

## Xplorer Downhole



The Xplorer Downhole tag has been validated by tests simulating simultaneous high temperature, high pressure stresses as well as in an actual live well site for survivability and performance under the extreme conditions of pressure, vibration, temperature and chemicals of a well. Its embeddable round form-factor is designed for firm and seamless insertion in metal structures for downhole application.



Withstands high pressure and vibration



Quick snap in attachment



Unique RF design



IP68, IP69K



Hi-Temp and chemicals resistance



- Onshore and Offshore Oil Pipes Management
- Downhole Assets Tracking

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### Performance Characteristics

|                                    |                       |
|------------------------------------|-----------------------|
| Read range (handheld) <sup>1</sup> | Up to 3.28 ft (1.0 m) |
| Read range (fixed) <sup>1</sup>    | Up to 4.92 ft (1.5 m) |
| Polarization                       | Linear                |
| Mounting system                    | Snap in, embedded     |

<sup>1</sup>. Performance based on standard testing methodologies. Performance may vary depending on environmental factors and reader output power.

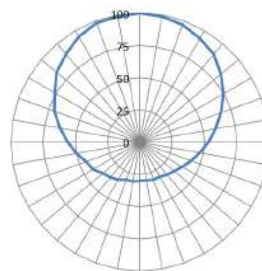
### Functional Specifications

|                             |   |
|-----------------------------|---|
| RF protocol                 | EPC global Class 1 Gen2                             |
| Frequency                   | 902-928 (US) ; 865-868 (EU)                         |
| IC type (chip) <sup>1</sup> | Alien Higgs-3                                       |
| Memory                      | 96-EPC bits, 64-bit unique TID, 512-bit user memory |
| Material                    | Stainless steel 316L                                |

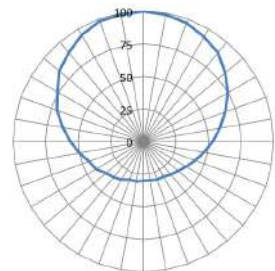
<sup>1</sup>. The chip data retention is up to 50 years, based on chip operating under general environment conditions.

### Radiation Pattern

Horizontal



Vertical



## Environmental Specifications

|                         |  |
|-------------------------|--|
| Operational temperature | -40°C to +85°C   |
| Survival temperature    | -50°C to +250°C  |
| Chemical resistance     | Withstands drilling fluids and hydraulic fluids including hydrogen sulphide. |
| IP rating               | IP68, IP69K  |
| Compression strength    | 13,000 psi (89 MPa)  |
| 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 | Compliant               |
| Warranty   | 1 year                  |

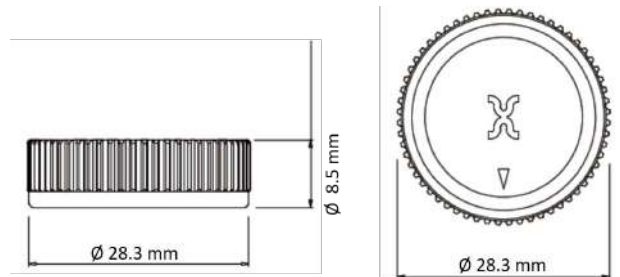
## Order Information

|                  |                                     |
|------------------|-------------------------------------|
| X1115-US101-H3   | Xplorer Downhole US                 |
| X1115-EU101-H3   | Xplorer Downhole EU                 |
| Optional service | Encoding / Printing / Laser etching |



## Product Dimensions and Weight

|                 |                  |
|-----------------|------------------|
| Dimensions (in) | ø 1.11 x 0.33    |
| Tolerance       | +/- 0.004        |
| Dimensions (mm) | ø 28.3 x 8.5     |
| Tolerance       | +/- 0.1          |
| Weight          | 0.89 oz (25.4 g) |



## Installation Instructions

1. Create a flat surface sized to the recommended dimensions on the connect part of the drill pipe by using the milling machine.
2. Chamfer the length edge of the flat surface. This could help to reduce the wear during pipe drilling.
3. Drill a blind hole in the center of the flat surface at the recommended diameter and depth by drilling machine.
4. Clean the hole.
5. Place the Xplorer tag onto the asset near the hole with the side facing up. For maximum reading range, the mark on Xplorer surface need to face to longer free metal surface side
6. Use a press, such as an arbor press or a drill-press, and chuck the driver tool in the press
7. Visually align the asset and nested Xplorer with the driver tool.
8. Use the press to install the Xplorer until it is 0.5 mm below the pipe surface.

### 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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