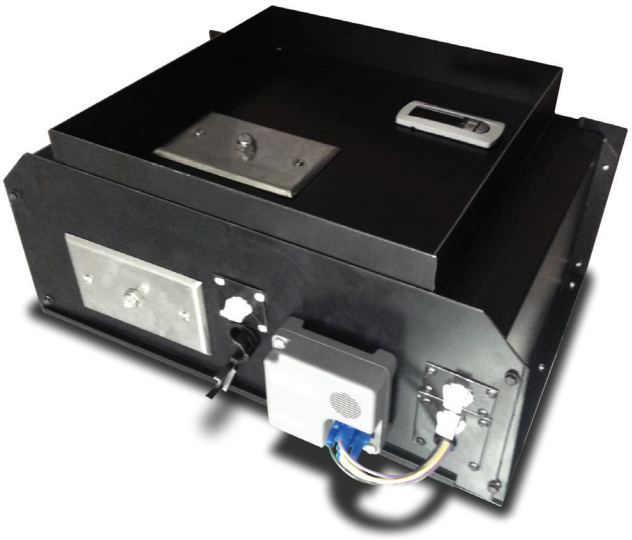
INSTALLATION / OPERATION MANUAL

Controller Terminal

MODEL: **FlexFloor3**

TOOLS REQUIRED:

1. Power Screwdriver:
   - Phillips #3 Bit – floor panel screws
   - Phillips #2 Bit – grille trim ring screws
2. Jigsaw – cutting openings in floor panels (if floor panels are not pre-cut/drilled)
3. Carpet Knife



MATERIALS REQUIRED:

1. FlexFloor3 Controller Terminal
2. Plug & Play Cables
3. #8 – 32 x 1-1/2" (38.1mm) Self-Drilling/Tapping Sheet Metal Screws (1-1/2" screws work in most applications, using other screws could void warranty)

PREPARATION:

1. Verify that the FlexFloor3 is the correct model, unit count and location(s) per scheduled placement.
2. Remove the floor covering / floor panel at the desired location(s) (if installed).
3. Verify that all adjacent floor panels are properly installed.

INSTALLATION:

CAUTION

IMPORTANT: It is HIGHLY RECOMMENDED by the manufacturer that each zone be checked for faulty or improper wiring DURING INSTALLATION. Each zone should be tested thorougly for full connectivity before proceeding with installation of the next zone. The manufacturer cannot be responsible for any improper installation as a result of failure to follow this procedure as outlined in the AirFixture Connectivity Testing Procedures.

The FlexFloor is designed to be installed into a floor panel that has been removed from the floor. The completed assembly is then installed back into the floor, and connected to the zone with Plug & Play Cables.

NOTE: Floor panel installation cut-outs are based on the style of diffuser grille being installed (round or square).

REFER TO PAGE 2 FOR ADDITIONAL INFORMATION:
INSTALLATION / OPERATION / MAINTENANCE / PARTS

INSTALLATION / OPERATION MANUAL

Controller Terminal

MODEL: **FlexFloor3**

INSTALLATION (CONTINUED):

1. Remove the floor panel and cut an opening for installation of the FlexFloor3 terminal (size/shape based on style of grille).
   SQUARE: 10-1/2" x 10-1/2" [+1/8"/-0"]
   (267mm x 267mm [+3.175/-.00])
   ROUND: 10-1/4"Ø [+1/8"/-0"]
   (260mmØ [+3.175/-.00])
2. Remove the trim ring and two grille pieces from the FlexFloor3 terminal. Remove the package of trim ring securing screws from the interior of the terminal (the screws may be provided in a separate box on the pallet).
3. Set the terminal on work surface. Lay floor panel on top of terminal, so that collar fits through pre-cut opening.
4. Insert the trim ring into terminal. It will fit into the collar, through the hole from the top side of the floor panel.
5. Secure trim ring to the terminal, using the included screws to hold the assembly together.

CAUTION

Use only #8 Phillips Head Sheet Metal Screws. Using other screws could void warranty.

6. Replace floor panel (with installed FlexFloor3).
7. Connect FlexFloor3 to the zone, using Plug & Play Cables. Required connections are power, slab temperature sensor, and network. Refer to **Connections** section for details.
8. Replace floor panel screws to secure the floor panel / FlexFloor3 assembly in place.
9. Place two grille pieces into the trim ring in the desired orientation.
10. For protection of the grille's finish during construction, a Grille Cover is recommended.

CONNECTIONS:

1. Connect 24VAC to Power Input Connector (Top Right)
   - PIN 1 = 24VAC Common (also signal common)
   - PIN 4 = 24VAC Hot
2. Connect Slab Temperature Sensor to Sensor Input Connector (Bottom Right)
   - PIN 1 = Thermistor (Signal Common)
   - PIN 2 = Thermistor

   NOTE: Thermistor polarity does not matter.
3. Connect Damper/AHU Cable to Control Output (Center)
   - PIN 1 = Signal Common
   - PIN 3 = 0–10V AHU/Damper Control

   NOTE: Control Output default is Direct Acting 0–10V, with Start Voltage at 1.5V and Max Voltage at 10V. These parameters are all adjustable from control panel or BMS.

OPERATION:

The FlexFloor3 is shipped with the standard application loaded in Plug & Play condition. For specific applications, the controller can be configured using either the built-in display and keypad, or through network parameters (refer to Pages 3 & 4 for additional details).

MAINTENANCE:

Once installed, the FlexFloor3 requires no regular service or maintenance for proper operation.

PARTS:

- Grille Cover: P/N 620.0120.05

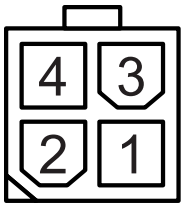
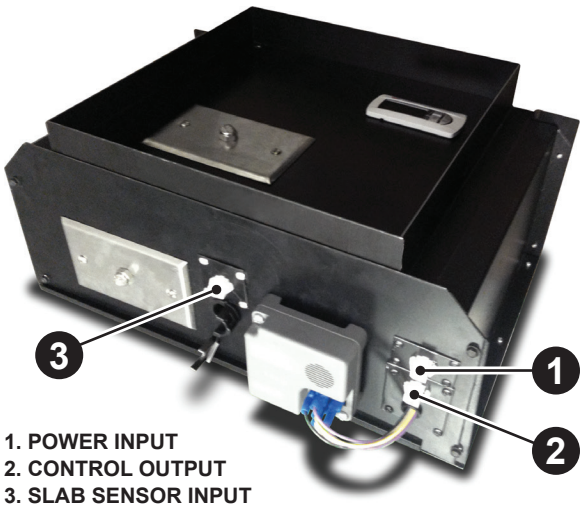


FIGURE 1: MOLEX PANEL CONNECTOR PIN NUMBERS



1. POWER INPUT
2. CONTROL OUTPUT
3. SLAB SENSOR INPUT

FIGURE 2: PANEL CONNECTOR LOCATIONS

INSTALLATION / OPERATION MANUAL

Controller Terminal

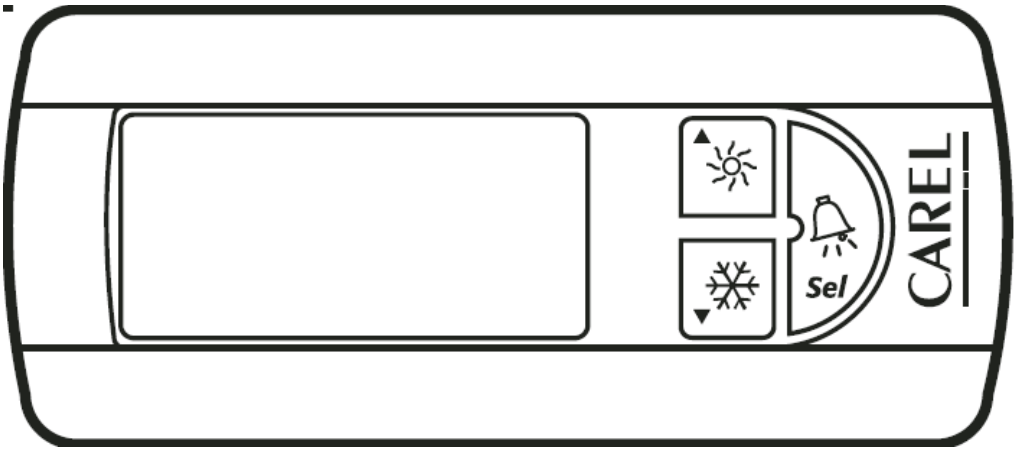
MODEL: **FlexFloor3**

Panel Display Normal:

- Blank
- Current Pressure Reading
- “SP” - Setpoint (default 50 = 0.05 iwg)
- “Out” - Control Output
- “Pt” - Plenum Temperature
- “St” - Slab Temperature
- “rH” - Relative Humidity
- “dP” - Dew Point
- “Alr” - Dew Point Alarm

Panel Setup Mode *(Push and hold both up and down for 5 seconds)*:

- “C-F” - Temperature units C/F (default F)
- “d-r” - Direct or Reverse Acting (default Direct)
- “StP” - Start Point - Low Voltage Cutoff (default 1.5V)
- “Lo” - Minimum V out (default 0.0V)
- “Hi” - Maximum V out (default 10.0V)
- “Pb” - Ctrl Loop Proportional Value (default 80 = 800)
- “It” - Ctrl Loop Integration Value (default 5)
- “Dt” - Ctrl Loop Derivative Value (default 0)
- “Db” - Deadband (default 2 = .002 iwg)
- “Of1” - Calibration Offset for Pressure Sensor
- “Of2” - Calibration Offset for Humidity Sensor
- “Of3” - Calibration Offset for Plenum Temperature Sensor
- “Of4” - Calibration Offset for Slab Temperature Sensor
- “Sr” - Software Revision



Controller Terminal

MODEL: **FlexFloor3**

FLEXFLOOR3 NETWORK PARAMETERS:

Param	Description	Default	Min	Max		Addr	Type
Pressure Setpoint	Pressure Setpoint (iwg) x 1000; e.g. 50 = 0.05iwg	50	0	250	r/w	41	Integer
Direct/Reverse Acting	Set Output as 0-to-10 or 10-to-0	1 (Direct)	0	1	r/w	1	Boolean
Output Start Voltage	Initial turn-on Voltage	1.5	0	10	r/w	6	Analog
Output Min Voltage	Minimum Output Voltage	0	0	10	r/w	7	Analog
Output Max Voltage	Maximum Output Voltage	10	0	10	r/w	8	Analog

Table 1: Job Specific Settings

Param	Description	Default	Min	Max		Addr	Type
Output Level	Output 0 to 100%	-	0%	100%	r	10	Analog
Pressure Reading	Pressure (iwg) x 1000; e.g. 50.0 = 0.05iwg	-	0	250	r	11	Analog
Plenum Temperature	Plenum Temperature (degree F)	-	50	90	r	12	Analog
Slab Temperature	Slab Temperature (degree F)	-	50	90	r	13	Analog
Relative Humidity	Relative Humidity (%)	-	0%	100%	r	14	Analog
Plenum Dew Point	Plenum Dew Point (degree F)	-			r	15	Analog
Dew Point Alarm	Condensation Warning	-			r	16	Boolean
SW Revision	SW Revision	2.1			r	201	Analog

Table 2: Status Outputs

Param	Description	Default	Min	Max		Addr	Type
Plenum Temp Cal	Temperature Offset (degree F)	0	-10	10	r/w	21	Analog
Slab Temp Cal	Temperature Offset (degree F)	0	-10	10	r/w	22	Analog
Pressure Cal	Pressure Offset (1 = .001iwg)	0	-25	25	r/w	23	Analog
Humidity Cal	Humidity Offset	0	-10	10	r/w	24	Analog
PID Loop Proportional	PID Proportional Setting /10; e.g. 80 = 800	80	0	999	r/w	42	Integer
PID Loop Integration	PID Integration Setting	5	0	999	r/w	43	Integer
PID Loop Derivative	PID Derivative Setting	0	0	999	r/w	44	Integer
PID Lood Deadband	Deadband (iwg) x 1000; e.g. 2 = 0.002iwg	2	0	999	r/w	45	Integer

Table 3: Tuning Parameters