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User's Guide

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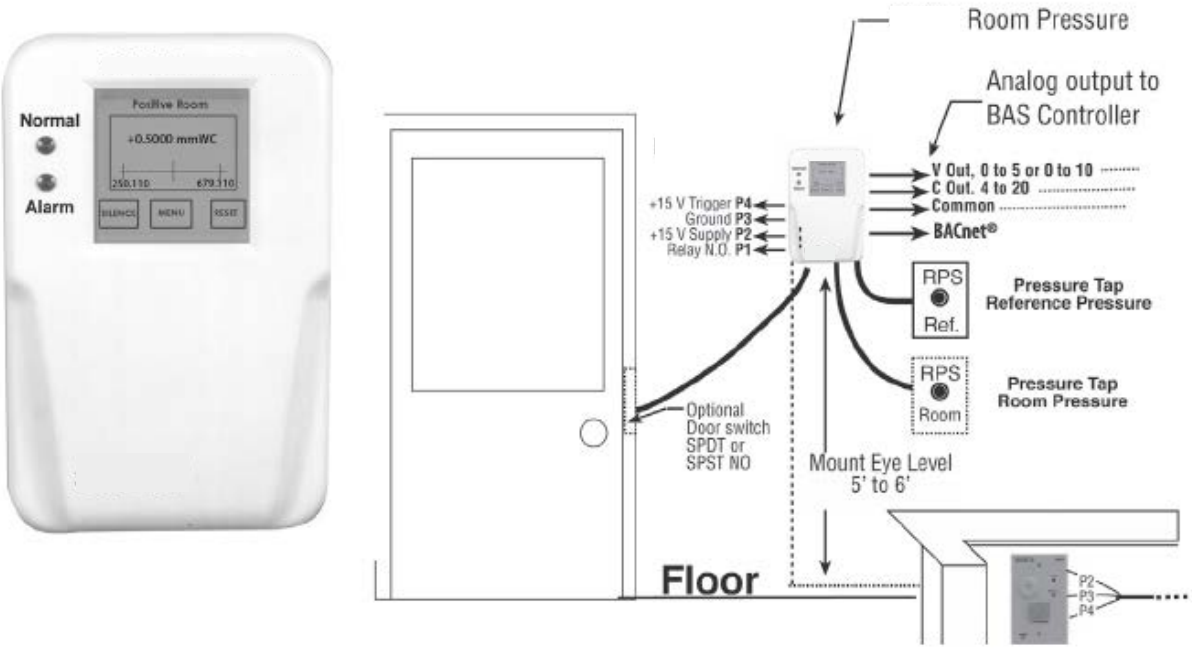
Omega DPG300 Room Pressure Monitor



The Omega DPG300 Room Pressure Monitor is designed for critical low differential pressure applications that require stringent pressure monitoring and alarming. The DPG300 can be configured to monitor positive, negative, or neutral pressure in protected environments and hospital isolation rooms per CDC guidelines. The DPG300 is a complete system that includes a backlit RGB LED display with a graphic user interface, which enables access to pressure, security, calibration, and alarm setup. The touch-screen displays menus that guide the user through setup, as well as setting up password protection. Red and green LED's and a local audible alarm (with time delay feature) alert personnel to system status. The DPG300 has a NEMA 1 (IP20) rated fire retardant plastic housing for indoor applications. True differential pressure is displayed with a resolution of .0001". Omega's patented very low pressure capacitance sensor is dead ended and avoids the potential for cross contamination of the room and reference space as well as eliminating drift that results from fouling of flow based on sensors, which by nature have a flow path connecting the protected and reference spaces. Additionally there are 2 levels of password protection available as well as optional BACnet MSTP communications.

Table of Contents

1.0 INTENDED USE

The DPG300 is designed to monitor critical environments by providing differential pressure indication. Typically this is between a monitored room and a reference space such as a corridor or ante room. The unit also provides monitoring, alarm and communications functions.

Installation must be indoors, Polution Degree 2, Installation Category II.

Typical Applications:

1. Hospitals: patient isolation and protection rooms, operating suites, intensive care, and emergency rooms.
2. Pharmaceutical, semiconductor, precision manufacturing, and clean rooms.
3. Laboratories: medical research, BSL (Bio safety labs), radiation, vivarium, toxic metals and chemicals. Indoor use only.

1.1 SPECIFICATIONS

Service: Air or nonconductive, nonexplosive gases.
Accuracy: ±0.5% F.S., ±0.25% FS optional
Operating Temperature Limits: 32 to 120°F (0 to 50°C).
Operating Humidity Limits: 5 to 95% Relative humidity (non-condensing).
Altitude: 2000 meters (max).
Thermal Effects: ±0.03% F.S./ °F (± 0.05% F.S./ °C).
Overpressure: ±15” WC.
Supply Voltage:
Code V1 and V2 85-265 VAC, 50-60 Hz
Code A1 and A2 18-32 VAC, 50-60 Hz.
Power Consumption (Voltage output): 5 W.
Output: Selectable 4-20 mA (2-wire), 0-5 VDC (3-wire), or 0-10 VDC (3-wire).
Loop Resistance (4-20mA output): 0-510 OHMS Ω.
Electrical Connection: Removable terminal block.
Pressure Fittings: Barbed fittings for 1/4” O.D. tubing.
Housing: Fire retardant plastic (NEMA 1, IP20 rated for indoor applications).
Mounting: Mounts to customer supplied 4½ x 4½ plaster ring (mounts to double gang electrical box).
Dimensions: 8½ H x 5.4½ W x 1.8½ D (20.3 H x 13.7 W x 4.1
Weight approx.: 1.5 lbs (680 g).
Agency Approval: CE, CAN/CSA-C22.2 NO. 61010-1-04
Communications: BACnet MSTP ASC, optional, see omega.com for detailed PICS statement.

1.2 DPG300 FUNCTION

The DPG300 senses very low differential pressure using high accuracy capacitive sensor technology. The pressure difference for these applications is the difference in static pressure between a critical environment room and its surrounding reference area (usually a hallway or another room). Maintaining and monitoring a static room pressure difference ensures that the critical environment room is either protected or isolated from a surrounding environment. Protection strategy requires a net positive room static pressure difference, while isolation requires a net negative static pressure difference. The DPG300 can be programmed to monitor either positive or negative room static pressure. Low pressure sensing technology is coupled with multifunctional alarming and simple touchscreen user interface with password security protection. The BACnet communication option allows the device to communicate with other BACnet devices to allow the supervisory system to change configuration setups and monitor alarms in an open network.

User Interface: LCD Display 128 x 128 COG module, with custom RGB LED backlight and custom 4-wire resistive touch screen.

RGB Backlight: The DPG300 indicates the status of the room being monitored using visual backlight color.

Color	Status
Green	Room Pressure is within alarm limits
Yellow	Door is open. (Door input must be enabled)
Red	Room Pressure is outside alarm limits and alarm delay period has been exceeded and room is not in “No Isolation” mode.

Visual Feedback: LED’s, green for normal, red for alarm

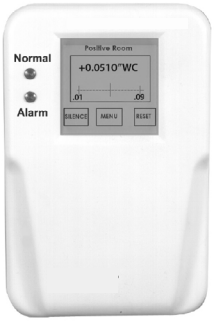
Audible Feedback: Beeper will sound when pressure is out of range and alarm delay has timed out. Volume can be adjusted between 1 to 4 in relative sound levels up to the maximum level specification of t he beeper to 85 dB at 4”. Audible alarm can also be disabled.

Quick Room Mode Change: Sometimes the room needs to be changed quickly from in use (Occupied) to out of use (No Isolation). This is accomplished by using 2 levels of password protection. The Operator level allows access to change room modes but no other changes. The Supervisor level allows full access to all menus. In No Isolation mode no alarms are generated even if the pressure is outside limits. To change mode, see page 23, Room Mode Change, for directions to change modes.

2.0 PARTS

2.1 DPG300 Room Pressure Monitor) INCLUDED PARTS

Quantity	
1	DPG300 assembly
2	Barbed Couplings, Brass, Plated
2	1/4 inch Tubes, Silicone
4	6-32 x 1/2” Mounting Screws for connecting DPG300 Base to the plaster ring



2.2 Remote Annunciator INCLUDED PARTS

Quantity	
1	Annunciator Assembly

2.3 Room Pressure Snubber INCLUDED PARTS

Quantity	
1	Room pressure snubber Assembly

MOUNTING AND WIRING
To mount and install properly, the following components are required:

NOT INCLUDED and required for each DPG300

Quantity	
1	Double Gang Metal Electrical Box with Grounding Stud
1	4x4 inch Metal Plaster Ring
1	Door Switch SPDT or SPST, N.O., as needed

NOT INCLUDED and required for each remote annunciator & room pressure snubber:

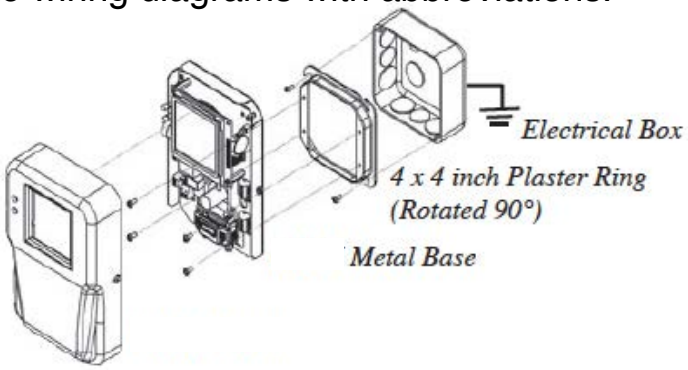
Quantity	
1	Single Gang Electrical Box 1/4” tubing as required to connect between the Annunciator and the DPG300

3.0 INSTALLATION (See Section 8.0 for Overview)

For 120/240 VAC Version, only
CAUTION: Do not open or remove DPG300 cover (tool required) with input power applied unless performed by a licensed electrician. "Hazardous Live" voltage is present at connector J3 when power is applied. Please observe the warning symbol (⚠) near the J3 power connector.

The DPG300 is designed to be mounted on a standard double gang metal electrical box using a 4 x 4 inch plaster ring adaptor. After the rough in wiring and plumbing is performed, remove the cover and mount the baseplate to the plaster ring adaptor using the supplied 6-32 x 1/2" long mounting screws. Note: The plaster ring external mounting face needs to be positioned flush to recessed, relative to the surface of the wall. Also note the orientation of the 4 mounting screws in the plaster ring, as the plaster ring is rotated 90° from conventional mounting.

Note: In the following wiring sections, abbreviations are used (e.g. J1, P3). Please see section 8.0 for complete wiring diagrams with abbreviations.



3.1 WIRING ELECTRICAL BOX (ROUGH IN)
Layout the system in terms of wiring: power, annunciator, analog output, BACnet, relay output and plumbing to connect to the monitored spaces (pressure taps).
Bring all power, earth ground, signal, communications and analog output wiring into the 4 x 4 electrical box.
Bring 1/4" O.D. tubing for 3/6" Barb fitting into box.

In order to conform to the CSA safety standard the electrical installer must comply with the following earth ground instructions. Pre-wire the electrical box with power (24 VAC or 120/240), and provide earth grounding to the electrical box. The safety ground path consists of four 6-32 x 1/2" metal screws that connect the DPG300 metal base to the 4½ x 4½ metal plaster ring. The plaster ring must be grounded to the 4½ x 4½ electrical box by 2 metal mounting screws. The 4½ x 4½ electrical box must be connected to the building earth ground. It is also highly recommended to use armored cable (Type AC) for all the wiring in applications where high levels of radio interference may be present.
Power leads, analog output, door status, and annunciator wiring should be 14 to 22

AWG stranded wire.

BACnet suggested wiring is 22 AWG stranded wire in a shielded cable, a +,-, Gnd (S) and shield should be run. This could be 2 twisted pairs with a separate shield. One twisted pair is used for communications, the second twisted pair can be connected to the other device shield wires.

3.2 PLUMBING (ATTACHING PRESSURE TUBING)

Warning: Always attach tubing to the DPG300 header and then place Header onto DPG300. This will prevent overpressure from crimped or collapsed tubes.
Use the following procedure for all room types: positive, negative or neutral:

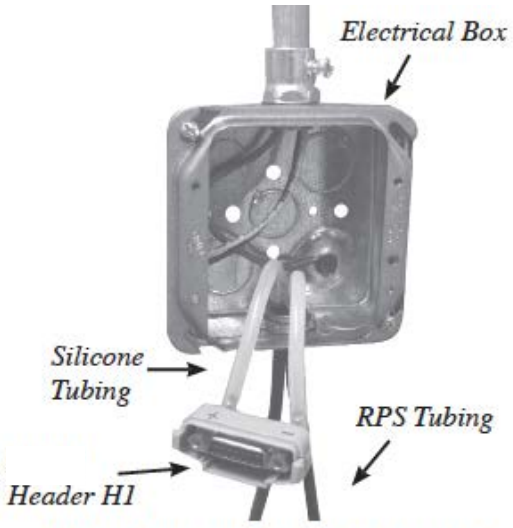
Typically a Room Pressure Snubber (RPS) is installed in the monitored room. Often stiff nylon ¼" tubing is used for running pressure signals from the DPG300 to the monitored spaces. To prevent buckling and collapse of this stiff tubing inside the electrical box, use the supplied soft silicone tubing and tubing adaptors to transition from the field tubing to the pressure fittings on the DPG300.

Attach pressure tubing as follows:

1. Connect the 1/4 inch O. D. tubing running from the RPS (or other pressure connection from the monitored space) to the 4½ x 4½ electrical box for the DPG300. Install one of the supplied 1/4 inch male to male barbed tube adaptors onto the end of the tube then push the 4" length silicone tube (supplied) onto the other end. Thread the tubes, with installed adaptor, through the conduit opening at the bottom of the electrical box.

2. Next push the open end of the silicone tubing onto the DPG300 pressure tube header (H1) port labeled "+". Note: The header is an Electro-Pneumatic (EP) assembly. "+" indicates (Positive) pressure, and "-" indicates negative or reference pressure.

3. For the most pressure stable operation, an RPS installed in the reference pressure area is also recommended. In this case, install the RPS in a hallway or reference space. Attach the tube to the DPG300 in the same way as for the + port, except attach the tube to the "-" port on the pressure tube header. Tighten swivel fittings on the DPG300 Header H1 assembly if they become loose, 9 in lb. max. Verify that the tubes are not buckled, which could close off pressure signal at end of installation.



Plumbing inside Electrical Box

RPS Room Pressure Snubber

3.3 WIRING, FINISH

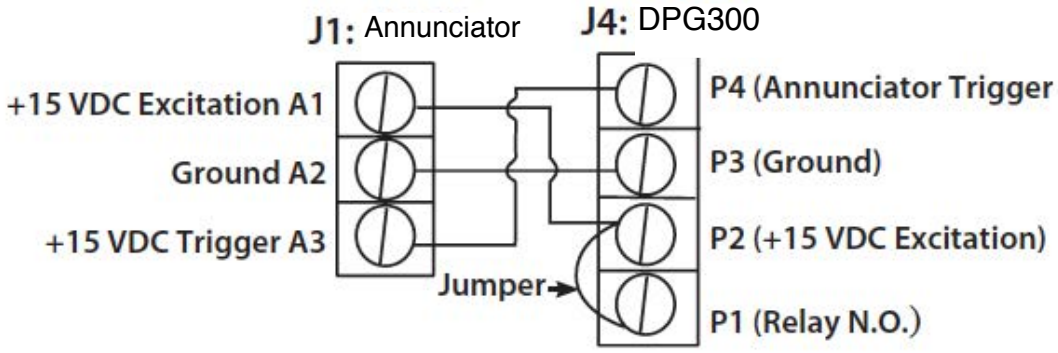
3.3.1 ALARM READY OUTPUT

The single Pole Single Throw (SPST) relay output can be used for remote signaling of alarm condition. A form "C" contact rated 1A is available. Connect to J4, P1 and P4 (See Section 8.0 for Diagram of J4). This relay can be used as a dry contact for remote indication or can drive a remote annunciator.

3.3.2 OPTIONAL REMOTE ANNUNCIATOR

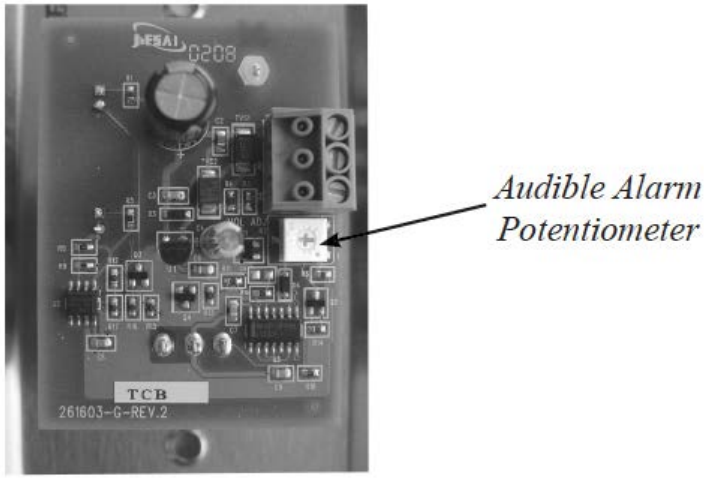
In the figure below, the remote annunciator connector is at left, and the DPG300 connector is at right:

On J4 of the DPG300, jumper P1 to P2, this will connect the internal 15V supply to the common of the internal alarm relay. Connect P2 to A1 (Located on Remote Annunciator), this supplies 15V exc. to the Annunciator for powering the circuit during normal conditions. Connect P3 of J4 to A2 of the remote annunciator J1, this is the 15V power return. Finally connect P4 of the DPG300 J4 to A3 terminal of the remote annunciator J1, this is the alarm trigger. When as alarm occurs and after the programmed alarm delay times out the internal relay will supply 15V to the Annunciator circuit to actuate the audible beeper and the red LED.



Non-Omega Remote Annunciator

The DPG300 can drive other annunciators that are powered by a 15V supply, 50mA max current draw., and accept a 15V trigger (wire as above).



The volume control of the Annunciator is a potentiometer that can be adjusted from 0 to 85 dB. Using a small flat bladed screwdriver, rotate potentiometer (remote annunciator PC board) clockwise to *increase* volume and counterclockwise to *decrease* volume.

3.3.3 DOOR STATUS SWITCH WIRING

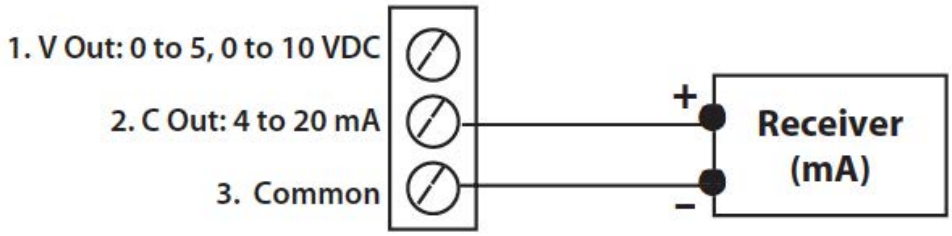
Install the door switch into the door jamb. Wire to the normally open (N.O.) side of the door jamb contact switch. The DPG300 will indicate the status of the door position. A contact closure indicates that the door is closed. This is a low voltage circuit (5 VDC). Run 2 wires from the door switch to connector J6 on the DPG300 (See Section 8.0). The door input status function is enabled in the SETUP ALARMS menu screen, section 4.7.

3.3.4 ANALOG OUTPUT

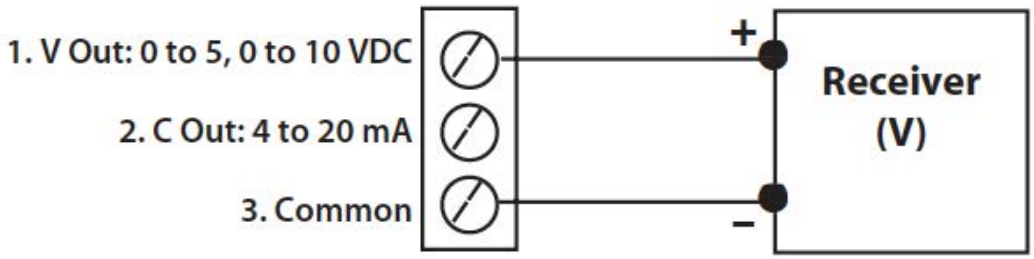
The DPG300 can be configured to have either current (4 to 20mA) or voltage (0 to 5 or 0 to 10 VDC) outputs. Voltage output--pin 1, Current output--pin 2, Common--pin 3. *Note: No external excitation if required.*

Current Output

The DPG300 supplies it's own loop power, do not wire in a separate power supply.



Voltage Output



3.3.5 BACnet

BACnet hardware is implemented as isolated RS485. Wire to Connector J2, labeled RS-485. Connect tx line to +(A), rx to -(B) and ground wires to S. Connect Shields together with wire nut.

Hardware configuration is done using a 5 position dip switch (S1) located int he upper right hand section of the PCBA as well as through the touch screen interface, see section 4.4 and 4.9.

Position	Function
1	MAC address enable
2	N/C Not Connected
3	Pull Up Resistor
4	Termination Resistor
5	Pull Down Resistor

Use a small flat blade screwdriver or pen to push the switch to the right to turn that function on, otherwise it is off.

There is a BACnet setup screen that is enabled by pushing position 1 switch to the “on” position. After configuration the switch must be moved to the “off” position.

4.0 STARTUP AND OPERATION

The DPG300 is designed with as an easy to use, intuitive, touch screen interface. In its normal (default) state the Monitoring Screen displays the actual room static pressure, also a slider bar shows the actual pressure relative to the alarm limits. The RGB backlight is used to indicate the condition of the room. The buttons at the bottom of the screen give you access to the functions that can be performed.

4.1 MENU TREE

4.2 POWER-UP

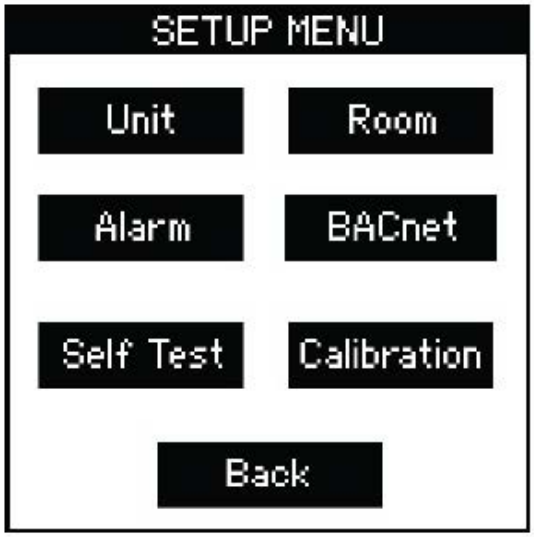
Apply power and observe the welcome screen and subsequent transition to the pressure monitor screen. The actual room static pressure is shown as a number in the center of the LCD screen and visually as a moving bar indicator operating between the preset alarm units. The vertical bar is an indicator of the pressure

4.3 MONITORING SCREEN

BUTTON	DESCRIPTION
Silence	Shuts off Alarm
Menu	Access to Main Menu Functions
Reset	Resets the unit in "Latched" mode.

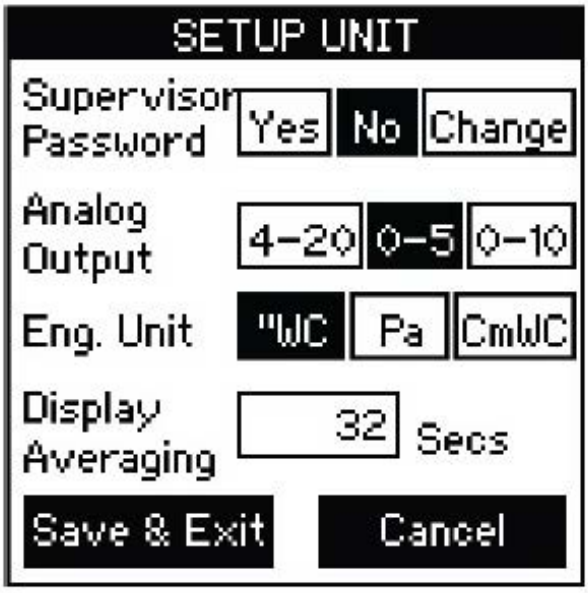
The following screens are configuration screens, they can be configured so that Password protection is required to make changes. If no entry is made to the screen the unit will return to the default screen after approximately 1 minute.

4.4 MAIN MENU SCREEN



BUTTON	DESCRIPTION
Unit	Setup Supervisor password, output, engineering units, and display averaging.
Room	Set up high and low pressure limits to monitor a positive, negative, or neutral room. Operator password setup.
Alarm	Setup latch alarm, audible alarm, door alarm input, mute time out, alarm delay, and volume.
BACnet	Configuration of BACnet Communications
Self Test	Identifies product model and software version, and serial #. Verifies memory and performs alarm test.
Calibration	Perform zero and span calibration.
Back	Returns to monitoring screen.

4.5 SETUP UNIT OPERATION



ENTERING DATA:
Press (or tap) button to select an output or engineering unit. Selected button background will change from clear to black.

PASSWORD PROTECTION:
Lightly pressing (or tapping) the “Yes” button activates Supervisor password protection. With Supervisor password protection enabled, operators can not access menu screens to update setup. Pressing “No” disables password protection. Pressing “Change” will open “Password Setting Screen”. To change the password, enter the present password (numeric value), followed by the new password in the “New Password” and “Confirm New Password” entry boxes, then press save. Be careful to store password for future reference.

Analog Output:
Select 4-20, 0-1, or 0-10

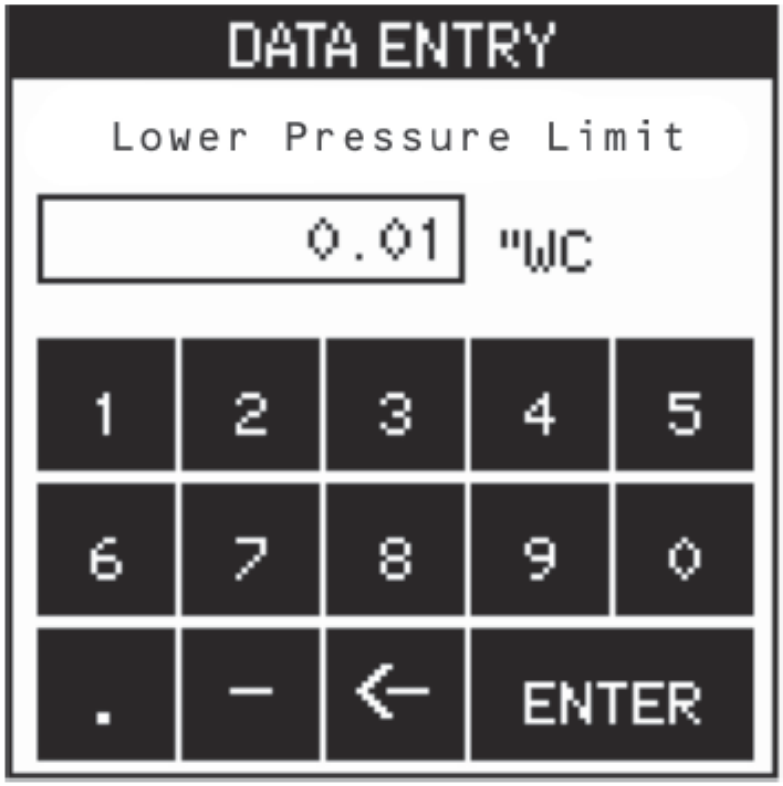
Eng. Unit:
Select WC, Pa, or CmWC

DISPLAY AVERAGING:
Lightly pressing (or tapping) the “Display Averaging” box activates the “Data Entry Screen”. Enter from 0 to 60 seconds. Display averaging affects the analog output. Increase the display averaging time to smooth out the pressure readings, this will also reduce the display update rate. Press Save and Exit.

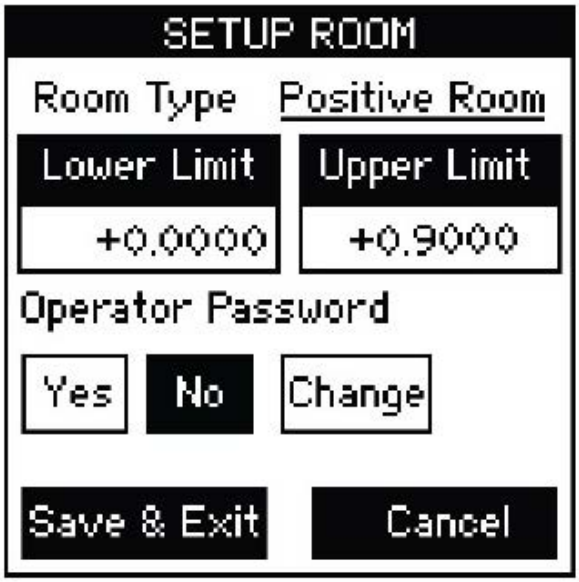
DATA ENTRY SCREEN

Enter numbers by pressing each key in sequence until the desired character is displayed in the data entry box above the keypad. (Note: The cursor will blink for one to two seconds then stop and display the character.) Erase any mistakes by using the "Back Space" key. When finished entering data, press the "Enter" key to return to SET-UP UNIT screen.

Note: Use the erased end of a pencil or back-end of a pen to press (or tap) box on screen to increase accuracy of inputs.



4.6 SETUP ROOM SCREEN



SETUP ROOM OPERATION
Setup alarm limits for “protective” positive room static pressure “isolating” negative room static pressure or neutral (where the limits can be - to +).

ENTERING DATA
Press lightly or tap in the Lower Limit data entry box. Enter the lower limit pressure. Enter the Upper Limit pressure. The Room type box will change depending on the lower and upper limits. If both entries are positive, the room will be a Positive Room. If both are negative, the room will be a Negative Room and if the Lower Limit is negative and the Upper Limit is positive, the room will be a Neutral Room.

OPERATOR PASSWORD
The operator can only change the room from Occupied to No Isolation and vice versa.

Lightly pressing (or tapping) the “Yes” button activates the Operator password protection. With Operator password protection enabled, room Occupied/No Isolation status can be changed without entering a valid Operator password. Pressing “No” disables password protection. Pressing “Change” will open “Password Setting Screen”. To change the password, enter the present password, followed by the new password in the “New Password” and “Confirm New Password” entry boxes, then press save. Be careful to save the operator password for future reference.

4.7 SETUP ALARMS SCREEN

From this screen the user can access the following:

a. Latched Alarm requires the pressure to return to normal and the alarm to be acknowledged before the alarm can be silenced and reset.

b. Enable the audible alarm by selecting “Yes” or use visual only alarm by selecting “No”

c. Provide a “door open” warning visual indication. When a door jamb contact switch is used and this button is activated by pressing “Yes”, the door status “open” condition is indicated by the touch screen display turning from green to yellow, and the door indicated on the monitoring (default) screen.

d. Set the time (in seconds) that the alarm can be silenced in the latched alarm mode before the alarm resumes. This assumes that the room static pressure is still outside the normal or set operating limits. The Mute Time Out can be set from 0 to 9999 seconds.

e. Set the Alarm Delay (in seconds) from the time that the room pressure goes out of the preset limits until the alarm activates. The alarm delay may be set from 0 to 9999 seconds.

f. Set the alarm volume or sound level. Using the Up and Down keys, the volume can be set at level 1-4. Level 4 alarm volume is the loudest and corresponds to a sound level of 85 dB at a distance of 4 inches.

ALARM SETUP OPERATION

Lightly press (or tap) button to select “Yes” or “No” for Latch Alarm, Audible Alarm, or Door Alarm Inputs. Selected box background will change from clear to black when selected.

MUTE TIME OUT/ALARM DELAY

Pressing (or tapping) the “Mute Time Out” or “Alarm Delay” box activates the Data Entry screen to set the time delay duration.

4.8 SELF TEST SCREEN

Self Test Operation
This screen identifies the Product Model Part Number and Software Version. User can also perform a Self Test of the unit to verify that the data is in protected area of the EEPROM memory hasn't been corrupted and also test the alarm to verify the sound level and alarm setup.

Press "Self Test" button to initiate EEPROM memory checksum test sequence.

Press "Alarm Test" to test beeper, visual Red LED Alarm, and relay output. This can be used to verify the system in alarm mode.

Press "Cancel Test" to stop the alarm test.

Pres "Exit" to return to Main Menu.

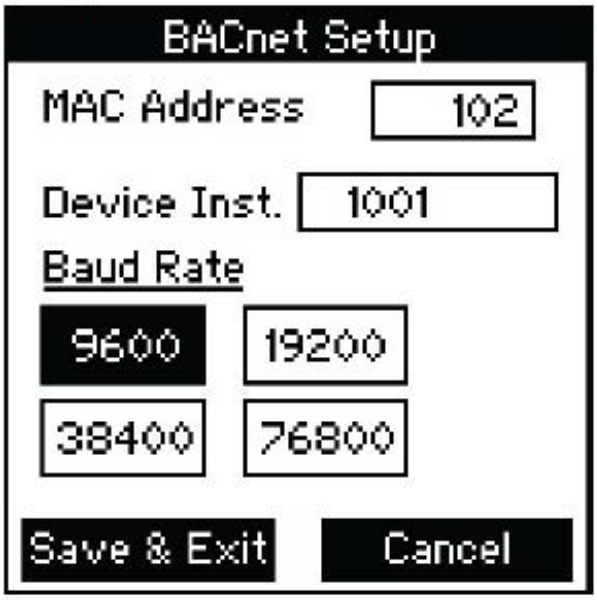
4.9 CALIBRATION SCREEN

CALIBRATION

To re-zero the device, disconnect the electropneumatic Header H1 so that room pressures are not applied to the pressure sensor and lightly press (or tap) the “Zero” button. If a sufficiency accurate Pressure Calibrator is available, apply a stead full-scale pressure signal to the “+” on the header fitting and press (or tap) the “Span” button. Reconnect the room pressure tube and calibration is complete. Calibration must be within ±5% of original calibration for this to occur otherwise an error message will occur.

The original factory pressure calibration can be restored, if desired, by pushing the “Restore Factory Setting” button.

4.10 BACnet Setup Screen

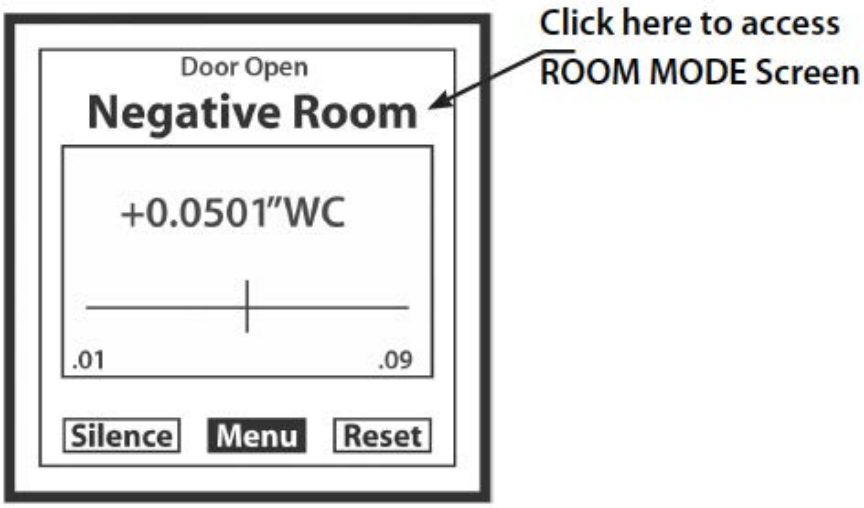


BACnet Setup

- To setup BACnet communications, the MAC address enable switch (S1 [See Section 8]) on the dip switch must be enabled by pushing it to the right.
- Set MAC address, input the address of the device.
- Select Device Instance by inputting the device instance into the data entry box.
- Select baud rate by pressing the correct baud rate button, 9600 to 76800.
- Save and Exit to save settings or Cancel to cancel setting changes. Once complete disable the BACnet setup by moving the dip switch position 1 to “off” (left) position.
- If the unit will be at the end of the line, the pull resistor can be enabled by pushing position 3 to “on”.
- The termination resistor can be inserted by pushing position 4 switch to “on”. The pull down resistor can be enabled by turning position 5 to “on”.
- **Save and Exit. After the unit returns to the main menu screen, disconnect the power to the unit, then re-connect to boot up with the proper MAC address and Device Instance.**

Position	Function
1	MAC address enable
2	Not Used
3	Pull Up Resistor
4	Termination Resistor
5	Pull Down Resistor

See Omega website for information on Points list and PICS and BIBBS statements.



PRESSURE MONITORING SCREENS

At completion of setup, the main display will be the pressure monitoring screen, which displays the actual room static pressure. The room static pressure is shown as a number on the LCD as well as a "Moving Bar" indicator operating between the preset pressure limits. Normal room pressure conditions within the preset pressure limits are verified by a green colored screen. When the door is opened under conditions within the preset pressure limits, the screen turns yellow. Room static pressure outside of the preset pressure limits is indicated by a Red screen after the alarm's time delay expires.

CHANGING ROOM MODES

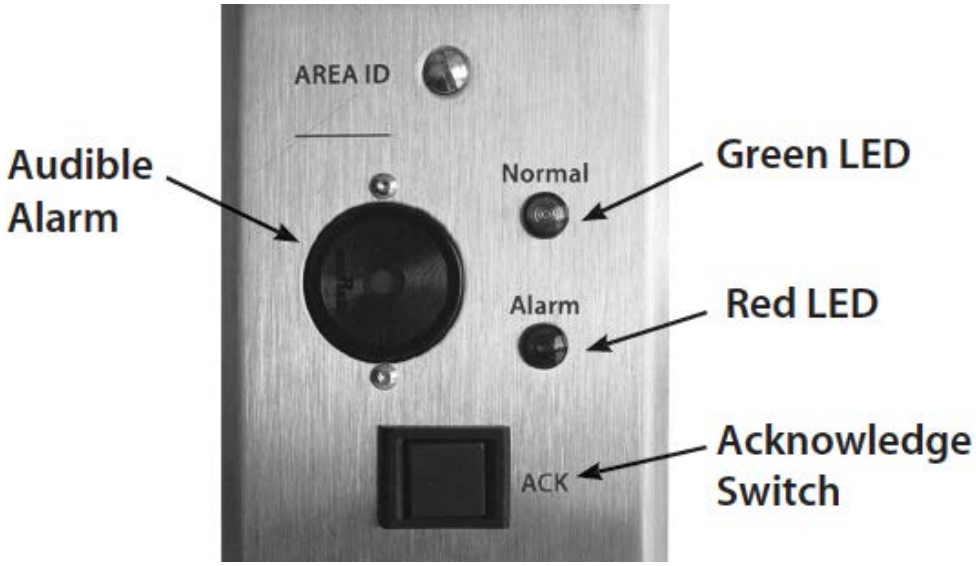
The DPG300 can quickly be changed from active monitor alarming to No Isolation (or unoccupied). To do this, touch the room mode indicator at the top of the pressure monitoring screen (see above.)

OCCUPIED/NO ISOLATION

Use these buttons to quickly change the room to Occupied (Standby) or No Isolation status. If No Isolation is used there will be no alarms generated if the room is outside pressure limits.

Press Save and Exit.

5.0 REMOTE ANNUNCIATOR



The Remote Annunciator provides remote indication of room status.

Green LED	Visual indication of normal room condition.
Red LED	Visual indication of a breach in room pressure protection.
Audible Alarm	Beeper sounds to indicate breach in room pressure protection.
Acknowledge Switch	Press to silence beeper.

OPERATION

Under normal conditions, the green LED remains on. When an alarmed condition occurs (i.e., room pressure falls outside preset range), a signal is triggered by the DPG300, the green LED shuts off, the red LED flashes, and the audible alarm sounds. The acknowledge button can be pressed to momentarily turn-off the audible alarm and the red LED will continue to flash until the alarmed condition is corrected. When the alarmed condition is corrected, the annunciator will reset itself. The green LED will turn on, and the red LED and the audible alarm will shut-off. If the DPG300 reaches the mute time out limit it will re-sound the alarm.

6.0 MAINTENANCE

The DPG300 is designed to operate an indoor environment, monitoring clean, dry air.

Upon final installation of the DPG300 Room Pressure Monitor, no routine maintenance is required. A periodic check of system calibration is recommended. The DPG300 is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to indicate a brief description of the problem plus any relevant application notes Contact customer service to receive a return goods authorization number before shipping.

CLEANING IMPORTANT

Do not blow into the pressure tubing or fittings with mouth, compressed air, or canned air. Such actions may permanently damage the pressure sensor. Do not clean or wash-down the DPG300 with industrial cleaners of solvents. The housing may be wiped down with soap and water or isopropyl alcohol. The LCD may only be cleaned with isopropyl alcohol. Do not immerse unit.

7.0 AGENCY ELECTRICAL STANDARDS

This device falls into CSA “Pollution Degree 2” for PCB insulation and CSA “Installation Category 2”.

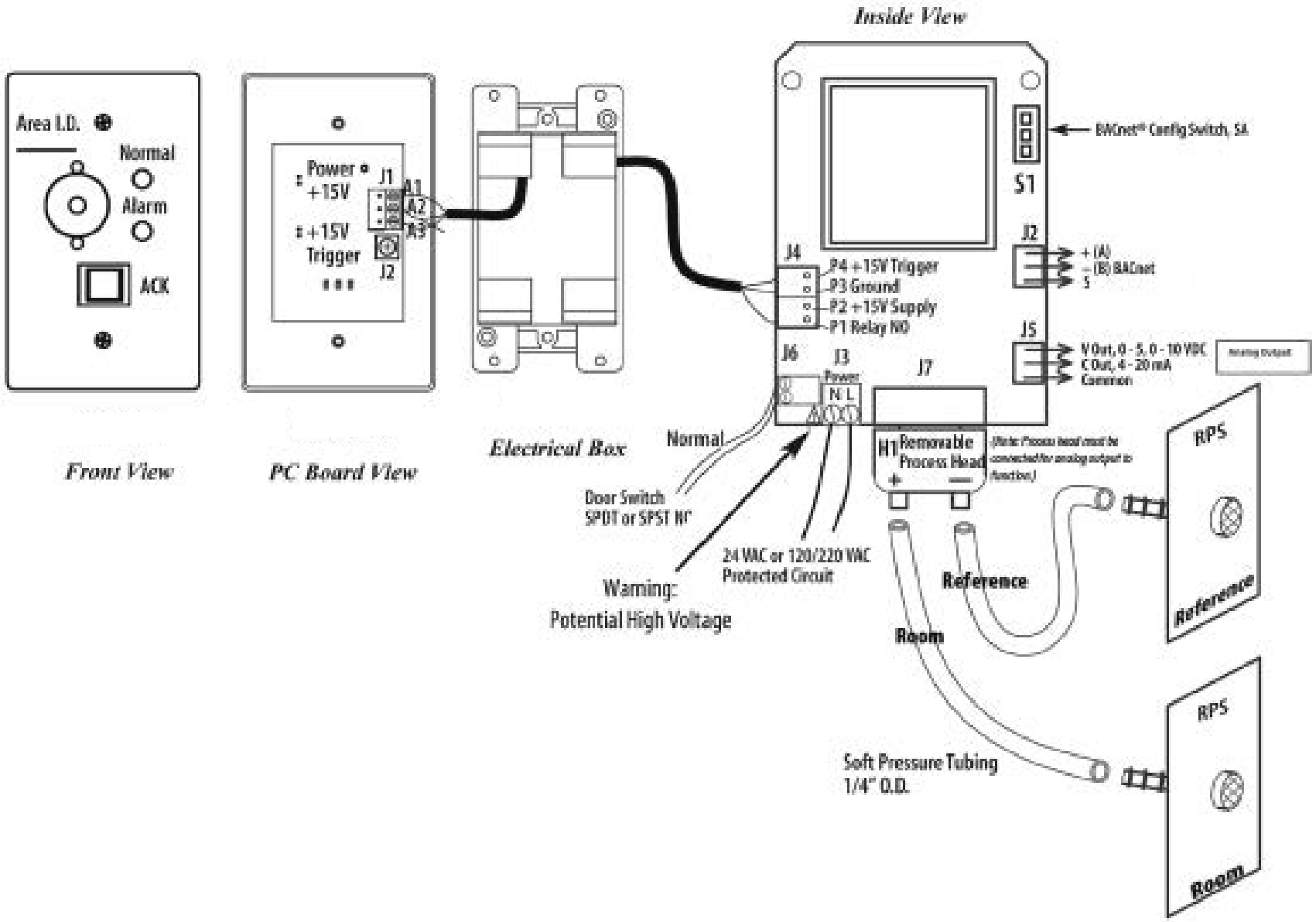
The DPG300 meets the following requirements:

CSA Standard C22.2 No 0-M 91: General Requirements - Canadian electrical code, Part 1

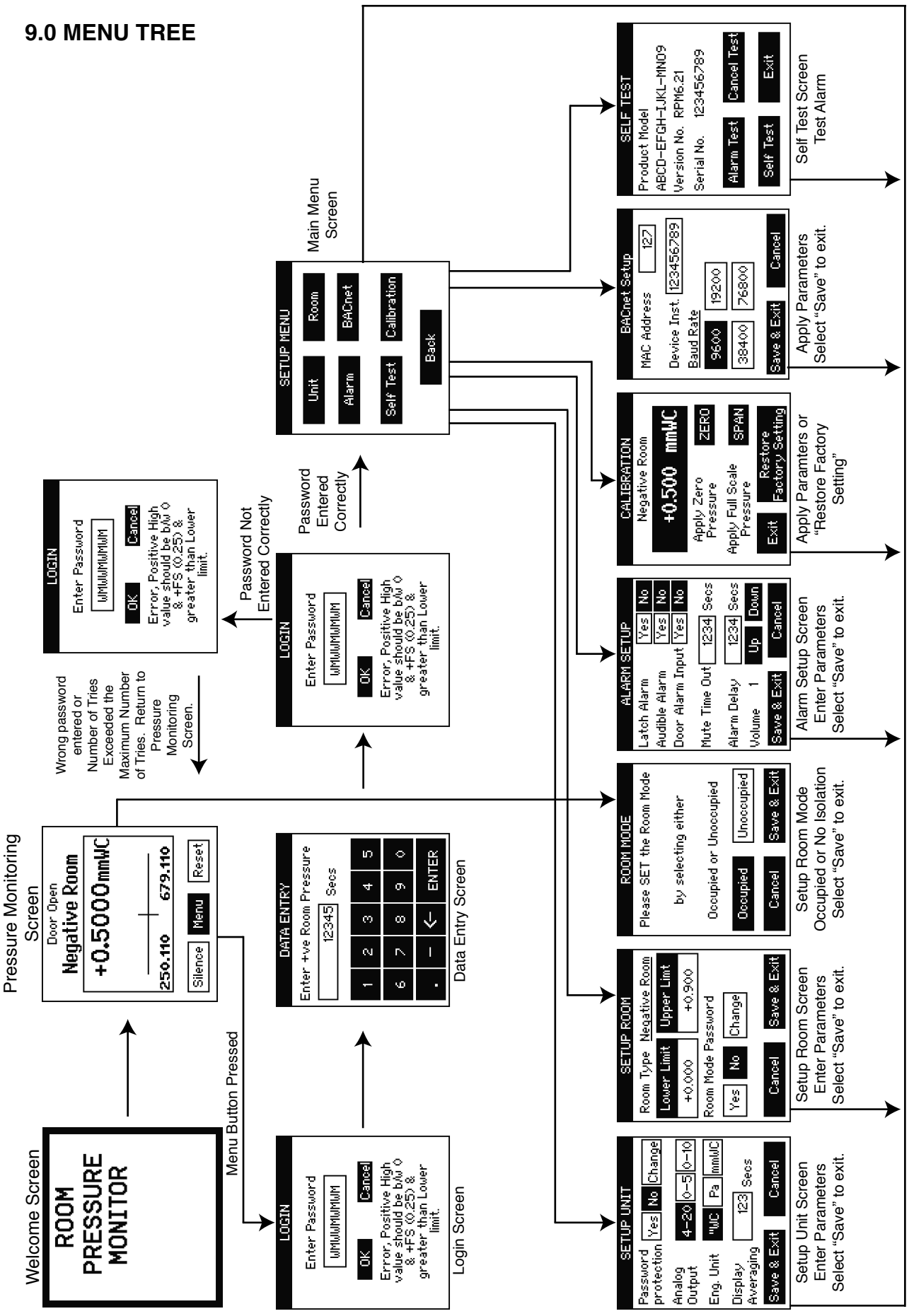
CAN/CSA C22.2 No. 0.4-04: Bonding of Electrical Equipment

CAN/CSA-C22.2 No. 61010-1-04: Safety requirements for electrical equipment for measurement, control and laboratory Use Part-1: General Requirements

ANSI/UL61010-1 (Second Edition): Safety requirements for electrical equipment for measurement, control and laboratory use Part 1: General Requirements.


Inside View
Area I.D.
Normal
Alarm
ACK
Power
+15V
+15V
Trigger
J1
J2
A1
A2
A3
S1
BACnet® Config Switch, SA
J4
P4 +15V Trigger
P3 Ground
P2 +15V Supply
P1 Relay NO
J2
+ (A)
– (B) BACnet
S
J5
V Out, 0 - 5, 0 - 10 VDC
C Out, 4 - 20 mA
Common
J6
J3
Power
N L
J7
H1
Removable
Process Head
RPS
Reference
Room
Normal
Door Switch
SPDT or SPST NC
24 VAC or 120/220 VAC
Protected Circuit
Warning:
Potential High Voltage
Soft Pressure Tubing
1/4" O.D.
Front View
PC Board View
Electrical Box

9.0 MENU TREE


Welcome Screen
ROOM PRESSURE MONITOR
Pressure Monitoring Screen
Door Open
Negative Room
+0.5000mmWC
250.110
679.110
Silence
Menu
Reset
Menu Button Pressed
LOGIN
Enter Password
WMWMWMWM
OK
Cancel
Error, Positive High value should be b/w 0 & +FS (0.25) & greater than Lower limit.
Login Screen
Wrong password entered or Number of Tries Exceeded the Maximum Number of Tries. Return to Pressure Monitoring Screen.
Password Not Entered Correctly
Password Entered Correctly
DATA ENTRY
Enter +ve Room Pressure
12345
Secs
1 2 3 4 5
6 7 8 9 0
. - ENTER
Data Entry Screen
SETUP MENU
Main Menu Screen
Unit
Room
Alarm
BACnet
Self Test
Calibration
Back
SETUP UNIT
Password protection Yes No Change
Analog Output 4-20 0-5 0-10
Eng. Unit WC Pa mmWC
Display Averaging 123 Secs
Save & Exit
Cancel
Setup Unit Screen
Enter Parameters
Select "Save" to exit.
SETUP ROOM
Room Type Negative Room
Lower Limit
+0.000
Upper Limit
+0.900
Room Mode Password
Yes No Change
Cancel
Save & Exit
Setup Room Screen
Enter Parameters
Select "Save" to exit.
ROOM MODE
Please SET the Room Mode
by selecting either
Occupied or Unoccupied
Occupied
Unoccupied
Cancel
Save & Exit
Setup Room Mode
Occupied or No Isolation
Select "Save" to exit.
ALARM SETUP
Latch Alarm Yes No
Audible Alarm Yes No
Door Alarm Input Yes No
Mute Time Out 1234 Secs
Alarm Delay 1234 Secs
Volume 1 Up Down
Save & Exit
Cancel
Alarm Setup Screen
Enter Parameters
Select "Save" to exit.
CALIBRATION
Negative Room
+0.500 mmWC
Apply Zero Pressure
ZERO
Apply Full Scale Pressure
SPAN
Exit
Restore Factory Setting
Apply Paramters or "Restore Factory Setting"
BACnet Setup
MAC Address 127
Device Inst. 123456789
Baud Rate
9600 19200
38400 76800
Save & Exit
Cancel
Apply Parameters
Select "Save" to exit.
SELF TEST
Product Model
ABCD-EFGH-IJKL-MNO9
Version No. RPM6.21
Serial No. 123456789
Alarm Test
Cancel Test
Self Test
Exit
Self Test Screen
Test Alarm

RETURNING PRODUCTS FOR REPAIR

Please contact Omega at 1-800-826-6342 or 1-203-359-1660 before returning unit for repair to review information relative to your application. Many times, only minor field adjustments may be necessary. When returning a product to Omega, the material should be carefully packaged and shipped prepaid to:

Omega Engineering, Inc
One Omega Drive
P.O. Box 4047
Stamford, CT 06907-0047

To assure prompt handling, please supply the following information and include it inside the package of returned material:

1. Name and phone number of person to contact.
2. Shipping and billing instruction.
3. Full description of the malfunction.
4. Identify any hazardous material used with product.

Notes: Please remove any pressure fittings and plumbing that you have installed and enclose any required mating electrical connectors and wiring diagrams. Allow approximately 3 weeks after receipt at Omega for the repair and return of the unit. Non-warranty repairs will not be made without customer approval and a purchase order to cover the repair charges.

Calibration Services

Omega maintains a complete calibration facility that is traceable to the National Institute of Standards & Technology (NIST). If you would like to recalibrate or re-certify your Omega pressure transducers or transmitters, please call our Sales Department at 1-800-826-6342 or 1-203-359-1660 for scheduling, cost and turnaround estimates.

Thank you,
Omega Engineering, Inc.

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.
CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.
The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:
1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:
1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.
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