



Product	107 Differential Pressure Switch
Application	HVAC Ducts Used in Electrical and Battery Container Rooms
Industry	Upstream Oil & Gas

Challenge Battery container rooms, electrical substation containers, and analyzer shelters should have an HVAC air exhaust system that includes an exhaust monitoring system in order to ensure there are no toxic buildup of gases and the air inside is maintained fresh at all times. In the case of battery container rooms, hydrogen emissions could be an issue. The exhaust monitoring system consists of a draft range differential pressure switch that monitors the performance of the exhaust fan, and can also be used to monitor the condition of the exhaust filters.

Solution The SOR 107 Series Differential Pressure Switch, having a range of 0-12" WC, is ideally suited for this application because of its' good repeatability, high static pressure handling capability, and the ability to set a low range starting from zero. The setpoint is generally set for increasing differential pressure, so once the fan is switched on, there is an indication of this in the control room. The 107 also has a user accessible external adjustment screw that permits one to adjust or fine tune the set points at the field should there be a change in the duct pressure, either due to the filters getting clogged or if they want to change the setpoint itself. This can be done without taking it on a pressure test bench. SOR can also provide customized scales to cater to various pressure units. In most cases, the HP port is connected at the outlet of the exhaust fan through a tapping from the duct. The LP side may be left to the atmosphere to read the ambient pressure in the container. In case the fan fails, the switch status changes because of a change in differential pressure, and this can be used to trigger an alarm in the control room. For substation container room applications, the general purpose and for battery container rooms, the hazardous area certified differential pressure switches could be used. Customers may also use a Pitot tube with the SOR 107 series Differential Pressure Switch, if they need to have a DP calculation based on static and dynamic pressures in the line.