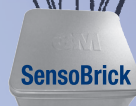
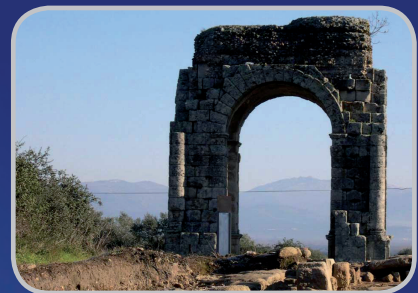


SensoBrick® – Structural Health Monitoring System

Monitoring for environmental condition: Immediate, complete, autonomous

- Turn key solution
- No data or power connection needed
- Long lifetime battery operation
- GSM / GPRS interface
- Warning & Status messaging
- Remote service and configuration



**OPTICAL
TECHNOLOGIES**

SensoBrick® – Structural Health Monitoring System

■ SensoBrick® – a complete and self-sufficient in-a-box monitoring solution

Structural health monitoring offers the chance to turn away from labour intensive and operator subjective visual inspection towards automated monitoring of key parameters on buildings, infrastructure or cultural heritage.

Traditional systems are cost effective when the installation and infrastructure expenses are spread over a larger number of sensors. SensoBrick® is designed towards cost effectiveness in low sensor-count applications for monitoring environmental, structural or also dynamic parameters.

SensoBrick® is a complete and self-sufficient in-a-box monitoring solution. Its embedded temperature sensor for environment and substrate, biaxial inclinometer for pitch and roll, 3-axis accelerometer and seismic trigger monitors thermal-, seismic-, vibration- and settling-induced actions on buildings, infrastructures or industrial plants. Numerous additional input ports allow for integration of application specific sensors to form a modular system to cover your specific monitoring needs.

SensoBrick® is designed for immediate installation without laying additional interfacing cable. Its modular approach allows to integrate additional external sensors and link them with the main communication interface of SensoBrick®. Its intuitive user interface lets you get in touch with your structure by one click over cellular phone or internet.

SensoBrick® comes with high power battery pack to let it run for years without any additional service intervention. The integrated trigger system can be kept continuously armed even when the device is in sleep mode in order to start data acquisition in less than 150ms for acquire dynamic events. The watertight enclosure and an integrated tamper alarm sensor provides additional security for uninterrupted monitoring.

■ Additional Sensors for the SensoBrick®

How much sensor flexibility does your application need?

Make the SensoBrick® a flexible solution with the widest choice of factory orderable sensors

The standard SensoBrick® can cover a wide range of SHM needs just using its own embedded sensors, but from the field experience we learnt that each different application may have its own specific requirements.

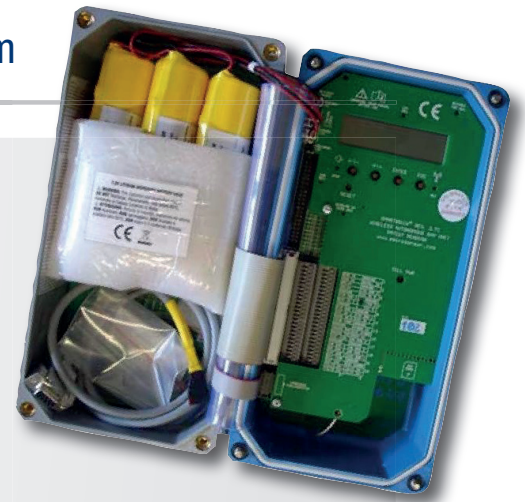
This is why the SensoBrick features a lot of inputs for additional sensors, and why AMS Technologies offers the possibility of ordering the device already equipped and pre-programmed with your custom choice of additional sensors.

Optional external sensors:

- meteo (wind/Rh%/rain)
- crack displacement gauges
- sub-mm LASER displacement gauge
- external 3-axes accelerometer
- additional external 2-axes inclinometer
- strain gauges and load cells
- acoustic emission (crack detector)



www.amstechnologies.com/SensoBrick





■ Key Features

Integrated Temperature sensor
 Integrated 2-axis Inclinometer
 Integrated seismic Trigger
 Integrated 3-axes Accelerometer
 Quad Band GSM interface
 Tamper Sensor
 Ruggedized housing for outside use

■ Applications

Monitoring of Infrastructure (bridges, dams, roads, towers)
 Monitoring of Cultural heritage (indoor & outdoor)
 Monitoring of Industrial plants
 Monitoring of Construction fields
 Monitoring of Soil displacement

■ Optional External sensors

Wind, Humidity, Rain Sensor
 Crack displacement gauges
 Sub-mm Laser displacement gauge
 External 2-axis inclinometer
 External 3-axis accelerometer
 Strain gauges and load cells
 Acoustic Sensor for crack detection
 Others sensors on request

■ Temperature Sensor

resolution: 0.1°C
 absolute accuracy: 1.8°C

■ Inclinometer

Instrumented axes: 2 (tilt & pitch)
 Resolution: 0.001°
 typical drift: ±0.06° (-20 , +80°C)

■ Accelerometers

Instrumented axes: 3 (X, Y, Z)
 Dynamic range: 1500mg(horiz.) 600mg(vert.)
 Bandwidth @ -3dB: 0.2 /65 Hz
 Noise floor: 7mg (@ 27°C, typ.)
 sampling frequency: selectable up to 4100Hz
 recorded samples: selectable up to 32786

■ Seismic Trigger

min. seismic threshold: 20mg (2 / 35Hz)

■ Power supply

long life embedded batteries (2-5 years, typ.)
 external supply input (10,24V AC/DC 300mA)

■ Additional preconditions input ports for custom sensors

5 x 12bit fast sampled 0 3.3V inputs (ratiometric)
 5 x 3V 20mA outputs for sensor excitation
 1 x fast sampled 10V bipolar input (12bit)
 1 x 5V excitation output (80mA max)
 1 x 12V excitation output (120mA max)
 5 x high resolution 24bit differential inputs
 120W strain gauges auto
 2 x 3V 50mA outputs excitation

■ Networking

Quad-band EGSM 850-900/1800-1900 MHz

■ Dimensions

WxHxD: 125x125x250 mm (4.92x4.92x9.84 in.)
 Protection grade: IP67 (IP68 upon request)
 EX (ATEX) compliance: optional



WHAT CAN WE DO FOR YOU?

Please contact us for further information

Germany

AMS Technologies AG
(Headquarters)
Fraunhoferstr. 22
82152 Martinsried
Germany
Phone +49 (0)89 895 77 0
Fax +49 (0)89 895 77 199
info@amstechnologies.com

United Kingdom

AMS Technologies Ltd.
Unit 11, St Johns Business Park
Lutterworth
Leicestershire LE17 4HB
United Kingdom
Phone: +44 (0)1455 556360
Fax: +44 (0)1455 552974
info@amstechnologies.com

France

AMS Technologies S.A.R.L.
1, avenue de l'Atlantique
Courtaboeuf
91976 Les Ulis - Courtaboeuf Cedex
France
Phone: +33 (0)1 64 86 46 00
Fax: +33 (0)1 69 07 87 19
info@amstechnologies.com

Italy

AMS Technologies S.r.l.
Via San Bernardino, 49
20025 Legnano (MI)
Italy
Phone +39 0331 596 693
Fax +39 0331 590 732
info@amstechnologies.com

Spain

AMS Technologies S.L.
C/Muntaner, 200 Atico, 4a
08036 Barcelona
Spain
Phone: +34 93 380 84 20
Fax: +34 93 380 84 21
info@amstechnologies.com

Nordic

AMS Technologies Nordic
Azpect Photonics AB
Balticvägen 3
151 38 Södertälje
Sweden
Phone +46 (0)8 55 44 24 80
Fax +46 (0)8 55 44 24 99
info@amstechnologies.com



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