

SafePressure Alert

Mastering Embedded System Online Diploma

[www.learn-in-depth.com](http://www.learn-in-depth.com)

**Requirement Gathering Document**

**First Term (Final Project 1)**

Eng. Abdallah Shabaan Ghazy

email:[abdallah.shabaan.ghazy@gmail.com](mailto:abdallah.shabaan.ghazy@gmail.com)

**My Profile:**

<https://www.learn-in-depth-store.com/certificate/abdallah.shabaan.ghazy%40gmail.com>

### Requirement Gathering for **Pressure** Control System (PCS)

**Version 1.0 approved**

**Prepared by:** Abdallah Shabaan Ghazy

**Organization:** learn in depth

**Date Created:** 8/11/2024

**1. Introduction**

**1.1 Objective**

Define the requirements for a pressure control system that alerts the crew in a cabin when the pressure exceeds 20 bars, including an alarm that lasts for 60 seconds.

**1.2 Scope**

This project aims to develop a software system that monitors cabin pressure and triggers an alert if the pressure exceeds 20 bars. The alert will last for 60 seconds.

**2. Functional Requirements**

**2.1 Pressure Monitoring**

* The system must continuously monitor the cabin pressure.
* The system should detect when the pressure exceeds 20 bars and trigger an alert.

**2.2 Alarm**

* There must be an audible or visual (or both) alarm to notify the crew when the pressure exceeds 20 bars.
* The alarm must continue for 60 seconds.

**2.3 Alarm Termination**

* After the 60-second alarm duration, the alarm should stop automatically.
* There should be an option to manually deactivate the alarm if necessary.

**3. Non-Functional Requirements**

**3.1 Performance**

* The alarm should be triggered within 2 seconds of the pressure exceeding the threshold.
* The alarm must be clear and audible or visible in the cabin's operating conditions.

**3.2 Security**

* The system must be reliable and capable of operating continuously without interruption.
* Data transmitted from pressure sensors to the system must be secure.

**3.3 Usability**

* The system should be easy for the crew to configure and operate.
* The alarm interface should be simple and clear.

**4. Constraints**

**4.1 Technical**

* The system must be compatible with the existing pressure measurement devices in the cabin.
* The alarm must be suitable for the cabin's operating environment (noise, lighting, etc.).

**4.2 Regulatory**

* The system must comply with industry standards for pressure alert systems.

**5. Assumptions**

* It is assumed that the cabin has reliable pressure measurement devices connected to the system.
* It is assumed that the crew will receive adequate training on how to handle the alarm system.

**6. Contractual Requirements**

* The system must adhere to the technical specifications provided by the client in the specification document.