

XS Dot Wedge



The Xerafy XS Dot Wedge offers outstanding performance in the most demanding temperature and pressure.

Its unique design makes it fully embeddable in metal, delivering a read range of up to 3.3 ft (1 m) at optimal performance.

The IP68-rated RFID Tag uses a high performance polymer for the casing to ensure exceptional dirt, chemical, UV and wear resistance, as well as excellent mechanical properties built for high temperatures environments.



Embeddable in metal



Extreme temperatures and pressure



Liquids and corrosion



Read-range optimal for in-the-field applications



Value to performance ratio



- Onshore and Offshore pipes
- Heavy equipment and tools
- Automotive manufacturing
- Industrial molds

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Performance Characteristics

Read range (handheld) ¹	Up to 1.6 ft (0.5 m) US
Read range (handheld)	Up to 1.3 ft (0.4 m) EU
Read range (fixed) ¹	Up to 3.3 ft (1 m) US
Read range (fixed)	Up to 2.6 ft (0.8 m) EU
Polarization	Linear
Mounting system	Press fit, embedded

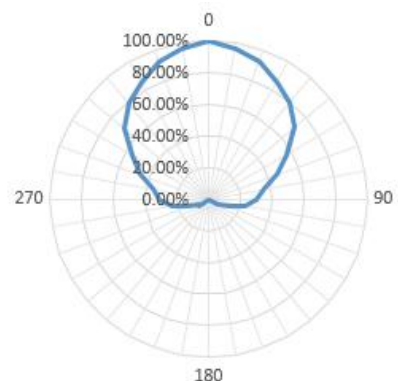
1. Embedded in metal read range (2W EPR)

Functional Specifications

RF protocol	EPC global Class 1 Gen2
Frequency	902-928 (US) ; 865-868 (EU)
IC type (chip) ¹	Alien Higgs-3
Memory	96-EPC bits, extensible to 480-bit, 64-bit unique TID, 512-bit user memory
Material	High performance engineered polymer

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

Radiation Pattern



Environmental Specifications

Operational temperature	-40°C to +85°C
Survival temperature	-50°C to +220°C (long term)
Peak temperature	-50°C to +250°C
Chemical resistance	Various mold treatments and coating / lubricants
IP rating	IP68
Compression strength	10,100 psi (70 MPa)
Weather ability	All weather including UV-resistance and sea water immersion

Industry Compliance

RoHS	EU Directive 2011/65/EU
CE	Yes
ATEX/IECEX	Compliant
Warranty	1 year

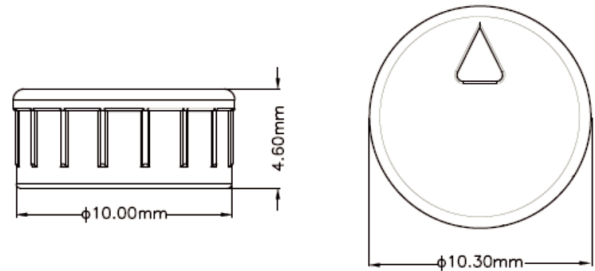
Order Information

X4202-US100-H3	XS Dot Wedge US
X4202-EU100-H3	XS Dot Wedge EU
Optional service	encoding / laser etching



Product Dimensions and Weight

Dimensions (in)	ø 0.405 x 0.181
Tolerance	+/- 0.004
Dimensions (mm)	ø 10.3 x 4.6
Tolerance	+/- 0.1
Weight	0.28 oz (8 g)



Installation Instructions



Instructions for optimal performances:

1. Preparation - For a spherical or curved surface, first make a plane on the surface (Length \geq 12 mm * Width \geq 12 mm).
2. Drilling - Make a flat bottom groove on the metal surface 10 mm * 5 mm).
3. Position - Put $\frac{1}{3}$ of the XS Dot Wedge into the groove and adjust the tag's direction according to the object size. The Δ mark on the tag indicates the recommended installation direction to ensures the tag's polarization direction is parallel with the length of the metal asset. Read range performance will decrease when the polarization direction forms an angle with the length direction.
4. Insertion - Drive the remaining $\frac{2}{3}$ of the tag into the groove, using a hammer or similar tool.

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.

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