



## SENSOR DOGBONE™

### Moisture Level Sensing Inlay

Smartrac's state-of-the-art SENSOR DOGBONE™ brings new features to the company's inlay and tag product range. It is specially designed to measure moisture conditions in industrial environments, e.g. in construction, energy, healthcare and the military.

The Smartrac SENSOR DOGBONE is a passive UHF inlay equipped with Axzon's Magnus®S2 IC. This RFID sensor inlay offers great performance, and accurately detects and measures moisture levels in the surrounding environment. The sensing information is digitized and wirelessly communicated to off-the-shelf readers using a standard UHF Gen 2 protocol READ command for further processing.

The innovative SENSOR DOGBONE is a passive UHF single-chip sensor inlay solution that offers cost efficiency, is easy to implement, and works on different low- and high-dielectric materials like cardboard, plastics, stone, wood and construction materials. It is deployable where active or semi-active sensors are not practical, and involves no battery maintenance, costs or problems with product lifetime or recycling. It can be delivered in dry, wet and tag format to suit all converting-industry needs, and complies with all relevant industry standards and strict quality control parameters.

The Smartrac SENSOR DOGBONE complements industry requirements and represents the state of the art in passive RFID sensing suitable for high-volume production. The passive UHF sensor inlay offers significant possibilities to enhance production control, quality control and maintenance in many different applications.

#### Overview

**Operating Frequency**  
900-930 MHz (FCC)

**Integrated Circuit (IC)**  
Axzon Magnus®S2

**Antenna Size**  
89 × 24 mm (3.5 × 0.9 in)

**Die-cut Size**  
97 × 27 mm (3.8 × 1.1 in)

#### International Standards

▶ EPC Class 1 Gen 2  
v.2.0.0 ISO 18000-6C

#### Application Areas

- ▶ Construction
- ▶ Energy
- ▶ Healthcare
- ▶ ... and many more.

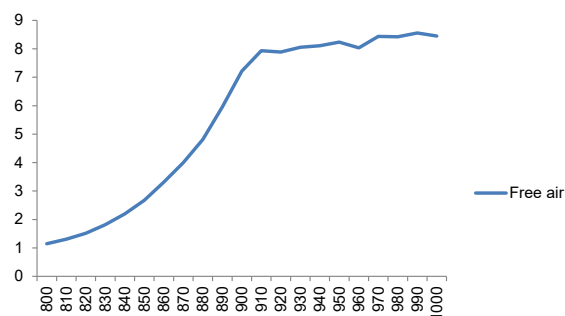
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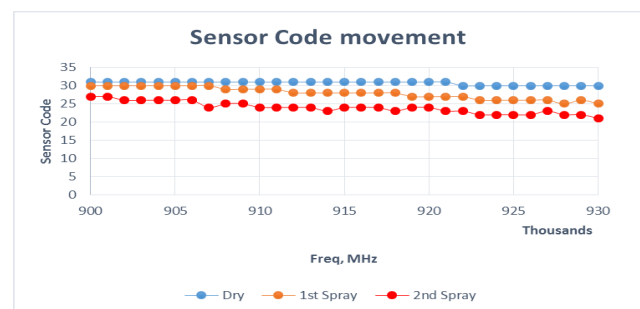
### Technical Features

IC + Memory	Size	Format*	Sales Code
Axzon Magnus®S2 64bit TID, 128bit EPC + 144bit User Memory	89 × 24 mm / 3.5 × 0.9 in 97 × 27 mm / 3.8 × 1.1 in	Dry Wet	3005259 3004837
Frequency	900-930 MHz (FCC band)		
Antenna Size	89 × 24 mm / 3.5 × 0.9 in		
Die-Cut Size	97 × 27 mm / 3.8 × 1.1 in		
Web Width	100 mm / 3.94 in		
Operating Temperature	-40 °C to +85 °C / -40 °F to +185 °F		
Adhesive	RA-5 - Acrylic, water borne adhesive		
Qty/Reel	500 pcs		
Core Size	76 mm / 3 in		
Shelf Life	+20 °C, 50 % RH / 68 °F, 50 % RH - minimum 2 years from the date of manufacturing		

Read Range



Sensor Code Value



All the graphs are indicative; performance in real life applications may vary. The data has been determined based on calculations for transmitters with a 2W ERP output power level.

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