



A DIGITAL AIR BLAST SENSOR IN THE INFRA-SYSTEM

INFRA S10 Air Blast Sensor

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

The S10 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/scanning is started you only select the wanted standard that is presented in the display of the master unit or Remote in INFRA Net Manager.

INFRA S10 is extremely robust and well protected to work under extreme outdoor conditions.



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

SS 02 52 10, 2000 Pa Frequency 2-315 Hz

ISEE Seismograph, Air Blast 160 dBL 2-250 Hz





Technical Data

MEASURING

The sensor has a built in digital signal processor. 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 minute (selectable from 5 sec. to 20 min) according to the selected standard. At the same time it triggers and record time histories when the trigger level is exceeded.

SAMPLING

The microphone 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. As soon as a time history is recorded in the microphone it is sent over the INFRA bus to the master unit.

POWER SUPPLY

The Microphone is powered via the bus cable with 12 Volts DC. Power in monitoring and recording mode 25 mW. Power consumption is higher during communication over the bus.

MEASURING RANGE

Pressure range is 0.5 Pa to 2000 Pa.

Contact Sigicom for further information on standards and measuring ranges

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 microphone has to be calibrated. The rest of the the system handles data communication and data storage. The microphone 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 rubber seals. It has holes for bolts passing through in two directions. Can easily be bolted to the wall or mounted to a microphone stand.

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)

CE APPROVAL

Fulfills EMC demands according to:

EN 301 489-1 V1.8.1 (2008)

EN 301 489-7 V1.3.1 (2005)

EN 61326-1 (2006)