

# Supervising and anticipating the maintenance of ventilation systems with ease.



## adeunis IoT sensors: Smart Delta P

Sensor with dedicated firmware embedding mathematical aggregates



## Artificial Intelligence & Edge Computing

Allows processing of data shared between the sensor and the platform



## Carl Software's dedicated IoT maintenance platform

Processes the data sent back through AI and creates the associated numerical models

## Benefits

- Organization and qualification in advance of the maintenance to be carried out.
- Decrease in intervention costs
- Increase in the life span of the observed equipment

## Highlights

- Adapts to any existing ventilation system (VMC,CTA)
- No configuration on the sensor to perform thanks to the embedded AI
- Identifies normal operating modes, automatically deduces drifts and alert thresholds

# SMART DELTA P



Sensor for monitoring the operation of a Centralised Mechanical Ventilation (CMV) or Air Handling Unit (AHU).



## MEASURE

Aggregating differential pressure data  
Aggregate data on current measurement



## ALERT

In case of anomalies\*  
In the event of filter clogging\*



## ACT

Controlling digital outputs

\*Function only available when paired with Carl Source, from Carl Software.

## AGGREGATE OF DATA COLLECTED

The configuration allows you to choose the list of desired aggregates according to your needs:

- Average
- Variance
- Standard deviation
- Skewness
- Kurtosis
- Median
- Gradient (last-first)
- Number of peaks
- Number of passages per average
- Min and Max

## TECHNICAL SPECIFICATIONS

### Smart Delta P

- Periodic or event mode
- 2 digital inputs/outputs
- Fully configurable locally or at a distance
- Operating temperature range:  $-20^{\circ}\text{C} / +70^{\circ}\text{C}$
- Delta pressure:  $-500/+500\text{Pa}$
- Accuracy:  $\pm 25\text{Pa}$
- Casing: IP68
- Dimensions:  $200 \times 63.5 \times 34 \text{ mm}$
- Replaceable battery
- Lifetime of several years

- Integrated fastening system: DIN rail, tube, wall, collar
- Zone: LoRaWAN® EU863-870
- Standards: Directive 2014/53/UE (RED)

### Current transducer

- Operating temperature:  $-25^{\circ}\text{C} / +60^{\circ}\text{C}$
- Fire resistance: UL94-V0
- Precision:  $\pm 2\%$
- Cable 10 mm
- About 70 cm of cable

