



Mechanical Specification



ProSpace™

Packaged Terminal Air Conditioner (PTAC)

The ProSpace™ Packaged Terminal Air Conditioners and heat pumps provide a high standard of quality in performance, workmanship, durability and appearance as they heat and cool the occupied air space year round. All models are designed for through-the-wall installation.

Features

- **Intelligence:** the unit has an on board computer which utilizes real-time diagnostics to prolong the life of the unit. There is an LED indicator on the control board, behind the front panel, that flashes an error code if the unit detects a faulty condition. In many situations, the unit automatically clears the fault condition and continues operating with no interruption. However, in some cases, the condition cannot be cleared and the unit will require servicing. In those situations, an **Fx** failure mode displays on the digital display.
- **Memory:** in the event there is a power lost, all of the control settings (Setpoint, Mode, Fan Speed, ON/OFF and Configuration) are retained in memory. After power is restored, the unit restarts in the previous mode (and configuration) prior to a power loss.
- **Quiet Design:** the ProSpace has two (2) fan motors and a tangential blower wheel for optimum quietness. The indoor fan always runs (a minimum of 10 seconds) before the compressor in order to reduce the sound of the compressor starting.
- **Random Compressor Restart:** the compressor is equipped with a 2-minute, 45 second to 3-minute 15 second random restart delay feature. This helps to prevent power surges after a power outage (for example, when many PTACs start at the same time). Whenever the unit is plugged in, or when power has been restarted, a random compressor restart occurs to help avoid power surges.
- **Compressor Protection:** the ProSpace has a random start-up delay of three (3) minutes on the compressor, with a minimum compressor runtime of three (3) minutes, to prevent short cycling of the compressor and to maximize its life.

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

- **Automatic Room Freeze Protection:** this feature automatically ensures that the indoor temperature does not fall below freezing. When the PTAC is configured for freeze protection (the default condition), the power is supplied to the unit. If the unit senses a temperature below 40°F (4.44°C), the fan motor and electric heater turn ON to warm the room to 50°F (10°C). The unit can be configured to have freeze protection turned OFF.
- **Automatic Quick Warm-up (Heat Pump Models Only):** if the room temperature falls to 5°F (-15°C) below the setpoint temperature, the reverse cycle heat is shut OFF and the electric strip heat is turned ON for one (1) cycle, until room temperature rises.
- **Dual-8 Display and LED Display:** the ProSpace has two (2) 8-segment nixie tubes and the following 13 LED indicators:
 - HIGH, MED, LOW, AUTO, Cool, Fan, Heat, ON, OFF, Setpoint, Indoor, Status, Timer
- **Displays:**
 - **Mode Indicator Display:** when the air conditioner operates in a certain mode, the corresponding mode indicator is lit.
 - **ON/OFF Indicator:** displays in green when the controller is ON and red when controller is OFF.
 - **Fan Speed Display:** when the air conditioner operates at HIGH, MED, LOW, or AUTO fan speed, the corresponding indicator is lit.
 - **Dual-8 Display:** ambient temperature can be displayed in cooling and heating modes by changing settings using the keypad.
 - Note: Under cooling or heating mode, the Dual-8 displays the set temperature and (the Dual-8 displays indoor ambient temperature under fan mode.*
 - **Display Data with 3-bits:** the Dual-8 displays a ten digit + the unit digit at first and then displays BLANK + hundred digit.
- **Fan Configuration Optimization for Selected Application:** the unit can be optimized for selected applications by configuring the fan to run in Continuous mode or cycle ON/OFF with the compressor and electric heater (can be different for both heating and cooling modes). In cycle mode, the fan continues to run after the compressor or electric heater stops in order to blow off any residual heat or cool left on coil.
- **Other Unit Configurations:**
 - Displays either Fahrenheit (F°) or Celsius (C°).
 - Optimizes the room temperature sensor reading to the exact application— one for cooling, one for drying, and one for heating (indoor temperature sensor biasing).
 - Emergency Heat (for Heat Pump Only); disables the compressor during heating mode operation (heat only with Electric Heat).
 - Configures the unit to display only the room temperature or setpoint during heating and cooling modes.
 - Configures the unit to limit the controlling setpoint range. The display always shows the complete setpoint range, but the controlling setpoint is limited to the configured minimum/maximum setpoint selected.
 - Energy Management (also referred to as Front Desk Control); provides an input so the unit can be manually disabled from a different location. If the unit detects 24 Vac on this input, it automatically turns itself OFF. If no voltage is detected on the input, the unit runs normally.
 - Wall Thermostat Control; a wired wall thermostat can be connected to the unit, but the unit must be configured to disable the keypad.

Electrical Specification

Power Connection Options

Appropriate power cord accessory kit is determined by the voltage and the amperage of the branch circuit, based on the unit amperage requirements (for example, electric heater size).

Note: Ensure the outlet matches the appropriate prong configuration on the plug. It should be within reach of the service cord. All wiring, including installation of the receptacle, must be in accordance with the NEC™ and all local codes, ordinances and regulations. National codes require the use of an arc fault or leakage current detection device on all 208/230V power cords. For 265V units, if power cord accessory option is selected, then the cord is only 18" long and must plug into the accessory electrical 265V sub-base.

All Units

Use recommended wire size (Table 1) and install a single-branch circuit. All units are designed to operate off only one (1) single branch circuit.

Note: Only use copper conductors. Branch circuit wire is single circuit from main box. AWG wire sizes are based on copper wire at a 140°F (60°C) temperature rating.

Table 1. Common Branch Circuit Wire Sizes

Nameplate Amps	AWG Wire Size
7.0 to 12	14
12.1 to 16	12
16.1 to 24	10

Grounding

For safety and protection, the unit is grounded through the service cord plug or through separate ground wire provided on hard wired units. Ensure that the branch circuit or general purpose outlet is grounded.

Voltage Supply

Note: Check voltage supply at outlet. For satisfactory results, the voltage range must always be within the ranges specified on the data information plate. The cord to order is determined by the unit voltage and the desired electric heat capacity.

Cord/Connection Units

Note: Power cord does not ship with the unit.

Table 2. Electric Heater and Cord Information, PTEF07xxx and PTHF07xxx

Voltage	230 Vac ^(a)		265 Vac	
Amps ^(b)	15	20	15	20
Heater Size	2.5 kW	3.5 kW	2.5 kW	3.5 kW
Plug Layout				
NEMA Plug	6-15P	6-20P	7-15P	7-20P
Cord #	PWR00286	PWR00288	PWR00287	PWR00289

(a) The 250 Vac field supplied outlet must match the plug for standard 208/230V units and be within reach of the service cord.
 (b) Do Not use 30 amp cord with size 07 units.

Table 3. Electric Heater and Cord Information, PTEF and PTHF Size 09, 12, and 15

Voltage	230 Vac			265 Vac		
Amps	15	20	30	15	20	30
Heater Size	2.5 kW	3.5 kW	5.0 kW	2.5 kW	3.5 kW	5.0 kW
Plug Layout						
NEMA Plug	6-15P	6-20P	6-30P	7-15P	7-20P	7-30P
Cord #	PWR00286	PWR00288	PWR00290	PWR00287	PWR00289	PWR00291

Power Cord Protection

The power cord for 230/208V units provide protection from fire. The unit power automatically disconnects when unsafe conditions are detected. Power to the unit can be restored by pressing the reset button on plug head. Upon completion of unit installation for 230/208V models, an operational check should be performed using the TEST/RESET buttons on the plug head.

Note: Models with 265V do not incorporate this feature because they require use of an electrical sub-base accessory. Connection to a wall socket is not permitted for 265V units. All 265V units must be hard wired using the hard wire kit or make use of the plug-in receptacle in the standard sub-base.



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