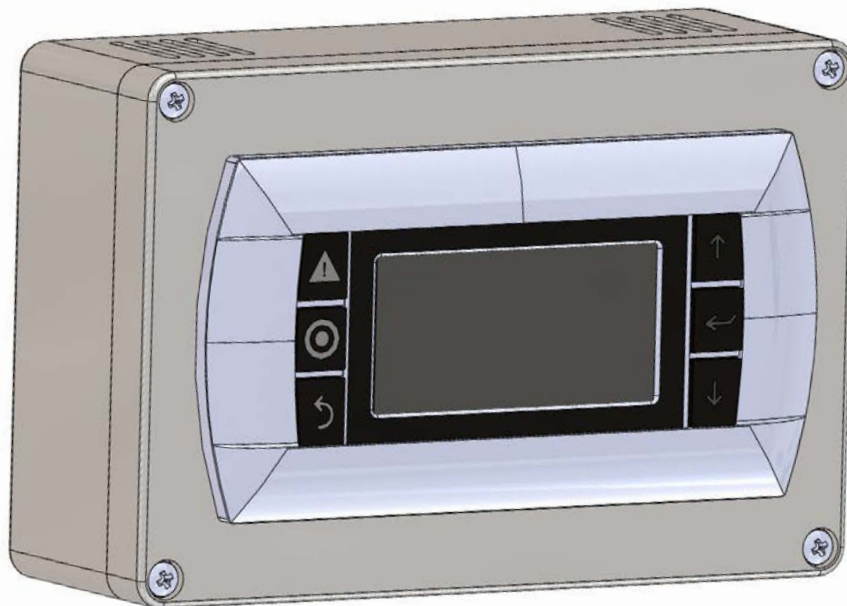

INSTALLATION INSTRUCTIONS

8620-306 & 8620-307 PGD Display Kits



NOTE: The PGD can be used as an alternative for the LC6000 controller for operation when a single MULTI-TEC[®], FUSION-TEC[®] WR Series or MEGA-TEC[®] unit is used.



Climate Control Solutions

Bard Manufacturing Company, Inc.
Bryan, Ohio 43506
www.bardhvac.com

Manual: 2100-734A
Supersedes: 2100-734
Date: 11-16-21

PGD Features, Display and Interface Buttons

Backlit Display

The controller includes a large 132 x 64 pixel graphic backlit display. An intuitive menu system provides settings, zone conditions, and alarms.

Illuminated Interface Buttons (Keys)

Six button (key) interface allows for easy setup and menu selection (see below).

Unit Operation Information

The following information is supplied through the PGD display:

RAT: Return air sensor or room temperature

SAT: Supply air temperature

Blo: Blower operation percentage

Fan: Outdoor fan percentage

Unit Status: Current unit operation

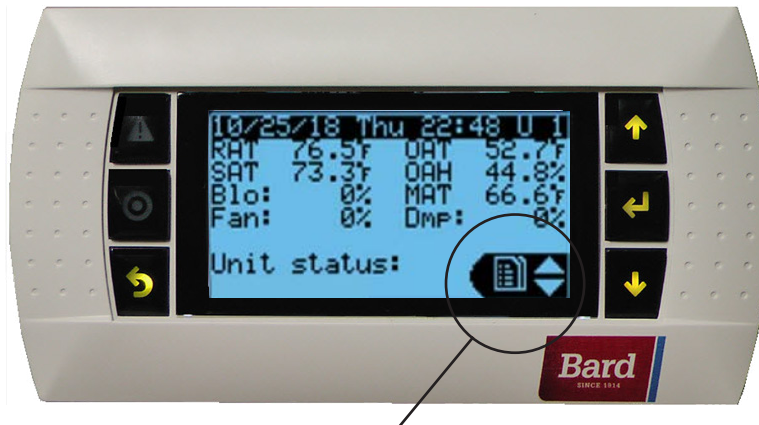
OAT: Outdoor air temperature

OAH: Outdoor air humidity

MAT: Mixed air temperature

Dmp: Cooling or heating demand percentage

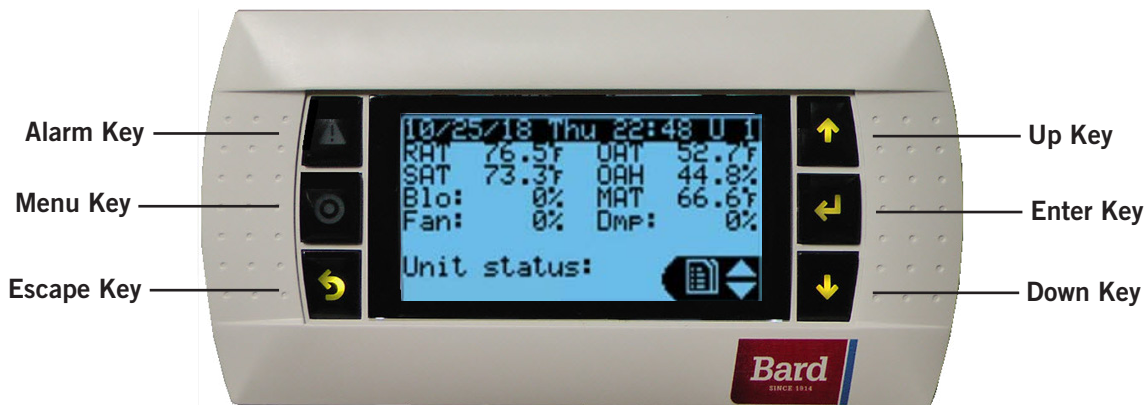
Unit Setup and Diagnostics
Unit setup features and diagnostics can be accessed using the Menu Key. See unit manual for additional instructions on unit setup and diagnostic features.



Time and Date
The display shows the time and date. The month/day/year format is configurable in the unit software as well as daylight savings time. Time and date stamps are used in alarm logging.

Setpoints, Additional Information and Alarm Logs

Heating and cooling setpoints can be configured using the PGD. See unit manual for temperature settings in the unit. Unit model and serial number can be viewed from the display. Alarm logs for the unit can be displayed through the use of the PGD.



Alarm Key
Allows viewing of active alarms
Silences audible alarms
Resets active alarms

Menu Key
Allows entry to Main Menu

Escape Key
Returns to previous menu level
Cancels a changed entry

Up Key
Steps to next screen in the display menu
Changes (increases) the value of a modifiable field

Enter Key
Accepts current value of a modifiable field
Advances cursor

Down Key
Steps back to previous screen in the display menu
Changes (decreases) the value of a modifiable field

General

The PGD display kit allows a single unit of any of the BARD PLC family of wall-mount units (MULTI-TEC, FUSION-TEC WR Series and MEGA-TEC) to run in orphan mode while providing a display of the unit. By connecting the PGD display to the unit, unit setup, status, operation and alarm display can be accessed from inside the climate controlled area.

The PGD replaces the TEC-EYE™ hand-held tool as a permanently mounted display and functionality is identical. Please consult the wall-mount unit installation and service manual for specific set up requirements and options. All information found in the unit manuals pertaining to TEC-EYE operation and functionality apply to the PGD display.

NOTE: The PGD display kits do not have indoor humidity control and cannot be used with electric or mechanical reheat dehumidification.

Two kits are available: 8620-306 and 8620-307.

The 8620-306 kit includes:

PGD, enclosure, 25' of cable (with J10 telephone connectors on each end) and instructions.

The 8620-307 kit includes:

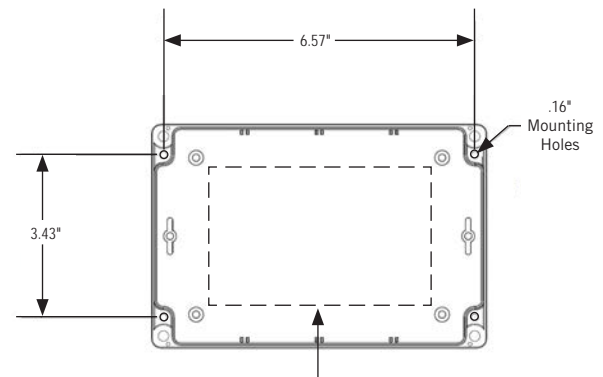
Everything included in 8206-306 kit plus a remote temperature sensor with separate instructions. The existing return air sensor is replaced with the new remote sensor. Room temperature is monitored using the wall mounted remote sensor instead of the return air sensor.

Mounting the PGD Enclosure

Four (4) mounting holes are provided for mounting the PGD display to the wall. See Figure 1 for information on mounting. If the mounting holes are not sufficient, polycarbonate plastic box construction allows for easy hole drilling where needed. The PGD display may also be installed on a 2 x 4 handi box to accommodate applications requiring wiring in a conduit.

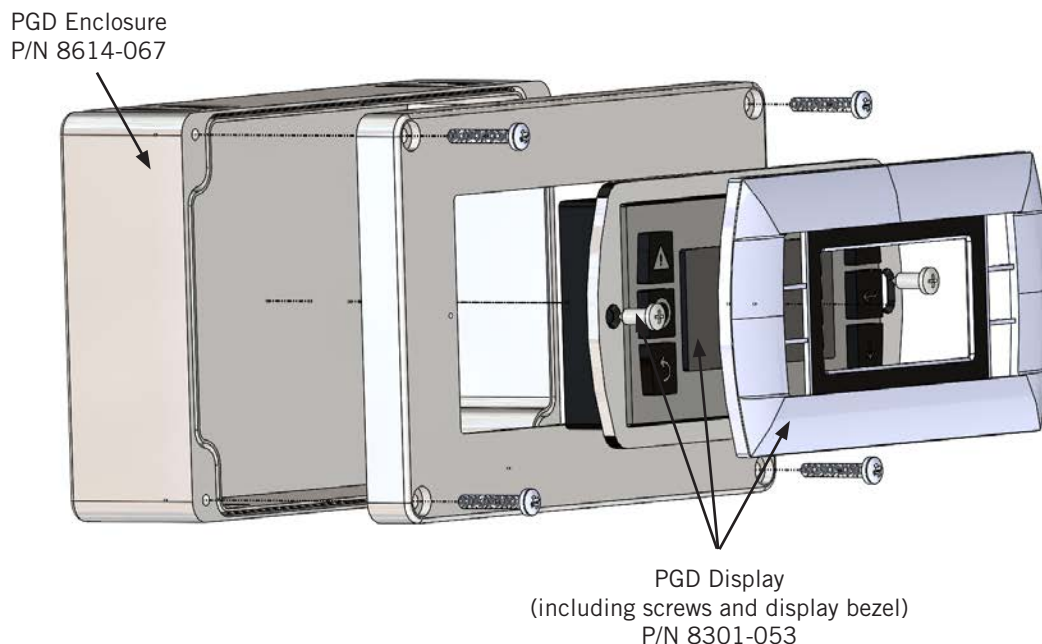
Prior to mounting enclosure on wall, an opening will need to be made in the back of the enclosure for the 25' cable with J10 connectors supplied with this kit (see Figure 1).

FIGURE 1
PGD Enclosure Mounting



Place access hole within dotted line. Polycarbonate plastic box construction allows for easy hole drilling where needed.

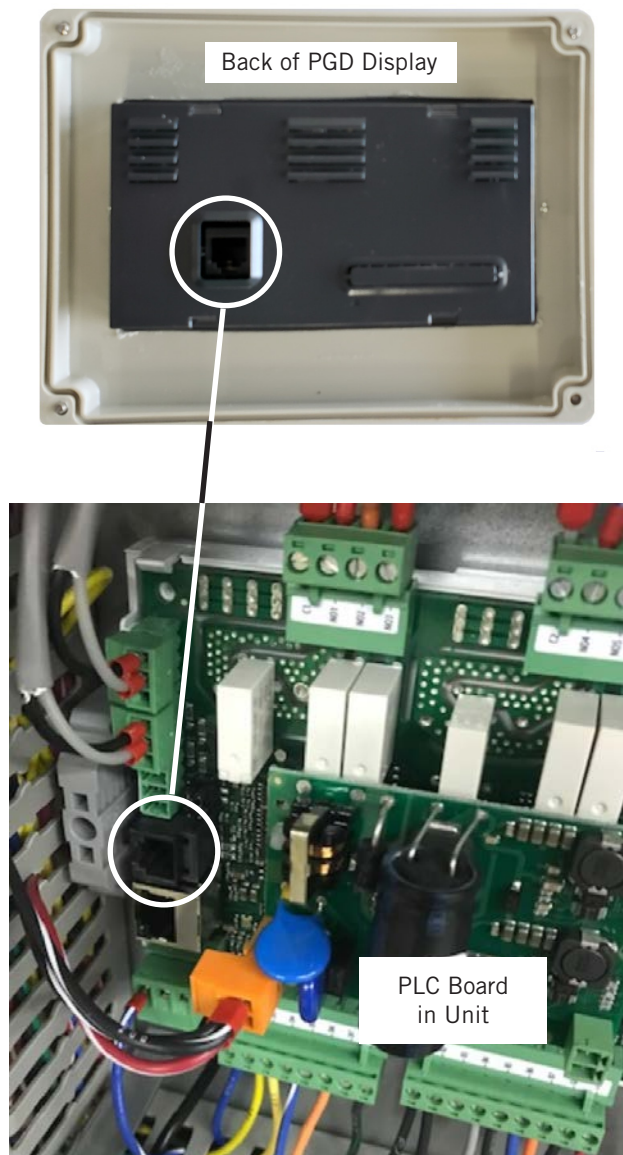
FIGURE 2
PGD and Enclosure



PGD Connection to Unit

A 25' cable with J10 connectors is supplied with this kit. Connect one end to back of PGD display and other to PLC board in unit (see Figure 3). 25' is the maximum suggested cable length. The end can be removed and the cable shortened if the proper crimping tools for a J10 connector are used.

FIGURE 3
Connecting PGD to Unit



Operation

The PGD replaces the TEC-EYE™ hand-held tool as a permanently mounted display and functionality is identical. All information found in the wall-mount unit manuals pertaining to TEC-EYE operation and functionality apply to the PGD display.

Once the unit is installed, the PGD kit is connected (according to the supplied instructions) and the AC breakers are turned on, the unit is ready to run in standard heating and cooling mode (heating is optional).

Balanced Climate™ and dehumidification are not available with the PGD kit.

The features and sequence of operation available with the PGD display kit include all functions and features available in “orphan mode”. Features and functions vary slightly by model and include:

- Emergency Cooling (economizer required)
- Alarm Logging
- Free Cooling
- Optimized Cooling (economizer required)
- Self Test
- Unit Disable

The PGD Kit allows remote viewing of the status and remote programming of the options.

The fan will run continuously with this kit. The return air sensor is used for temperature sensing and continuous fan helps ensure correct temperature input.

8620-307 Kit Only

Kit 8620-307 also includes a remote temperature sensor that can be located away from the unit. The return air sensor is disconnected and the remote sensor is connected to these terminals allowing space temperature monitoring.

Currently the fan will still run continuously; a future software update will be required to disable continuous fan operation.

See instructions provided with remote temperature sensor for sensor mounting information.

Remote Temperature Sensor Connection to Unit (8620-307 Kit Only)

To connect the remote temperature sensor to the unit, the existing return air sensor conductors must be removed and replaced with the conductors from the remote temperature sensor. The connection locations of the remote temperature sensor vary with the differing units. See Table 1 and Figures 4A, 4B, 5, 6A and 6B on pages 5 and 6 for information on connecting the remote temperature sensor to the unit.

Wire for connecting the remote temperature to the unit is field supplied. Use 18 to 22 gauge copper conductor wire no longer than 35' in length.

TABLE 1
Remote Temperature Sensor Connections

Remote Temp Sensor Connection	Unit Connection				
	MULTI-TEC		FUSION-TEC WR Series (see Figure 5)	MEGA-TEC	
	Small Cabinet ¹ (see Figure 4A)	Large Cabinet ² (see Figure 4B)		Small Cabinet ³ (see Figure 6A)	Large Cabinet ⁴ (see Figure 6B)
Terminal 1	B3 on PLC	B3 on PLC	B3 on PLC	B1 on PLC	B1 on PLC
Terminal 2	Analog Ground Terminal	11 on Terminal Block	16 on Terminal Block	25 on Terminal Block	42 on Terminal Block

¹ MULTI-TEC small cabinet models: W18ABP*, W18LBP*, W24ABP*, W24LBP*, W30ABP*, W30LBP*, W36ABP*, W36LBP*, W36ABE*

² MULTI-TEC large cabinet models: W42ACE*, W42ACM*, W42ACP*, W48ACE*, W48ACM*, W48ACP*, W60ACE*, W60ACM*, W60ACP*, W72ACE*, W72ACM*, W72ACP*

³ MEGA-TEC small cabinet models: W90A, W120A, , W150A

⁴ MEGA-TEC large cabinet models: W180A

FIGURE 4A
Connecting Remote Temp Sensor to Small Cabinet MULTI-TEC

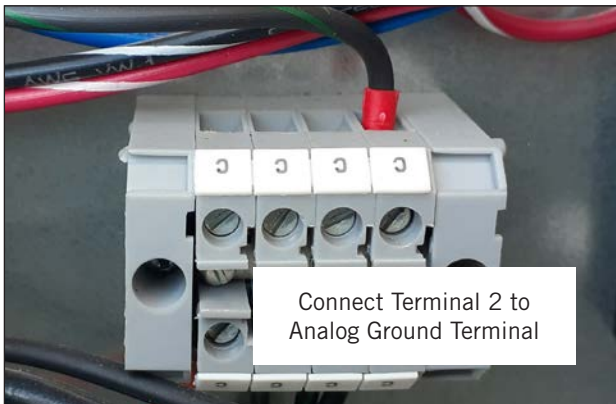
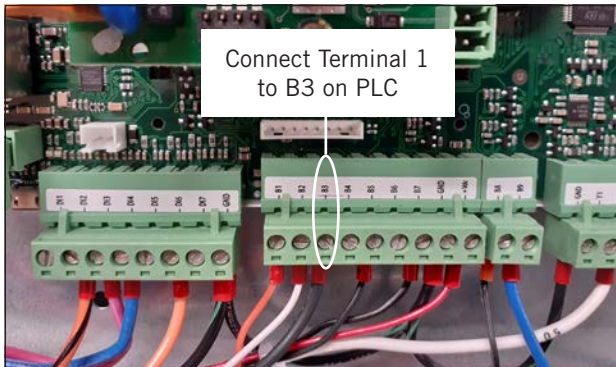


FIGURE 4B
Connecting Remote Temp Sensor to Large Cabinet MULTI-TEC

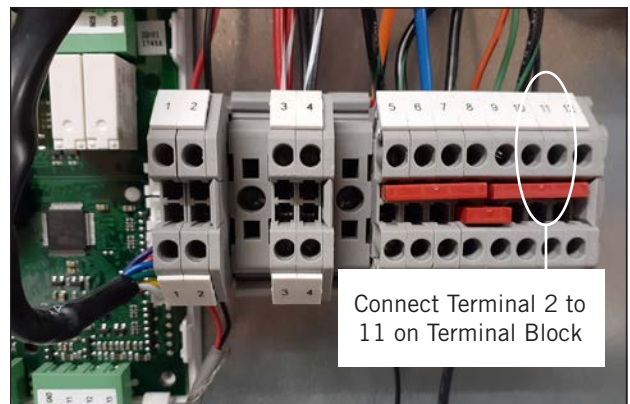
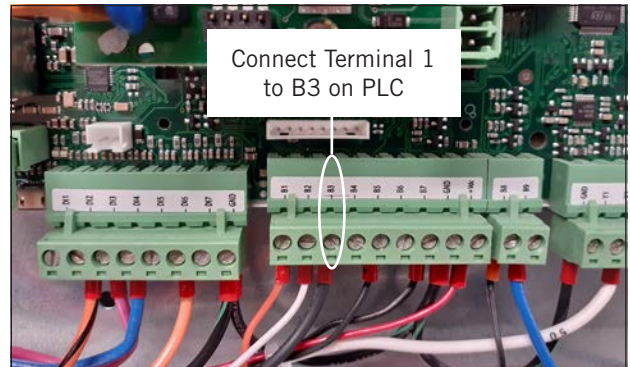


FIGURE 5
Connecting Remote Temp Sensor to FUSION-TEC WR Series

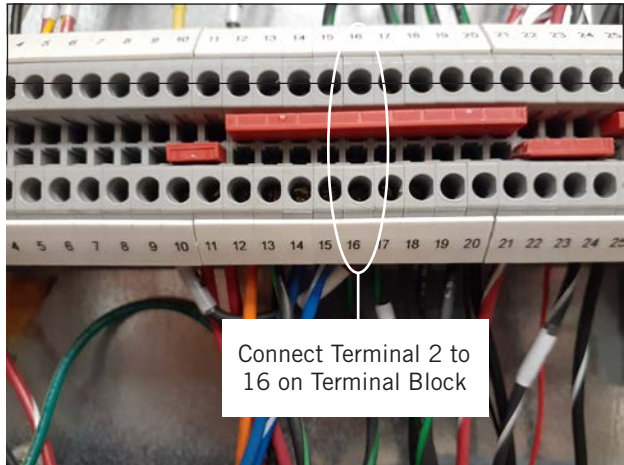
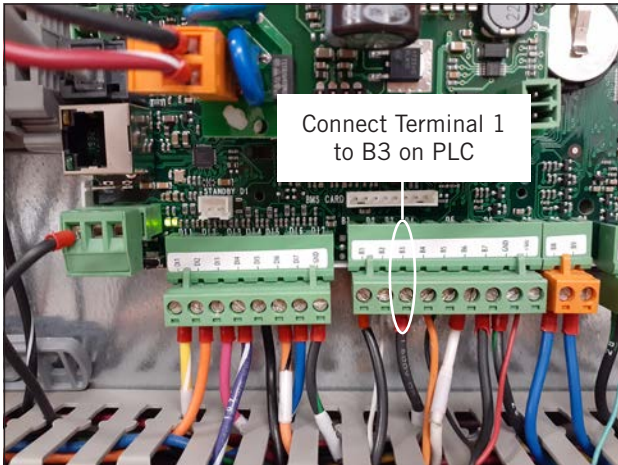


FIGURE 6A
Connecting Remote Temp Sensor to Small Cabinet MEGA-TEC

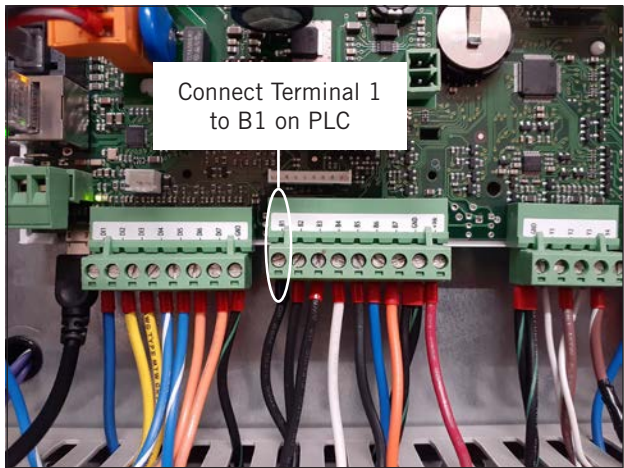
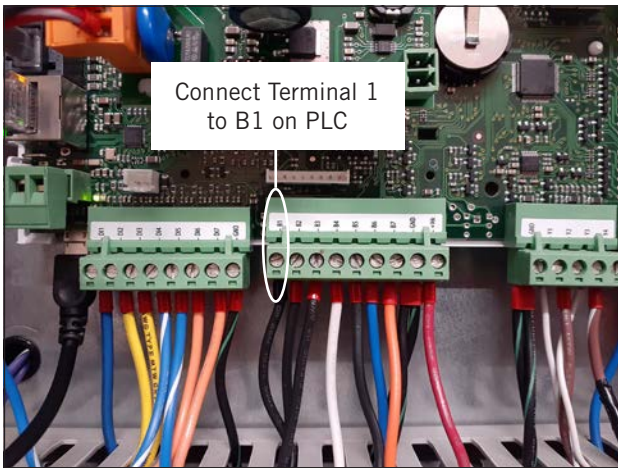


FIGURE 6B
Connecting Remote Temp Sensor to Large Cabinet MEGA-TEC

