



# Pressure transmitters provide reliable performance on filtration systems for hazardous airborne chemicals

## Background

A technical research, design, and manufacturing firm in the Western U.S.A. specializes in high-performance equipment used to protect the environment and personnel from the harmful effects of a wide variety of the world's most hazardous airborne chemicals and contaminants. That equipment includes vessels, air handling units, air cleaning and filtration systems, containment and glove enclosures, and related piping and material handling systems. Of particular note, is the customer's technology and experience related to protection against chemical warfare agents.

This research firm has a series of air filtration systems designed and built in accordance with the stringent requirements mandated by the U.S. Army's Chemical Demilitarization program (Destruction of chemical weapons). These filter systems are sent to a variety of locations around the world to be used in cleaning chemical wastes. They are very

important in providing safe work environments for the U.S. military personnel abroad, as well as the local civilian areas where these bases are located.

## Problem

The customer needs accurate and dependable differential pressure measurements for several locations within the filtration systems. The pressure transmitter they use must meet stringent U.S. military specifications and come with the appropriate documentation and global service and support required. Some of the suppliers the customer considered could or would not meet all the requirements they needed.

## Solution

The local Siemens representative presented the SITRANS P DS III Differential Pressure (DP) transmitters with PROFIBUS to the customer, pointing out the major features and benefits of the instrument, including pushbutton set-up at the transmitter, a 5-year warranty from startup, and a standard local display. He also stressed the benefits of working with a worldwide

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supplier of quality instrumentation. Since they were already using Siemens PLCs, they were glad to see they could get the same kind of quality in their instruments. The customer has installed the Siemens pressure transmitters at critical locations across the filtration system to measure the differential pressure and maintain the performance of the system. This allows the customer to maintain the quality and performance of their systems and deliver, as specified, to the U.S. military. The use of the PROFIBUS protocol allows the customer to gather a variety of information from the transmitters on their Siemens PLC, the S-7 controller.

#### Benefits

##### ■ Cost savings

Using PROFIBUS protocol allows the customer to save on cable and installation costs by connecting several transmitters to a single bus line.

##### ■ Convenience

Able to access, program, and troubleshoot all of the DS III pressure transmitters from one station on the S-7 controller, using SIMATIC software.

##### ■ Global service and support

Local service and support, worldwide.

##### ■ Quick and easy set-up

Unique and easy to set up using the local pushbutton menu as well as the PROFIBUS PA to DP coupler and SIMATIC software.



#### About the SITRANS DS III Pressure Transmitter

The SITRANS P DS III series includes digital pressure transmitters for measuring gauge pressure, absolute pressure, differential pressure, flow and level. Even the standard devices offer comprehensive diagnostics and simulation functions for superior reliability. Their suitability for use in SIL 2 circuits has been certified by external test institutes.

#### Features

- Extensive diagnostics and simulation functions
- Suitable for installation in SIL 2 applications in accordance with IEC 61508/IEC 61511.
- Wide range of certification and approval, e.g. ATEX EEx ia, EEx ib, Dust protection, FM, CS
- Option of using a simulation function for loop check functions opens up a host of different bus communication options for you: HART, PROFIBUS PA, PROFIsafe, or FF

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