Dot Wedge



The Xerafy 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.





Extreme temperatures and pressure





Read-range optimal for demanding environments



Value-to-performance ratio



- Onshore and Offshore pipes
- Heavy equipment and tools
- Automotive manufacturing
- Molds

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Performance Characteristics

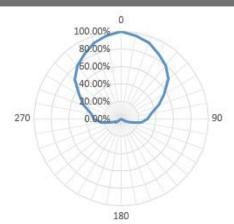
Read range (handheld)1	Up to 1.6 ft (0.5 m)
Read range (fixed) ¹	Up to 3.3 ft (1 m)
Polarization	Linear
Mounting system	Press fit,embedded

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 engineering 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	
	(168 h one time / 500cycles)	
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	

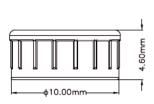
Industry Compliance		
RoHS	EU Directive 2011/65/EU	
CE	Yes	
ATEX/IECEx	Compliant	
Warranty	1 year	

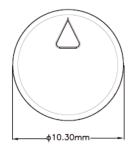
Order Information		
X4202-US100-H3	Dot Wedge US	
X4202-EU100-H3	Dot Wedge EU	
Optional service	encoding / laser etching	



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:

- Preparation For a spherical or curved surface, first make a plane on the surface (Length ≥12 mm * Width ≥ 12 mm).
- Drilling Make a flat bottom groove on the metal surface 10 mm * 5 mm).
- 3. Position Put $st{V}_3$ of the Dot Wedge into the groove and adjust the tag's direction according to the object size. The \triangle 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 \(^{4}\)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.

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

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