SIEMENS

Alternate Room Pressure Monitor Solution

Quick Start Guide

Smart Infrastructure

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Overview

Alternate Room Pressure Monitor Solution

- Visibly indicates correct or incorrect room pressurization for healthcare staff at the display panel.
    - Green LED = Isolation pressure acceptable
    - Red LED = Isolation pressure unacceptable
- Audibly alerts healthcare staff of incorrect room pressurization.
    - Alarm can be silenced via mute button
    - Adjustable delay time before alarm sounds
- Enables building maintenance staff to remotely monitor room pressurization via the building automation system.

3rd Party
DP Sensor   DXR2.E17C   ODP
                                                                               QMX3.P87

Features	I/O
• Numerical display, at the room, of room pressure with respect to adjacent space	• Display unit including numerical pressure, visible alarm, audible alarm, alarm silence, fault indicator
• Configurable room pressure alarm	• Room pressure sensor
• Qualitative display of room pressurization (Normal vs. Alarm)	
• Audible indication (buzzer/horn) at the room of room pressure alarm	
• Silence button, at the room, to turn off the audible alarm	
• Fault indication at the room interface	
• LCD screen to display the room pressure	

Common Use Cases

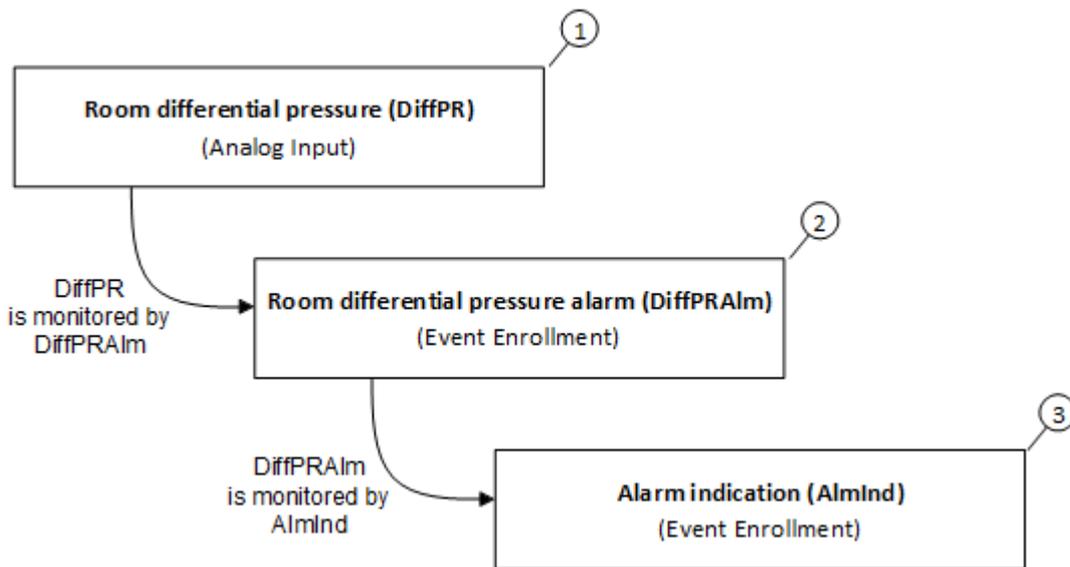There are three typical use cases for the Alternate Room Pressure Monitor Solution:

- Basic operation
- Silent operation
- Synchronized operation

Basic Operation – Alarm text and red light activate immediately when the door is opened and pressurization is lost. Audible alarm is silent unless the door stays open longer than a configured delay time.

Silent Operation – Alarm text and red light activate only if the door stays open beyond a configured delay time. Audible alarm stays silent.

Synchronized Operation – Alarm indications (text, light, and buzzer) occur together if the door stays open beyond a configured delay time.

Function

Key

1	Room differential pressure input (**DiffPR**) is monitored by the Room differential pressure alarm Event Enrollment object (**DiffPRAlm**).
2	**DiffPRAlm** monitors **DiffPR** and affects the lights and the display text. DiffPRAlm must be configured for High limit, or Low limit, or both. Possible states for the LED: • Green = Normal condition • Red = Fault condition • Flashing red = Hi/Lo alarm
3	**AlmInd** monitors **DiffPRAlm** and affects the buzzer. If AlmInd is Fault or Off-Normal, the buzzer will sound until silenced.

!	*NOTICE*
	Emergency Max Button – Do Not Use In the Alternate RPM Solution, the Emergency Max button on the ODP performs no function. If someone presses it by mistake, the red LED and buzzer respond for 1 second and then return to normal. Pressurization is not affected. • Make sure to affix the label "Do Not Use", found in the product carton, over the words "Emergency Max"

BAS Alarm Integration

The room pressure monitor can communicate on a BAS network to give the building operation staff the same information that is available at the ODP.
- **Audible setup** handled by EE object **AlmInd**. (typical setup with sound at the panel)
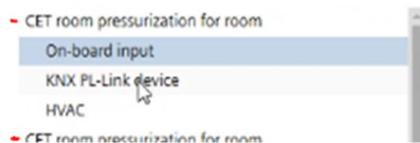- **Silent setup** handled by EE object **DiffPRAlm**. (not default, requires configuration)

See Configuration & Setup > Alarm Integration [→ 9] for details.

Configuration & Setup

Step 1 - In ABT Site, select **Pressure monitor** from Types in library.

Step 2 - Select room pressure monitor(s) (CET room pressurization for room).

Step 3 - For each room, make choice selections for:
- On-board input
- KNX PL-Link device
- HVAC

i	When setting up multiple ODPs for multiple isolation rooms, the LED will flash and the display will show "Close the sash, Failed, Do not use" until all ODPs have been configured. This is expected.

Step 4 - For each Room ODP, go to **Default values** in ABT Site.

Step 5 - Set parameters to desired specification, see table.
Basic steps:
1. Determine the pressure level(s) for the alarm.
2. Set pressure level(s) for the alarm, and set the desired delay time.
3. Set the desired delay time for the audible alarm.

| Parameters	Basic Operation	Silent Operation	Synchronized Operation
Backlight brightness	Set as desired	Set as desired	Set as desired
Backlight timeout [1]	Set as desired, max = 120min	Set as desired, max = 120min	Set as desired, max = 120min
Rm DiffP alarm > Event parameters [2]	TimeDelay: 0	TimeDelay: >0 Typically based on time needed to enter or exit the room	TimeDelay: >0 Typically based on time needed to enter or exit the room
	Low limit: as specified	Low limit: as specified	Low limit: as specified
	High limit: as specified	High limit: as specified	High limit: as specified
	Neutral zone: as specified	Neutral zone: as specified	Neutral zone: as specified
Alarm indication > Event parameters	TimeDelay: >0 Typically based on time needed to enter or exit the room	TimeDelay: n/a Audible alarm is disabled by setting "Enable event detection" to **No**	TimeDelay: 0 Audible alarm trips at the same time as visual (DiffPRAlm) if this delay is 0
	StateList: DO NOT change	StateList: DO NOT change	StateList: DO NOT change
Alarm indication > Enable event detection	Yes	**No**	Yes
ODP field 2 > Default command	Set to "Diff.air pressure" (can be set to "Blank" if desired, ODP displays blank screen)	Set to "Diff.air pressure" (can be set to "Blank" if desired, ODP displays blank screen)	Set to "Diff.air pressure" (can be set to "Blank" if desired, ODP displays blank screen)

[1] The backlight turns on whenever the LED changes, and also with user/ODP interaction.

[2] See figure below for how to set High limit and Low limit.

> **!** There is no automatic timeout function for a muted alarm. If the Mute button is pressed to silence an active alarm, the buzzer will remain muted for as long as the alarm condition exists.

High limit and Low limit (how to set up):
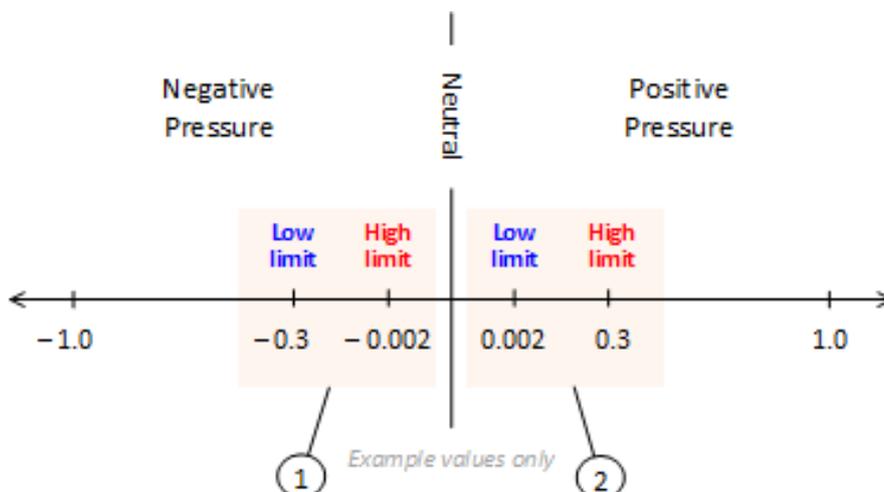
Key

1	In a negative pressure room, the High limit setting is closest to neutral pressure.
2	In a positive pressure room, the Low limit setting is closest to neutral pressure.

Alarm Integration

The Event Enrollment objects DiffPRAlm and AlmInd handle alarm integration for the Alternate RPM Solution.
- DiffPRAlm (Room differential pressure alarm)
- AlmInd (Alarm indication)

The typical setup is **audible** with sound at the panel. This is the default configuration.
To configure for non-default **silent** setup, do both of the following:
- Set DiffPRAlm parameter "Suppress event notification" to **No**.
- Set AlmInd parameter "Enable event detection" to **No**.
When this is done, the EE object DiffPRAlm will annunciate alarm conditions silently.