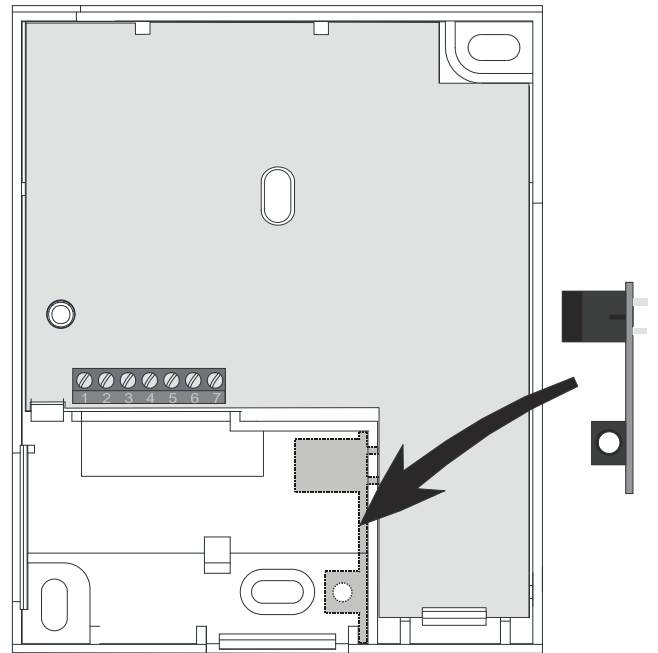

Fig. 10. Mounting T7460-LONJACK

T7460-LIMITER

The T7460-LIMITER can be used to adjust the setpoint dial to particular setpoints.

Put the limiters approximately opposite the setpoints you want to adjust. In the following example, the setpoints are at about 18 and 27 °C.
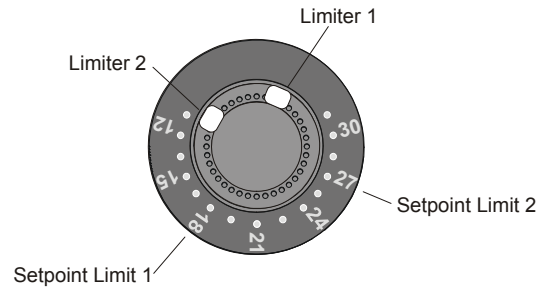
Order quantity: set of 100 pieces

Limiter 1
Limiter 2
Setpoint Limit 2
Setpoint Limit 1

Fig. 11. Mounting T7460-LIMITER(S)

Honeywell