

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

HONEYWELL EXCEL 5000 OPEN SYSTEM

SPECIFICATION DATA



FEATURES

- Mountable on 2.36 in. (60 mm) wall outlet box or directly on a wall.
- Models with setpoint adjustment.
- Models with bypass (override) button and LED.
- Models with 3-position (auto/0/1) or 5-position (auto/0/1/2/3 speed) fan switch.
- Setpoint dials with Celsius relative or Celsius absolute scale.
- Locking cover on all models.
- Operating range 43...104°F (6...40°C).
- CE-approved.
- IP 30 housing.

GENERAL

The T7460A,B,C,D,E,F are a family of direct-wired wall modules for use with Honeywell Excel 10 W7750, W7751, W7752, W7753, W7761, W7762, W7763, and Excel 600, 500, 100, 50, 20 Controllers. All models have a space temperature sensor; some models have setpoint adjustment, bypass button and LED, and fan switch.

DESCRIPTION

The T7460A,B,C,D,E,F packages include two setpoint dials. By default, the "Celsius Relative" type (-5 ... +5) is mounted, but can be easily replaced with the "Celsius Absolute" type (12...30°C).

SPECIFICATIONS

Table 1. T7460 Wall Module models

type no.	setpoint adjustment	bypass (override) button and LED	fan switch 3- or 5- position	compatible with
T7460A	--	--	--	W7750A,B, W7751B,D,F,H, W7752D,E,F,G, W7753A, W7761A, W7762A,B, W7763C,D,E, and Excel 600, 500, 100, 50, 20
T7460B	12...30 °C (absolute) ± 5 K (relative)	--	--	W7750A,B, W7751B,D,F,H, W7752D,E,F,G, W7753A, W7762B, W7763E, and Excel 600, 500, 100, 50, 20
T7460C		✓	--	W7750A,B, W7751B,D,F,H, W7752D,E,F,G, W7753A, W7762A,B, W7763D,E, and Excel 600, 500, 100, 50, 20
T7460D		--	5	W7752D,E,F,G, W7753A, and Excel 600, 500, 100, 50, 20
T7460E		✓	3	W7750A,B, W7752D,E,F,G, W7753A, and Excel 600, 500, 100, 50, 20
T7460F		✓	5	W7752D,E,F,G, W7753A, and Excel 600, 500, 100, 50, 20

NOTE: Not all of the T7460 Wall Modules are compatible with W7751A,C,E,G (VAV1) and W7752D1 (FCU1) controllers.

NOTE: Refer to T7460A,B,C,D,E,F Installation Instructions (product literature no.: EN1B-0291GE51) for wall module settings and wiring diagrams.

Construction:

Two-piece construction: cover and internally wired subbase. Field wiring 16 to 22 AWG (1.5 to 0.34 mm²) connects to a terminal block on the PCB.

Temperature Sensor Operating Range:

43...104°F (6...40°C).

T7460A,B,C,D,E,F 20kΩ Sensor:

All T7460 models are furnished with a 20kΩ NTC temperature sensor following a specific temperature-resistance curve. See Fig. 1. Honeywell controllers used with the T7460 employ an algorithm that provides readings close to the actual temperature. Table 2 summarizes the T7460 sensor accuracy for normal operating temperatures. Throughout the range of 43...104°F (6...40°C), the accuracy is better than ±0.75°F (±0.42°C).

Table 2. Temperature sensor accuracy

ambient temp. °F (°C)	max. error °F (°C)	nom. resistance (Ω)
60 (15.5)	±0.52 (±0.29)	31543
65 (18.3)	±0.49 (±0.27)	27511
70 (21.1)	±0.48 (±0.27)	24047
80 (26.7)	±0.49 (±0.27)	18490
85 (29.5)	±0.52 (±0.29)	16264

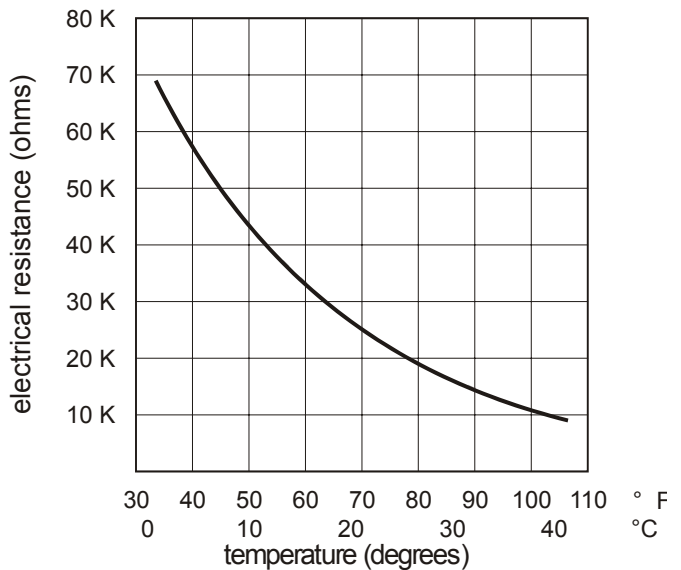


Fig. 1. Temperature vs. resistance for 20kΩ sensor

T7460B,C,D,E,F Setpoint Adjustment:

In the case of wall modules equipped with setpoint adjustment, depending on the type of setpoint dial in use, the controller must be set for either the relative or the absolute scale. The relation between setpoint and resistance is given in Table 3. Accuracy of resistance is:

- ±5% in middle position, e.g. 5225 Ω to 5775 Ω;
- ±10% in end position, e.g. 9450 Ω to 11550 Ω.

Table 3. Setpoint values versus resistances

relative scale (Kelvin)		absolute scale (°C)	
setpoint	nominal resistance (Ω)	setpoint	nominal resistance (Ω)
-5	9574.0	12	9958.0
-4	8759.2	13	9468.7
-3	7944.4	14	8979.3
-2	7129.6	15	8490.0
-1	6314.8	16	8000.7
0	5500.0	17	7511.3
1	4685.2	18	7022.0
2	3870.4	19	6532.7
3	3055.6	20	6043.3
4	2240.8	21	5554.0
5	1426.0	22	5064.7
		23	4575.3
		24	4086.0
		25	3596.7
		26	3107.3
		27	2618.0
		28	2128.7
		29	1639.3
		30	1150.0

Table 4. Bypass button/LED operation

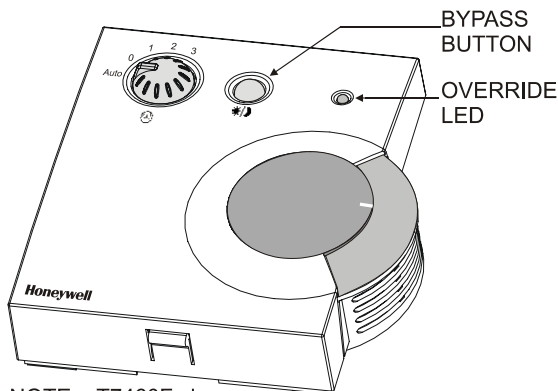
1 ^b button held down	controller mode	LED status
0...1 sec	no override	OFF
1...4 sec	timed occupied override	ON
4...7 sec	unoccupied override	1 blink / sec
>7 sec	no override	OFF
--	continuous occupied override ^a	2 blinks / sec
--	wink from network ^a	4 blinks / sec
2 ^b controller mode independent of bypass button		LED status
Effective Occupied / Effective Bypass		ON
Effective Standby		1 blink / sec
Effective Unoccupied		OFF
Wink from network		4 blinks / sec

^aRemote function. Generated from the network.
^b1=Controller configured for indicating override;
 2=Controller configured for indicating occupancy

T7460C,E,F Bypass Button / LED

When Used With Excel 10 Controllers:

The controller provides timed occupied and unoccupied temperature setpoints for the wall module, see Fig. 2. The bypass button is used to change the controller into the modes shown in Table 4 and Fig. 3. The override LED displays the override status of the controller.



NOTE: T7460F shown.
 T7460C has no fan switch,
 T7460E has 3-position fan switch.

Fig. 2. LED and bypass button locations on T7460C,E,F

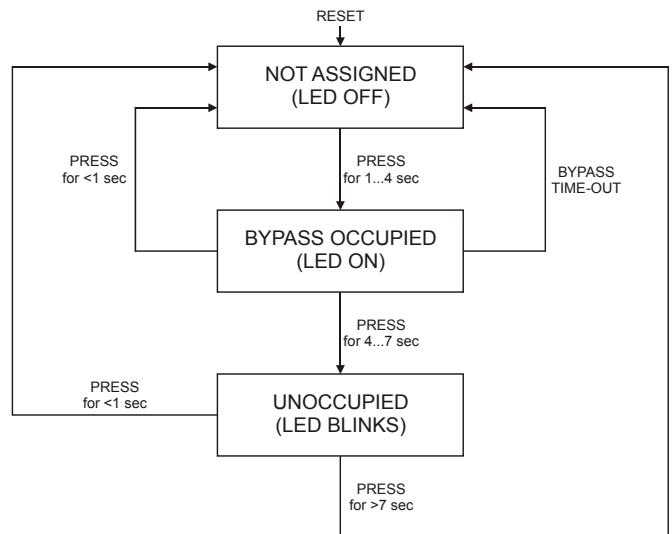


Fig. 3. Bypass button operation (with Excel 10)

When Used With Excel 600/500/100/50/20 Controllers:

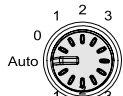
All Excel 600, 500, 100, 50, and 20 Controllers are fully programmable. The application engineer-programmer can program the override and LED to operate in any manner desired. The bypass (override) input is a dry-contact, normally-open, momentary digital input when the wall module does not have a fan switch. When a fan speed switch (basically a series of resistances based on fan switch position) is present, the bypass button is an analog input. See Table 5 for those resistances.

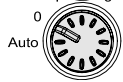
Every controller includes a software module (XFM) enabling you to adapt the wall module to the respective controller, making further configuring unnecessary. Contact your local Honeywell distributor for further details.

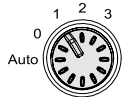
T7460D,E,F Fan Switch

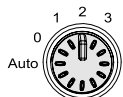
When Used With Excel 10 FCU Controller:

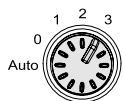
The T7460D,F have a 5-position fan switch (Auto, 0, 1, 2, 3); the T7460E has a 3-position fan switch (Auto, 0, 1).

 Fan runs automatically at the speed determined by the controller's temperature control algorithm.

 Fan is continuously off.

 Fan is continuously running at speed 1.

 Fan is continuously running at speed 2. (Not available with T7460E).

 Fan is continuously running at speed 3. (Not available with T7460E).

NOTE: The fan speed switch on the wall module overrides the temperature control algorithm.

When Used With Excel 600/500/100/50/20 Controllers:

All the Excel 600, 500, 100, 50, and 20 Controllers are fully programmable and can be programmed so that the fan speed switch and bypass button function the way that the application engineer/programmer wants. The resistances used for programming the controller are shown in Table 5.

Every controller includes a software module (XFM) enabling you to adapt the wall module to the respective controller, making further configuring unnecessary.

Contact your local Honeywell distributor for further details.

Table 5. Program settings for wall modules with fan switch

for switch position	resistance (Ω)
Auto	1861.4 \pm 100
0	2686.4 \pm 100
1	3866.4 \pm 100
2	3041.4 \pm 100
3	4601.4 \pm 100
bypass button closed	0 to 100

NOTE: An additional 10k Ω (\pm 2%) series resistor can be set by jumper (jumper setting: A=1; B=3).

See T7460A,B,C,D,E,F Installation Instructions (product literature no.: EN1B-0291GE51) for jumper settings.

Mounting Options:

The T7460 can be mounted on a 60 mm diameter junction box or directly on a wall.

Dimensions (H/W/D):

4-1/8 x 3-15/16 x 1-3/16 in. (104 x 99 x 30 mm).

Environmental Ratings:

Operating temperature: 43° to 104°F (6° to 40°C).
Shipping temperature: -40° to 150°F (-40° to 65°C).

Relative Humidity:

5% to 95% non-condensing.

Approvals:

CE.

ACCESSORIES

For mounting the following accessories, see T7460A,B,C,D,E,F Installation Instructions (product literature no.: EN1B-0291GE51).

T7460-LONJACK

The T7460-LONJACK is a small board and allows easy access to LONWORKS via the wall module (the wall module must be already connected, in compliance with the max. cable lengths set forth by the LONWORKS Guidelines, to the LONWORKS network via a LONWORKS bus cable). Via an additional 3.5 mm jack plug on the board, a PC connection can be established.

Order quantity: set of 5 pieces

T7460-LIMITER

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

Order quantity: set of 100 pieces

Honeywell

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**DIN EN
ISO 9001**