XERAFY®

XENSE Temp Concrete

The Xerafy XENSE Temp Concrete is a battery-free RAIN RFID sensor platform that enables the cost-effective deployment of IoT monitoring in construction, infrastructure, and manufacturing.

The industry-grade case and attachment systems offer a fast read-rate platform with customizable sensing features to enable specific use cases such as concrete curing monitoring.

Battery-free

Fast read rate

Temperature and more sensing features

IP68

Industry-grade mounting options

Performance Characteristics

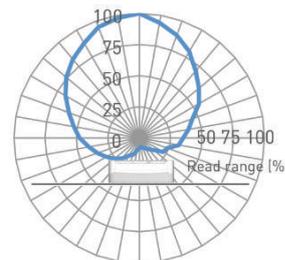|	
Read range (On metal)[1]	Up to 6.5 ft (2 m)
Read range (Off metal)[1]	Up to 9.8 ft (3 m)
Read range (In concrete)[1]	Up to 14.7 ft (4.5 m)
Polarization	Linear
Attachment	Casting, Screws, Rivets (ø3.2mm), Cable ties, High-performance adhesive (optional)

1. Fixed reader

Functional Specifications

RF protocol	EPC global Class 1 Gen2
Frequency	902-928MHz (US) 865-868MHz (EU)
IC type (chip)[1]	Asygn AS3211
Memory	192 bits EPC, 48 bits TID, 32 bits User memory
Customizable sensing features	Temperature, Humidity, Strain, Ambient light, Pressure, Magnetic field (Hall Effect), Electrical continuity
Material	High-performance engineered polymer, Copper

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

- Concrete Curing
- Infrastructure Monitoring
- Manufacturing Assets

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Radiation Pattern

100
75
50
25
0
50 75 100
Read range (%)

RAIN RFID   ETSI   FC   RoHS 2002/95/EC   CE   Ex   REACH COMPLIANCE

221125

Environmental Specifications

Operational temperature	-40°C to +85°C
Survival temperature	-40°C to +85°C
IP rating	IP68
Compression strength	29 psi (200 kPa)
Shock (drop)	3 ft (1 m) to concrete/granite
Vibration	MIL-STD-810G

Industry Compliance

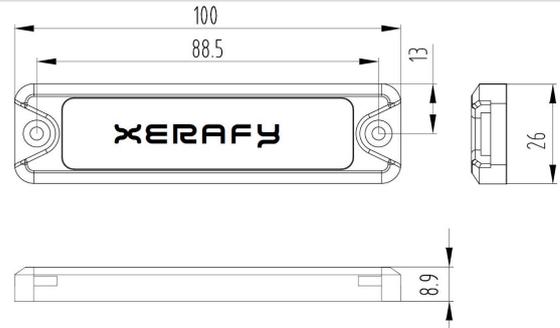|	
RoHS	EU Directive 2011/65/EU
CE	Yes
ATEX/IECEx	Certified
Warranty	1 year

Order Information

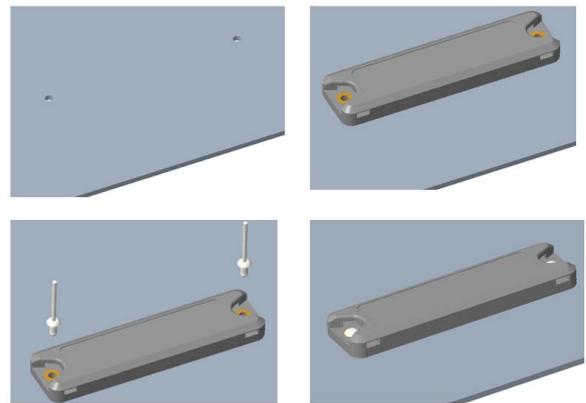|	
X90A0-US100-AS3211	XENSE Temp Concrete US
X90A0-EU100-AS3211	XENSE Temp Concrete EU
Optional Services	Encoding / Printing / Laser Marking / Industrial Adhesives / ATEX Certified Version

Product Dimensions and Weight

Dimensions (in)	3.94 x 1.02 x 0.35
Tolerance	+/- 0.02
Dimensions (mm)	100 x 26 x 8.9
Tolerance	+/- 0.5
Rivet hole diameter	0.137 in +/-0.008 (3.5 mm +/-0.2)
Weight	0.68 oz (19.4 g)

Installation Instructions

Instructions for optimal performances:
1.Drill two holes on the subject metal surface.
(ø 3.4 mm, pitch: 88.7mm)
2.Insert two φ3.2mm (recommended size) rivets on the tag.
3.Fix the tag on the metal surface with a rivet gun.

*Can use cable ties to attach the tag on metal rebars.

About Xerafy

Xerafy designs and manufactures the world's toughest RFID tags to power Industrial IoT applications in Aerospace, Oil & Gas, Automotive, Healthcare and Manufacturing.

For Product inquiries: sales@xerafy.com
Singapore | China | US | UK

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