

## INSTALLATION INSTRUCTIONS & SUBMITTAL DATA

### Remote Monitoring Panel and Remote Damper Positioner gas-fired duct furnace/make-up air units model series "D", "H", "I", & "O"

#### Remote Monitoring Panel



### WARNING

1. Gas supply shall be shut-off and the electrical power disconnected before proceeding with the conversion. Failure to do so could result in fire, explosion, electrical shock, or the unit starting suddenly resulting in injury.
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 (I&S) Manual originally shipped with the appliance being converted, in addition to any other accompanying component supplier literature.

#### Model Application

The purpose of the remote monitoring panel is to offer control and/or indication of the current operating conditions of a heating/make-up air unit, model series "D", "H", "I", or "O".

#### Remote Panel Components

The standard panel includes 2 lights ("Heat On" and "Blower On") and a Summer/Off/Winter switch. Other panels are available with the following options:

- **Indicator Light Tags (panel holds 2 to 6 lights):**

Heat On	Cool On
Blower On	Evap On
Blower On (High)	Smoke Alarm
Blower On (Low)	Power On
Dirty Filters	
  
- **Switch Tags (panel holds 1 to 3 switches):**

<u>2-Position Switches</u>	<u>3-Position Switches</u>
Day/Night	Heat/Vent/Cool
Occupied/Unoccupied	Summer/Off/Winter
On/Off	Heat/Off/Vent
Heat/Off	On/Off/Auto
High/Low	
Summer/Winter	
Heat/Cool	
Auto/Off	
  
- **Other Devices Available:**
  - Single- or Two-Stage Thermostat
  - Maxitrol Electronic Set Point Adjuster – TD121
  - Damper Positioner

#### Component Data:

- **Lights:**
  - Red, 24VAC, 60Hz, 1 Watt
- **Switches:**
  - DPDT (2 position) or DPDT-Center Off (3 position)
  - Ratings: 15A @ 125VAC, 3/4HP 125-250VAC
- **Thermostats:**
  - Single Stage:
  - White-Rodgers 1C20-101, 1.0A @ 24VAC, 50°-90°F
  - Two Stage:
  - Honeywell TH5220D1003, 1.0A @ 24VAC, 40°-90°F heating, 50°-99°F cooling
  - Modulating:
  - Maxitrol TD121 Set Point Adjuster\*\*, 55°-90°F
  - \*\*Requires TS121 Duct Sensor
- **Damper Positioner:**
  - Belimo SGF24 Manual Positioner
  - Input Voltage: 24VAC, Output Voltage: 2-10VDC
- **Dirty Filter Switch:**
  - Field adjustable, 0.17"-5.0" W.C. (refer to the heating/make-up air unit I&S Manual for setup).

# INSTALLATION – REMOTE MONITORING PANEL & DAMPER POSITIONER

## Installation

The remote monitoring panel is to be mounted indoors in an environment free of excessive contaminants such as oil, moisture, and dirt. Mounting holes are provided in the rear of the enclosure for mounting to a wall, terminal box, etc. Conduit entrance knockouts are provided on the sides, bottom, and rear of the enclosure.

If the panel includes a thermostat, follow any accompanying component supplier literature for general installation instructions. The following general points should be observed for best performance:

- Mount the panel approximately 5ft. (1.5m) above the floor on an inside wall with good air circulation at average temperature.
- Mount the panel away from the following:
  - Drafty areas
  - Areas behind doors or in corners
  - Hot or cold air from ducts
  - Sources of radiant heat such as steam pipes, the Sun, fireplaces, etc.
  - Concealed pipes or chimneys
  - Areas behind the thermostat that are unheated or uncooled (such as an outside wall)

## Wiring

Installation of wiring must conform with local building codes, or in the absence of local codes, of the National Electric Code ANSI/ NFPA 70 – Latest Edition. Unit must be electrically grounded in conformance to this code. In Canada, wiring must comply with CSA C22.1, Part 1, Electrical Code.

The remote monitoring panel components are designed to accept the following connections:

- **Lights:**  
3/16" quick connect terminals
- **Switches:**  
1/4" quick connect terminals
- **Single or 2-Stage Thermostats:**  
Screw terminals
- **Maxitrol TD121 Set-Point Adjuster:**  
1/4" quick connect terminals
- **Belimo Damper Minimum Positioner:**  
Screw terminals

## Wiring Diagram Selection

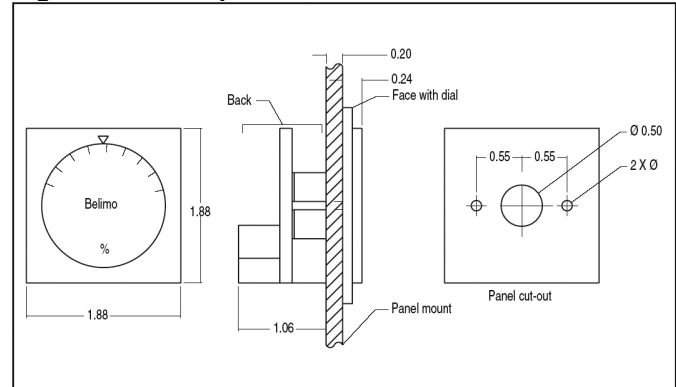
- For system units (factory supplied blower), refer to the job specific unit wiring diagram provided with the unit.
- For deviations to these wiring diagrams or the job specific wiring diagrams, consult the factory.

## Damper Positioner Setting Instructions

The damper positioner (if supplied) is used with a modulating damper actuator to set the minimum percentage of outside air. The positioner dial is manually set between 0 to 100% resulting in a 2 to 10 VDC signal being sent to the damper actuator. The control signal DIP switch, located on the back of the positioner, must be in the 2 to 10VDC signal position.

Note: For a remote (shipped loose) Belimo Damper Minimum Positioner, see Figure 2.1 for panel cut-out dimensions required when mounting on a panel by others.

Figure 2.1 - Damper Positioner



## Remote Panel Dimensions

Figure 2.2 - Remote Panel Dimensions (inches)

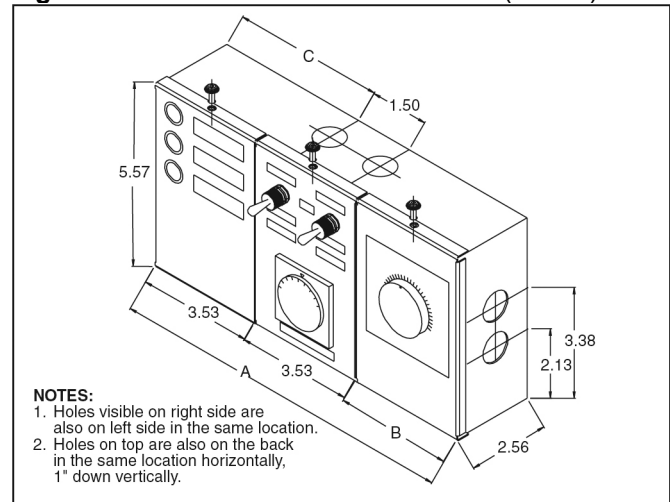


Table 2.1 - Remote Panel Dimensions (inches)

Remote Panel Type	A	B	C
Lights and Switches Only	7.06	–	2.81
With Single Stage Thermostat or Electronic Set Point Adjustor	10.60	3.53	4.58
With Two Stage Thermostat	13.09	6.03	5.82