

INSTALLATION INSTRUCTIONS

Carel pGD1 Digital Display/Interface Module

model series "D", "H", "I", "O", and "MPR"

(when equipped with Modine Control System)

Figure 1.1 - Carel pGD1 Display/Interface Module



! WARNING

1. Disconnect power supply before making wiring connections to prevent electrical shock and equipment damage.
2. All units must be wired strictly in accordance with wiring diagram furnished with the unit. Any wiring different from the wiring diagram could result in a hazard to persons and property.
3. All wiring must be done with a wiring material having a temperature rating of at least 105°C.

IMPORTANT

1. The use of this manual is specifically intended for a qualified installation and service agency. All installation and service of these kits must be performed by a qualified installation and service agency.
2. These instructions must also be used in conjunction with the Installation and Service Manual originally shipped with the unit, in addition to any other accompanying component supplier literature.

Application

The pGD1 is a remote user interface for the Carel controller that is available to be used on:

- Model series "D", "H", "I", and "O" Indirect Fired Make-Up Air Units that feature the Modine Control System option (model Digit 12=9)
- All model "MPR" Packaged Ventilation/Dedicated Outside Air System (DOAS) Units.

The interface allows a user to access the Carel controller remotely for setpoint changes and to view the operational status of the equipment. The interface features an LED backlit graphic display and buttons for excellent visibility. Also included is a buzzer to indicate alarm conditions. The interface can be used as a handheld device or can be wall mounted.

Two common uses for the pGD1:

- When servicing the unit, depending on factors such as unit size or roof curb height, the unit mounted controller may require a ladder to access. Having the ability to navigate through the controller menus from roof level may be easier with this device.
- Maintenance personnel may wish to have the pGD1 mounted in an equipment control room.

Note: The pGD1 does not have temperature/humidity control capabilities. It is only meant as an interface to the Carel controller menu structure remotely. For space temperature/humidity sensing/control, please refer to the literature for the Carel pAD.

Model Number:	PGD1000WX0
Power Supply Input:	24 Vac (powered from unit controller)
Operating Conditions:	<ul style="list-style-type: none"> • -4°F to 140°F • 10 to 85% Relative Humidity (non-condensing)
Index of Protection:	IP40 (NEMA Type 1)
Maximum Wired Distance:	100 feet using RJ12 cable
Dimensions:	6.14" W x 1.22" D x 3.23" H

Carel pGD1 Digital Display/Interface Module

Handheld Installation

For handheld use of the pGD1 interface, follow the steps below, otherwise proceed to the section "Wall Installation".

1. If the pGD1 interface is to be used as a hand-held device, connect one end of an RJ12 cable (not to exceed 100 feet in length) to the back connection on the pGD1 (see Figure 2.1). For the connection at the unit mounted controller, refer to the section "Wiring Connection at Unit Controller".

Note: If the distance between the pGD1 and the Carel controller exceeds 100 feet, refer to the appropriate Carel literature for further information.

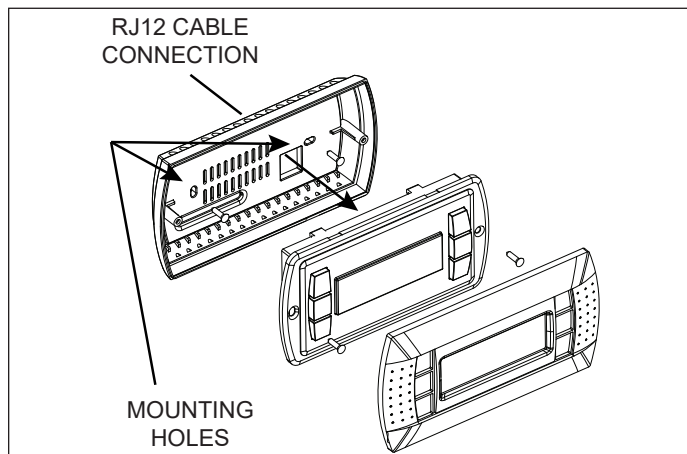
2. Proceed to section "Wiring Connection at Unit Controller".

Wall Installation

For wall mounting of the pGD1 interface, follow the steps below, otherwise proceed to the section "Handheld Installation".

1. If the pGD1 interface is to be used as a hand-held device, remove the back of the interface module and front trim plate as shown in Figure 2.1.

Figure 2.1 – Exploded View of pGD1 Interface Module



2. Attach the back to a standard 2" x 4" electrical box mounted sideways. Use the round-head screws supplied through the mounting holes on the back of the interface module as shown in Figure 2.1.
3. Connect one end of an RJ12 cable (not to exceed 100 feet in length) to the back connection on the pGD1 (see Figure 2.2). For the connection at the unit mounted controller, refer to the section "Wiring Connection at Unit Controller".

Note: If the distance between the pGD1 and the Carel controller exceeds 100 feet, refer to the appropriate Carel literature for further information.

4. Attach the pGD1 controller to the back that was mounted in Step 2 using the flush-head screws supplied in the packaging and then install the front trim plate.
5. Proceed to section "Wiring Connection at Unit Controller".

Wiring Connection at Unit Controller

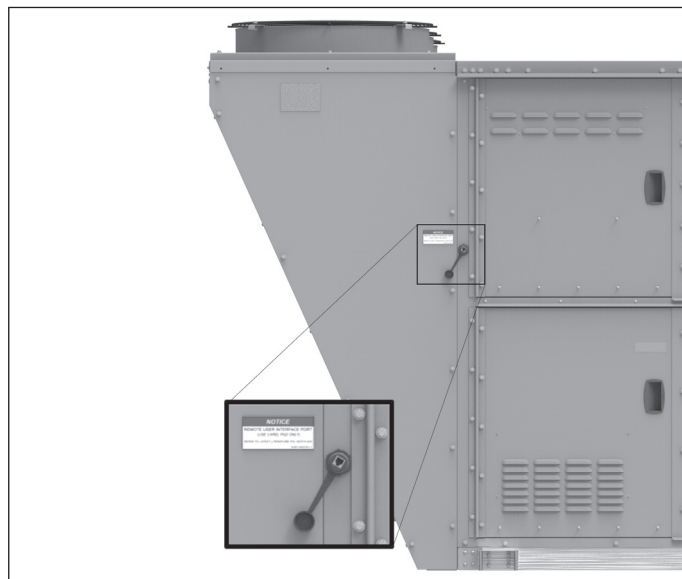
The wiring of the pGD1 interface to the unit must be within 100 feet. If the distance exceeds 100 feet, refer to the appropriate Carel literature for further information.

The wiring of the pGD1 interface to the unit controller varies by unit model and configuration as follows:

Model MPR

- **Direct to Unit Controller:** The RJ12 cable is to be connected to the J10 connection on the unit mounted controller.
- **Units with External Data Port Option:** Some units are equipped with an external data port option on the exterior of the cabinet as shown in Figure 2.2. The RJ12 cable is to be connected to the data port connection.

Figure 2.2 - Optional External Data Port



Model Series "D", "H", "I", "O"

All Model Series "D", "H", "I", "O" units with the Modine Control System option include a unit mounted pLDPRO (Figure 2.3), which is a smaller version of the pGD1 interface. It features the same screen information and keypad functions but is unit mounted in a smaller package.

Figure 2.3 - Unit Mounted pLDPRO Interface



(continued next page)

Carel pGD1 Digital Display/Interface Module

Model Series "D", "H", "I", "O" (continued)

For remote access, the pGD1 can also be used, in addition to the unit mounted pLDPRO, as follows:

1. The pGD1 Interface kit includes a TCONN terminal board (see Figures 3.1 and 3.2) that is to be field mounted inside the unit control cabinet using the bracket/screws included.

Figure 3.1 - TCONN Terminal Board

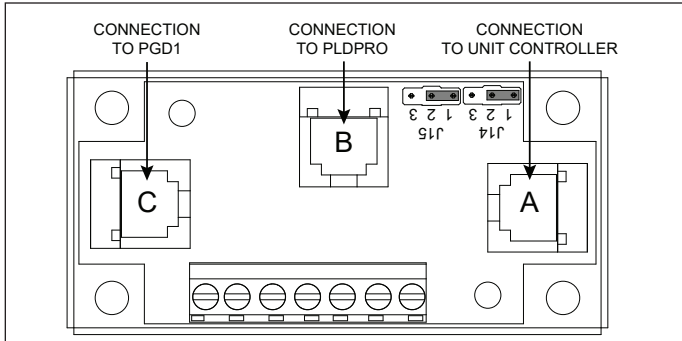
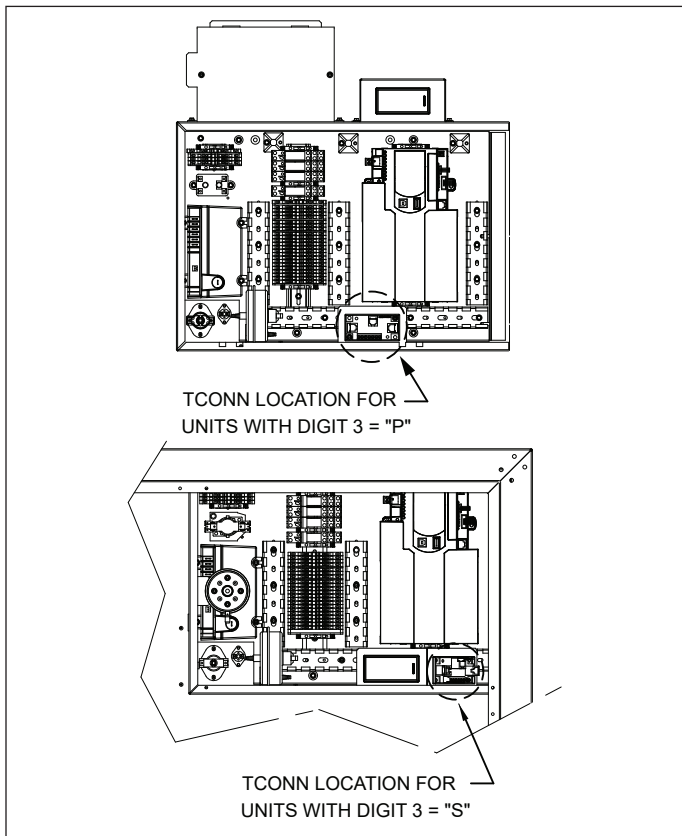


Figure 3.2 - TCONN Board Mounting Locations



2. Disconnect the RJ12 cable from the pCOEM+ controller on the unit at J15. Reconnect to terminal B on the TCONN so the pLDPRO is wired to terminal B.
3. Using the RJ12 cable provided with the kit, connect one end to the unit controller at J15 and the other end to terminal A on the TCONN.
4. Connect the RJ12 cable from the pGD1 controller to terminal C on the TCONN.
5. Verify that the J14 and J15 jumpers on the TCONN board are installed on pins 1 and 2.

Button Features

The pGD1 has 6 buttons for control. Refer to Figure 3.3 for the buttons and their functions:

Figure 3.3 – pGD1 Button Features

The image shows the pGD1 digital display with the following text on the screen: '08:09 02/08/18 Unit:01', 'SA: 68.0%', 'SUPPLY Set: 70.0%', and 'Status: OFF-KEYPAD OCCUPIED'. The display is flanked by six buttons: a bell icon (ALARM), 'Prg', 'Esc', an up arrow (UP), a left arrow (ENTER), and a down arrow (DOWN).

	ALARM: Press once to indicate information regarding active alarms (red if active alarms). Press twice to reset any active manual-reset alarms.
	PRG: Press to select the main navigation menu.
	ESC: Press to return to the main display screen showing unit status.
	UP: Press to either: <ul style="list-style-type: none"> • Scroll through the various display screens, providing the cursor is in the top left position. • Increase the value of a set point adjustment.
	ENTER: Press to confirm any set point adjustments and move the cursor to the next available set point.
	DOWN: Press to either: <ul style="list-style-type: none"> • Scroll through the various display screens, providing the cursor is in the top left position. • Decrease the value of a set point adjustment.

For detailed instructions on the how to use the pGD1, please refer to the latest revision of the Controls Manual that shipped with the unit.

Note: In most cases, the unit controller will automatically recognize the pGD1 when connected. If the pGD1 is not recognized, refer to the section "Addressing the pGD1 in the Carel Controller" on the next page.

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Addressing the pGD1 in the Carel Controller

Once the pGD1 is connected to the Carel controller, the controller should automatically detect the pGD1. If it doesn't, the address must be set as follows:

1. Press and hold down the UP+DOWN+ENTER buttons simultaneously until "Display Address" screen is shown. The address settings should be:

- Display: 32
- I/O Board: 1 (for PCO3, 5, or OEM+) or 2 (for PCOxs)

```
Display address
setting.....: 32
I/O Board address: 01
```

2. If the settings are not as shown, press the ENTER button to go to the "Terminal Config" screen as follows:

```
Terminal confi9
Press ENTER
to continue
```

3. Press the ENTER button again. The display will show the terminal configuration screen, similar to the following:

```
P: 01 Adr Priv/Shared
Trm1 32 Pr
Trm1 05 ① Pr
Trm1 None -- OK?No
```

① Note for model series "D", "H", "I", and "O" units, Trm2 will already be addressed to 05 for the unit mounted pLDPRO interface.

4. Press the ENTER button until the cursor is underneath the Trm1 setting. Press the UP or DOWN buttons to change the value to 32.
5. Press the ENTER button until the cursor is underneath Pr or Sh. Press the UP or DOWN buttons to change the value to Pr for units without an ERM (Energy Recovery Module) or Sh for units with an ERM (model MPR only).
6. Press the ENTER button until the cursor is underneath No. Press the UP or DOWN buttons to change the value to Yes and press the ENTER button to complete the programming.

As Modine Manufacturing Company has a continuous product improvement program, it reserves the right to change design and specifications without notice.

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