

## Pico-iN Plus

**STANDARD**

**HIGH TEMPERATURE**



### Functional Specifications

|                                       |  |
|---------------------------------------|--|
| RF air protocol                       | EPC Class 1 Gen 2; ISO18000-6C               |
| Operating frequency                   | UHF 902-928 MHz (US); 866-868 MHz (EU)       |
| IC type                               | Alien Higgs-3                                |
| Memory configuration                  | 96-EPC bits; 512-bit user memory; 64-bit TID |
| Functionality                         | Read / write (user programmed)               |
| Memory – expected read / write cycles | 100,000 cycles at 77°F (25°C)                |
| Data retention                        | Up to 50 years <sup>1</sup>                  |
| Read rate                             | 400 tags per second for 96-EPC bit number    |
| Warranty (limited)                    | 1 year                                       |

### Performance Characteristics

|   |                    |
|---|--------------------|
| Read range in metal (2W ERP) <sup>2</sup> | Up to 6.6 ft (2 m) |
| Polarization                              | Linear             |

### Physical Specifications

|          |         |
|----------|---------|
| Material | Ceramic |
| Color    | White   |

### Environmental and Industry Compliance

|      |                         |
|------|-------------------------|
| RoHS | EU Directive 2002/95/EC |
| ATEX | ATEX Compliant          |



<sup>1</sup> The chip data retention is based on chip operating under general environment conditions.

<sup>2</sup> Actual read range may vary based upon use case and antenna power.

**Operational and Environmental Specifications**

|                         |   |
|-------------------------|---|
| Shock (drop)            | 3 ft (1 m) to concrete/granite up to 200 cycles |
| Vibration               | MIL-STD-810F                                    |
| Compression strength    | Packaging dependent                             |
| IP classification       | IP 68   |
| Humidity                |   |
| Operational humidity    | 5%-95% non-condensing                           |
| Storage humidity        | 5%-95% non-condensing                           |
| Operational temperature |   |
| Cold                    | -22°F (-30°C)                                   |
| Dry heat                | +185°F (+85°C)                                  |
| Thermal shock           | -22°F to 185°F (-30°C to +85°C); cycled         |

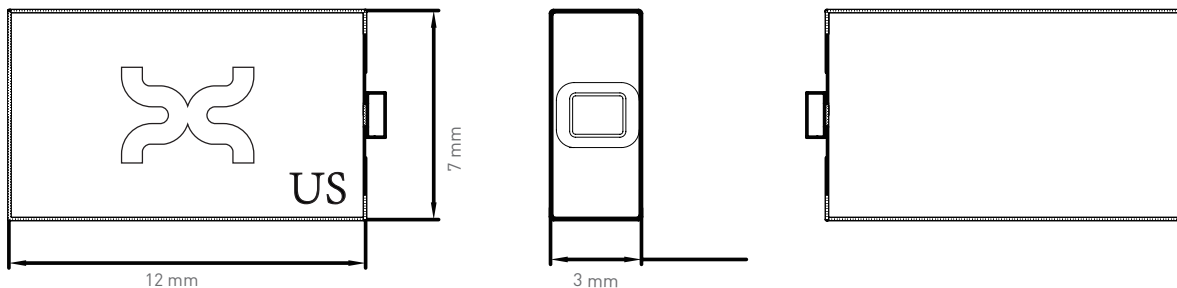
**STANDARD VERSION**

|                         |                 |
|-------------------------|-----------------|
| Application temperature |                 |
| Cold                    | -40°F (-40°C)   |
| Dry heat                | +302°F (+150°C) |

**HIGH TEMPERATURE VERSION**

|                          |   |
|--------------------------|---|
| Application temperature  |   |
| Cold                     | -40°F (-40°C)   |
| Dry heat                 | <b>+455°F (+235°C)</b>  |
| Peak temperature         | <b>+482°F/+250°C</b> 6 hours duration                               |
| Temperature cycling test | 30 Minutes at + 482°F/+ 250°C,<br>1 hour cool-down; 500 test cycles |

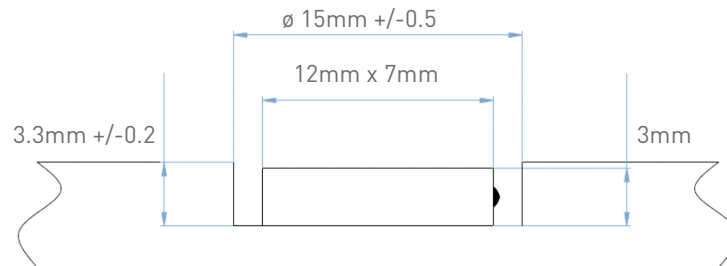
**Product Dimensions and Weight**



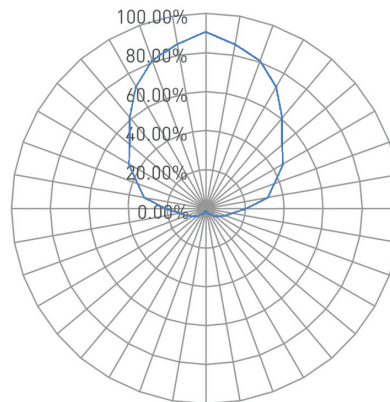
|                 |                    |
|-----------------|--------------------|
| Dimensions (mm) | 12 x 7 x 3         |
| tolerance       | +/- 0.3            |
| Dimensions (in) | 0.47 x 0.28 x 0.12 |
| tolerance       | +/- 0.012          |
| Weight          | 0.05 oz (1.4 g)    |

## Cylindrical Socket Dimensions for Flush-mounting

|  |                                   |
|--|-----------------------------------|
| Cylindrical socket dimensions / tolerance (mm) | 15(+/- 0.5) x 3.3 (+/- 0.2)       |
| Cylindrical socket dimensions / tolerance (in) | 0.59(+/- 0.02) x 0.13 (+/- 0.008) |



## Radiation Pattern



## Order information

|                |  |
|----------------|--|
| X3210-US000-H3 | Pico iN Plus US Standard Version         |
| X3210-EU000-H3 | Pico iN Plus EU Standard Version         |
| X3210-US050-H3 | Pico iN Plus US High Temperature Version |
| X3210-EU050-H3 | Pico iN Plus EU High Temperature Version |