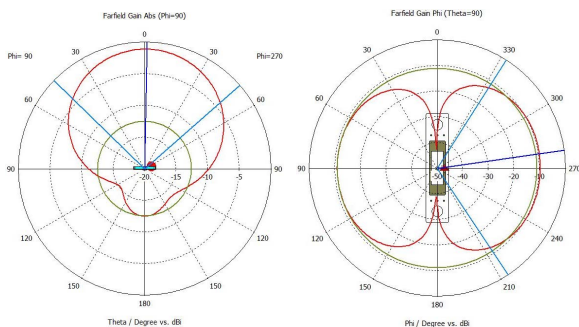




XENSE STRAIN

Technical Specifications

- **RF protocol** EPC global Class 1 Gen 2
- **Frequency** 902-928 MHz (US);
865-868 MHz (EU)
- **IC type(chip)**¹Asygn AS3213S
- **Chip memory**² 192 bits EPC; 16 bits TID;
96 bits user memory
- **Sensing features**
Temperature sensor -40°C to +120°C;
Resolution ± 0.5°C; Accuracy ± 1°C
Strain sensor
- **Read range fixed**³ Up to 4.92 ft (1.5 m)
- **Read range handheld**³ Up to 3.28 ft (1 m)
- **In concrete**⁴ Up to 6.56 ft (2 m)
- **Polarization** Linear
- **Radiation pattern on metal**



Key Features

- + **Wireless:** battery-free
- + **Strain sensing:** monitor strain and temperatures
- + **Embeddable:** long-term durability in concrete
- + **IP68 rating:** waterproof
- + **Rugged mounting systems**

Applications

- Concrete strength monitoring
- Infrastructure management
- Railroad concrete ties

Environmental Specifications

Temperatures



- Operational -40°C to +85°C
- Survival -40°C to +120°C
- Temp resolution ± 0.5°C
- Accuracy ± 1°C

- **IP rating** IP68
- **Compression strength** 8,700psi (60MPa)
- **Shock** 3ft (1 m) to concrete/granite
- **Vibration** MIL-STD-810G
- **Warranty** 1 year

¹ The chip data retention is up to 50 years, based on chip operating under general environment conditions.

² EPC can be re-programmed, password protected, or permanently locked. TID is locked and unique at the point of manufacturing.

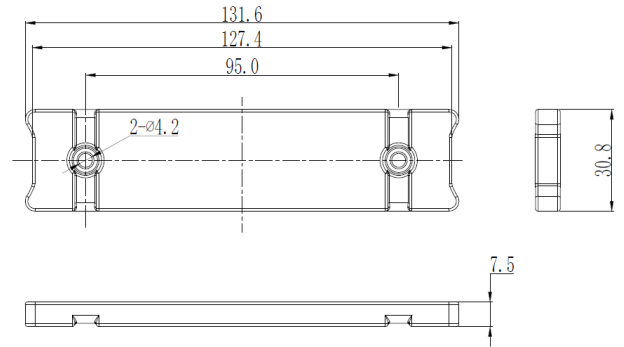
³ On metal

⁴ Fixed reader



Physical Specifications

- **Material** Industry grade polymer
- **Dimensions (in)**¹ 5.18 x 1.21 x 0.30
- **Dimensions (mm)**¹ 131.60 x 30.80 x 7.50
- **Rivet hole diameter** 0.165 in +/-0.008 (4.20 mm +/-0.20)
- **Weight** 1.48 oz (42 g)



Mounting Systems

- Casting
- Pop rivets
- Screws
- Cable ties
- Industrial adhesive (optional)

Installation Instructions

1. Use rivets, screws, wire, cable ties and adhesive to attach the sensor to the rebar or metal surface. Ensure the sensor tag is oriented with the logo side facing outward.
2. Pour concrete over the sensor tag, ensuring that the depth of the tag from the concrete surface does not exceed 5cm.
3. Mark the location of the sensor tag and allow for the curing of the concrete.

¹ Tolerance: +/- 0.02; +/- 0.40

Industry Compliance



Order Information

XENSE Strain US: X90A2-US100-AS3213S

XENSE Strain EU: X90A2-EU100-AS3213S

Customization Options

Encoding

Laser Marking

ATEX Certified Version

Printing

Industrial Adhesives

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