

A DIGITAL AIR BLAST SENSOR IN THE INFRA-SYSTEM

INFRA S10/S11 Air Blast Sensor

The INFRA system is used to monitor construction activities, rock blasting, train traffic, road traffic, vibration in buildings etc.

The S10/S11 is a digital Air Blast sensor.

The Sensor can be directly connected to the bus cable of the INFRA field monitoring system.

All filtering, signal processing and detection is done digitally in the sensor. Before the recording is started you only select the wanted standard that is presented in the Remote part of INFRA Net.

INFRA S10/S11 is extremely robust and protected to work under harsh outdoor conditions.



The INFRA S10 Air Blast Sensor measures according to the following standards:

| | |
|------------------------------|----------------|
| SS025210 Luftstöttség | 2000Pa 2-315Hz |
| AS 2187.2-2006 | 2000Pa 2-250Hz |
| AS 2187.2-2006 | 160dB 2-250Hz |
| OSM/USBM Air blast | 160dB 2-250Hz |

The INFRA S11 Air Blast Sensor measures according to the following standards:

| | |
|------------------------------|----------------|
| SS025210 Luftstöttség | 7500Pa 2-315Hz |
| AS 2187.2-2006 | 7500Pa 2-250Hz |
| AS 2187.2-2006 | 170dB 2-250Hz |
| OSM/USBM Air blast | 170dB 2-250Hz |

Technical Data

MEASURING

The sensor has built in digital signal processing. The signal processor processes all incoming data in real time according to the selected standard. The sensor works in combinational mode. It measures maximum values for each interval (selectable from 5 sec. to 20 min) according to the selected standard and at the same time it triggers and record time histories when the trigger level is exceeded.

SAMPLING

The sensor signal is sampled at 4096 Hz using a 16 bit A/D converter which gives a wide dynamic range. When a preset threshold is exceeded a time history is recorded. Even some time before the trigger time is stored (pre-trig). If any one sensor in a sensor network triggers all sensors will record time history data synchronously.

RECORDING TIME

Recording time up to 40 seconds at 4 kHz sampling.

POWER SUPPLY

The INFRA S10/S11 is powered via the bus cable with 12 Volts DC. Power in monitoring and recording mode 40 mW. Power consumption is higher during communication over the bus.

MEASURING RANGE

Pressure range for S10 is 0.5 Pa to 2000 Pa.
Pressure range for S11 is 1 Pa to 7500 Pa.

Contact Sigicom for further information on standards and measuring ranges.

SENSOR ELEMENT

The element is a high quality pressure sensor. It is very rugged and is long term stable.

IDENTITY

The sensor has a unique ID number that follows the recorded data. This makes it possible to trace data to a certain sensor.

CALIBRATION

Only the sensor has to be calibrated. The rest of the the system handles data communication and data storage. The sensor has an internal memory for identity, calibration factors, calibration date etc. Even the calibration date is supplied with the recorded data.

TRIGG-SYNCRONISATION

All time history recording sensors that are connected to the same INFRA bus cable will record data simultaneously if one sensor triggers. Acts as a multichannel transient recorder.

MECHANICAL

Watertight anodized aluminium house with o-ring seals. It has holes for bolts passing through in two directions. Can easily be bolted to the wall.

Dimension: 78 x 220 x 75 mm (3.1 x 8.7 x 2.9 in)
(excluding connector and standoffs)

Material: Anodized aluminium.

Protection class IP67

Weight: 500 grams (1.1 lb)

Temperature range -20 to +50 °C (-4 to 122 °F)

CE APPROVAL

Fulfills EMC demands according to:
EN 61326-1 (2006)

Product specifications and descriptions in this document are subject to change without notice.

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