

T7560A,B,C Digital Wall Module



INSTALLATION INSTRUCTIONS

CAUTION: This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Installation Instructions, may cause interference with radio communication. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case, users at their own expense will be required to take whatever measures may be required to correct the interference. Any unauthorized modification of this equipment may result in the revocation of the owner's authority to continue its operation.

BEFORE INSTALLATION

All wiring must comply with local electrical codes and ordinances or as specified on installation wiring diagrams. Digital Wall Module (DWM) 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 164 ft (50 m). Twisted pair wire is recommended for wire runs longer than 100 ft (30.5 m).



CAUTION

EMI Noise Introduction.

Risk of erratic system operation.

Keep wiring at least one ft (305 mm) away from large inductive loads such as motors, line starters, lighting ballasts and large power distribution panels. During installations, try to avoid areas of high EMI noise. Run wall module wiring separately from 50 Vac or greater power wiring.

Table 1. Types of DWM.

	Sensor ¹	Setpoint	Bypass	Fan Override
T7560A	Tmp	wheel	button	button
T7560B	Tmp/Hum	wheel	button	button
T7560C	Tmp/Hum	-	-	-

¹ Tmp = Temperature sensor; Hum = Humidity sensor

Table 2. Controller SW requirements for powering via terminal 5 and new LCD signaling.

Fan Coil Unit W7752	Hydronic W7762	Chilled Ceiling W7763
1.00.04	1.00.03	1.00.03

NOTE: A software module (ModAL module GNRSC02A) is available to adapt the wall module to the respective Excel 20, 50, 80, 100, 500, 600 controller, making any further configuring obsolete. Contact your local Honeywell distributor for further details.

DWM DISASSEMBLY

The T7560A,B,C comes packed with a subbase that mounts separately for ease of installation. The cover is fixed by a latch on the underside of the unit. Remove the cover as shown in Fig. 1 (T7560A,B) or Fig. 2 (T7560C):

1. Insert the tip of an awl or a similar narrow, pointed object into the small hole in the latch (T7560A,B) or simply depress the latch by hand (T7560C).
2. Pry off the cover.

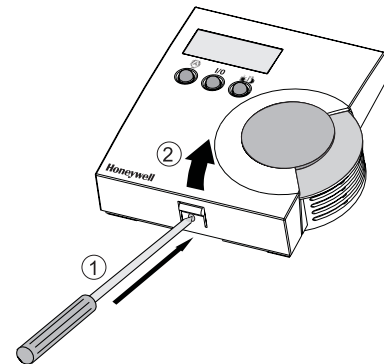


Fig. 1. DWM disassembly (T7560A,B)

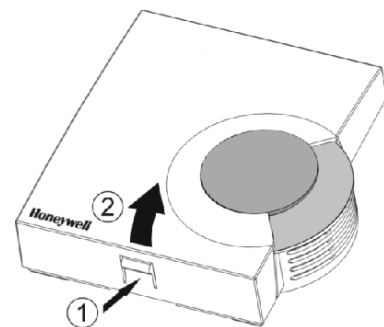


Fig. 2. DWM disassembly (T7560C)

INSTALLATION

Mount the wall module on an inside wall approximately 54 in. (1.3 m) from the floor (or as specified on the installation drawings) to allow exposure to the average zone temperature. Do not mount the wall module 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 DWM is furnished with a terminal block; all field wiring connections are made to these eight terminals.

The DWM has to be mounted in vertical position with the LCD display to the top.

Mount the subbase directly on a wall (see Fig. 3) using the type of screws appropriate for the wall material.

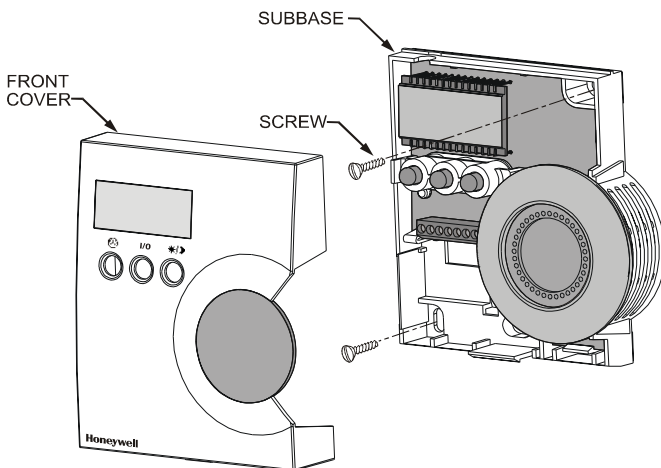


Fig. 3. Mounting of DWM (T7560A,B shown)

See Fig. 6 for T7560A,B,C mounting dimensions.

Wiring

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.

IMPORTANT

Deviation from this rule can result in improper electrical contact. See Fig. 4.

3. Verify DWM is wired according to Fig. 4.

NOTE: For specific wiring requirements, see the following Power section.

Power

The DWM can be powered either via the 5 V LED input (terminal 5) or via the 24 Vac/dc input (terminal 8).

IMPORTANT

The DWM can be powered only via terminal 5 with those controllers listed in Table 2, and if a SW version listed in Table 2 or higher is installed. If the DWM is powered via terminal 5, the Excel 10 controller must be configured for LCD_DISPLAY (LED output continuously ON).

NOTE: The 24 Vac power supply is needed only with the T7560B DWM (for the humidity sensor).

Alternatively, a DC voltage source with 5...12 V can be connected to terminal 5 (see **IMPORTANT** note above).

Alternatively, a DC voltage source with 18...30 V (e.g. 22 Vdc from W7750 CVAHU) can be connected to terminal 8.

Input ratings

Terminal 5:

min. 5 Vdc I_{max} 3 mA
 max. 12 Vdc I_{max} 5 mA
 or LED output of any Excel 10 controller

Terminal 8:

24 Vac from controller; $I < 5$ mA
 or
 18...30 Vdc; $I < 5$ mA

Controllers with the following output ratings can be connected to terminal 5 (ratings are met by all Excel 10 controllers):

- 5 V with 389 ohms
- 4.3 V with 100 ohms
- 14.3 V with 1.5k ohms

Use up to 16 AWG (1.5 mm²) with a minimum of 18 AWG (1.0 mm²) wire for connecting 24 Vac power to terminal 8.



CAUTION

Low Voltage Equipment.

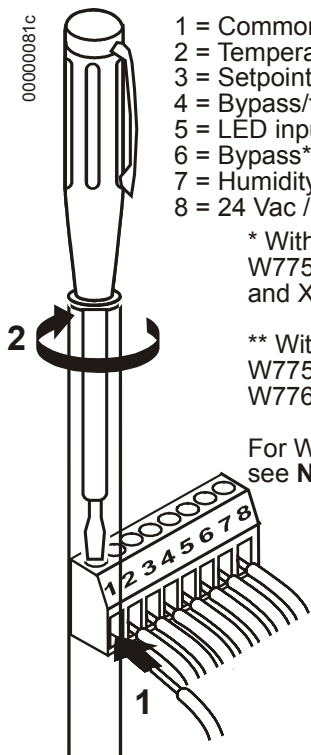
Risk of equipment damage.

The 24 Vac power source for the DWM must be a Class II Power Source. To conform to Class II restrictions, transformers must not be larger than 100 VA. A transformer that is CE certified and meets the Low Voltage Device (LVD) requirements must be used in Europe for all installations of this product.

The DWM power usage is < 0.5 VA at 24 Vac. The DWM does not require a dedicated transformer. The DWM can get power from any convenient location in the 24 Vac power circuit.

The 24 Vac power can come from the 24 Vac power terminals on the nearest controller or directly from a 24 Vac transformer, whichever is closer.

Terminals



- 1 = Common
- 2 = Temperature sensor
- 3 = Setpoint (T7560C: Do not connect!)
- 4 = Bypass/fan* (T7560C: Do not connect!)
- 5 = LED input (T7560C: Do not connect!)
- 6 = Bypass** (T7560C: Do not connect!)
- 7 = Humidity output
- 8 = 24 Vac / 22 Vdc input

* With Excel 10 Controllers:
W7750 (CVAHU), W7752 (FCU),
and XL12

** With Excel 10 Controllers:
W7751 (VAV), W7762 (HYD), and
W7763 (CHC)

For W7753 (UV) and W7761 (RIO),
see NOTE below.

Fig. 4. Wiring of DWM

NOTE: If connected to W7753 (UV) Controller, both terminals 4 and 6 must be connected.

W7761 Remote I/O Controller supports only terminals 2 (temperature), 7 (humidity), and 1 (common), as well as terminal 8 as voltage supply.

Wiring with terminal 8 is not necessary if:
An FCU or CHC controller with software is connected (see table 2).
An Excel 500 with 6V/8V/10V signaling from the controller is used.
The T7560A is then powered by terminal 5.

When all wiring is complete, attach the cover of the DWM as is shown in Fig. 5.

NOTE: Make sure that the latch on the underside of the DWM engages properly.

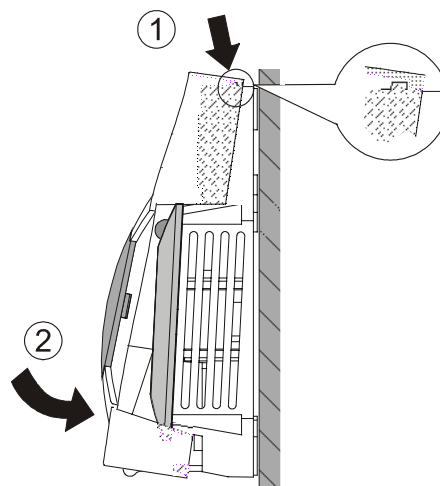


Fig. 5. Mounting cover of T7560A,B DWM.

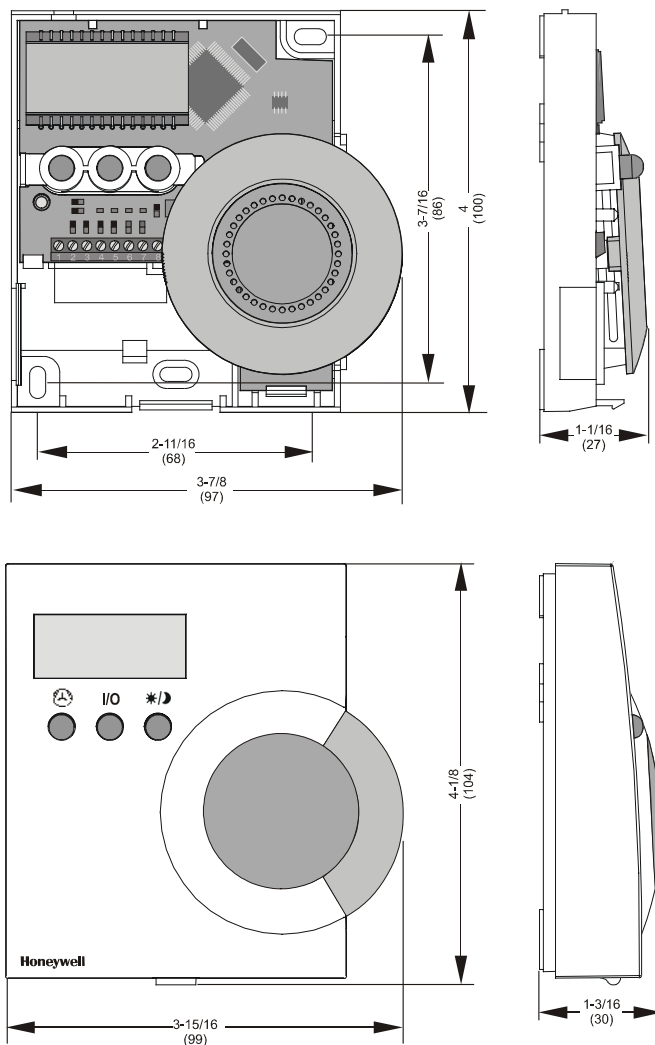


Fig. 6. DWM dimensions in inches (mm)

CONFIGURATION (T7560A,B)

After installation, the T7560A,B DWM must be configured in order to perform as desired. This is done by using the buttons and the setpoint wheel (see Fig. 7).

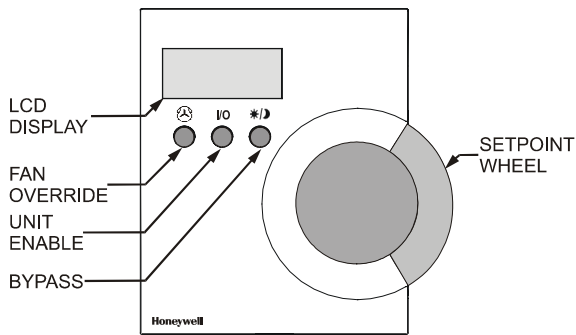


Fig. 7. Control elements of T7560A,B DWM

Normal Operating Mode

After the DWM is powered up by the controller, it will display the room temperature and will operate as configured by default; the respective default setting is marked with an asterisk in the following.

After power-up, all display segments are switched on for approx. one second (see Fig. 8).

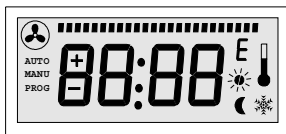


Fig. 8. Display of all segments after power-up

Entering Configuration Mode

1. Press FAN OVERRIDE for at least 5 seconds.
2. Press UNIT ENABLE, then release FAN OVERRIDE, hold UNIT ENABLE for at least 5 seconds.
3. Release UNIT ENABLE.
RESULT: The display shows P -:-- and the DWM is ready for configuration (see below).
4. Press and hold FAN OVERRIDE while turning the setpoint wheel to select the parameter number.
RESULT: The parameters with their currently set values are displayed; the \equiv behind the value indicates the currently set value (see below for values).
5. Release FAN OVERRIDE and turn the setpoint wheel to select the parameter value.
6. Confirm selection by pressing UNIT ENABLE.
7. Repeat steps 4 to 6 to configure next parameter, or press BYPASS to leave the configuration mode.

NOTE: After approx. 10 seconds without further action, the DWM automatically falls back to normal mode.

P1 Setpoint Type Setting Scale Type Setting

- $P1:1$ Fahrenheit relative
- $P1:2$ Fahrenheit absolute
- * $P1:3$ Centigrade relative
- $P1:4$ Centigrade absolute

P2 Room Temperature Setting

- $P2:1$ Do not display room temperature (setpoint, only)
- * $P2:2$ Display room temperature

P3 Bargraph Use Setting

- $P3:1$ No Fan
- $P3:2$ Auto, Off, On
- $P3:3$ Auto, Off, 2 Speeds
- * $P3:4$ Auto, Off, 3 Speeds
- $P3:5$ Bargraph shows humidity (each segment represents 4% rel. humidity; no fan speed available)

P4 Controller Type Setting

- * $P4:1$ New LCD signaling from controller (only with controllers and SW versions as listed in Table 2 or higher; set Excel 10 controller to LCD_DISPLAY)
- $P4:2$ LED override mode from controller, US signaling (100 ms pulses); with contr. W7750, W7751, W7753, W7761, XL12
- $P4:3$ LED override mode from controller, European signaling (500 ms pulses); with contr. W7752, W7762, W7763, XL12
- $P4:4$ LED occupancy mode from controller, US signaling ("Japan Mode"; set Excel 10 controller to LED_OCCUPANCY)
- $P4:5$ LED occupancy mode from controller, European signaling (500 ms pulses); with contr. W7752, W7762, W7763, XL12
- $P4:6$ Excel 500 signaling from controller (10 V, 8 V, 6 V)

P5 Pin 4 (Bypass/Fan) Grounding

- $P5:1$ Pin 4 not shorted to GND if override is pressed (UV-controller, W7753)
- * $P5:2$ Pin 4 shorted to GND if override is pressed

Configuration Items in Software Version 2.10 and Above

P6 Device type

This item configures different devices.

IMPORTANT:

*Stay on P6:1 and do **not** change to other configurations.*

P7 Temperature offset

- P7:50 Temperature offset; values of 0 through 99 are valid. 50 = no change, 49 = -0.1 Kelvin, 51 = +0.1 Kelvin, etc. This offset varies the LCD display value, only. It must be set separately in the XL10 controller.

P8 Switch back fan / temperature offset if unoccupied

- 01 --> enable FAN Key / enable Setpoint Key
- 02 --> enable FAN Key / disable Setpoint Key
- 03 --> disable FAN Key / enable Setpoint Key
- 04 --> disable FAN Key / disable Setpoint Key

To "disable" means to switch back to FAN= auto / Setpoint offset = zero and disable operation.

To "enable" means to make normal operation possible (no action if unoccupied).

"Unoccupied" means:

- Effective Unoccupied (moon on continuously)
- or
- Override Unoccupied (moon flashing).

Works only with configuration P4:1: LCD signalling
Setpoint will be set to zero only if set to relative: P1:1 and P1:3.

How to Check the Software Version

Press the left and right button for approx. 5 seconds: After a LCD display test, you will see the current SW version of the device.

ACCESSORIES

T7460LONJACK

The T7460LONJACK allows to easily access LONWORKS® via the wall module. LONWORKS® will be connected to the 2 LON® terminals. Via the 3.5 mm jack plug, a PC connection can be established.

Order quantity: set with 5 pieces

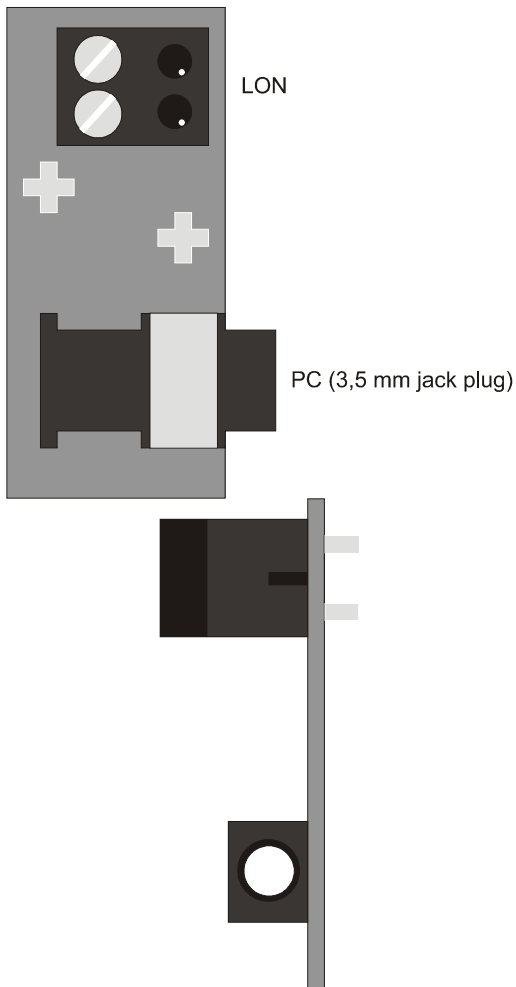


Fig 9. T7460LONJACK

Mounting

Remove the setpoint wheel and put in the LonJack as shown in the following:

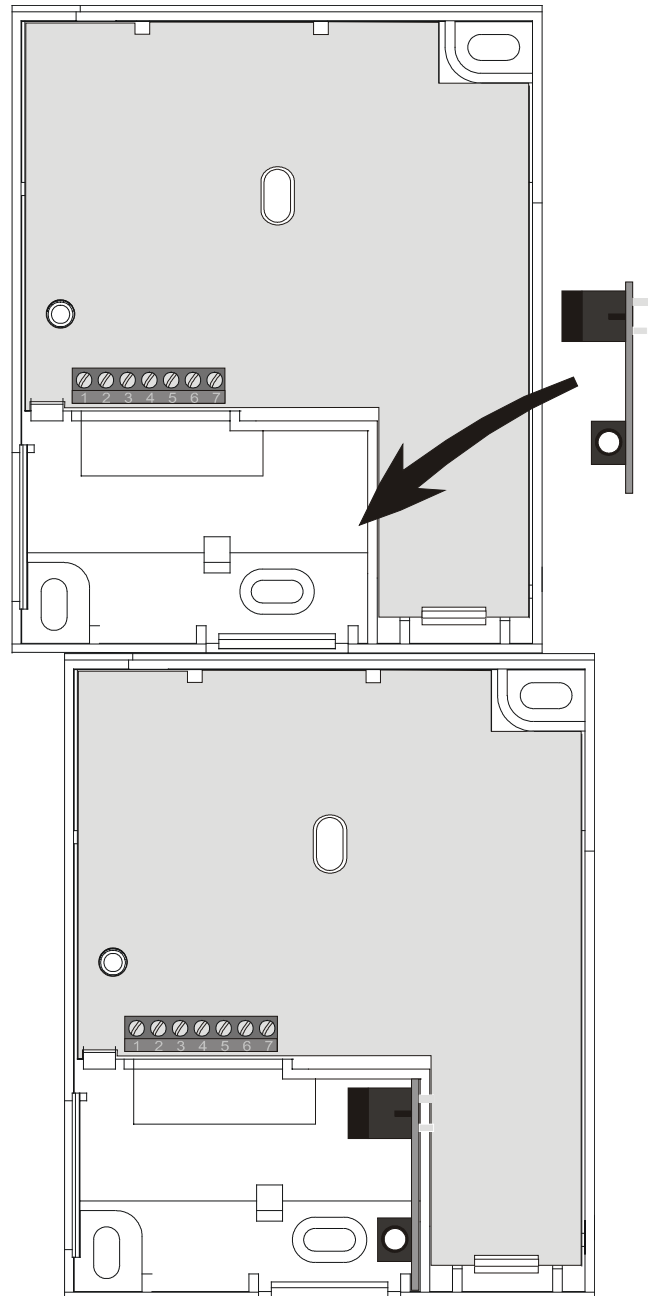


Fig 10. Mounting T7460-LONJACK

T7560 Blinds

Same material and color as housing; for covering non-operational buttons.

Order quantity: set of 50 pieces.

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