

### Sense<sup>IoT</sup> Condition – Temperature

The Sense Condition – Temperature is a small form factor, battery free RFID tag with built in temperature sensor. Its small size makes it ideal for a number of applications where space is tight or limited intrusion is desirable but this does not affect performance as the read range is up to 4 meters. An ideal solution when space is limited but both RF performance and operational environment information are required.



### Applications

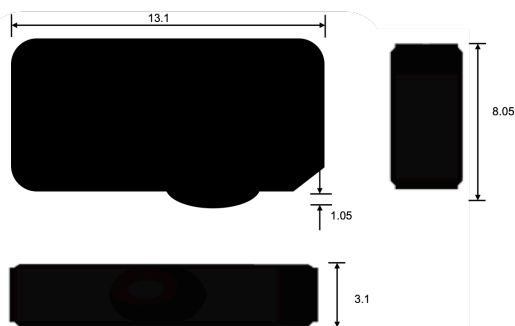
A small form, high RF performance device with accurate temperature monitoring, ideal for applications requiring:

- ▶ Efficient operation
- ▶ Equipment monitoring in-house or in transit
- ▶ Data Centers and metal IT assets – both in terms of tracking and temperature monitoring
- ▶ Embedding the tag into metal components
- ▶ Monitoring mechanical plants

### Physical Specifications

Finish	Painted black
Size (mm) (tolerance)	13.1 × 8.05 × 3.1 including IC bump ± 0.5
Size (in) (tolerance)	0.52 × 0.32 × 0.12 including IC bump ± 0.02
Weight (g)	1.4

### M3E — Dimensions



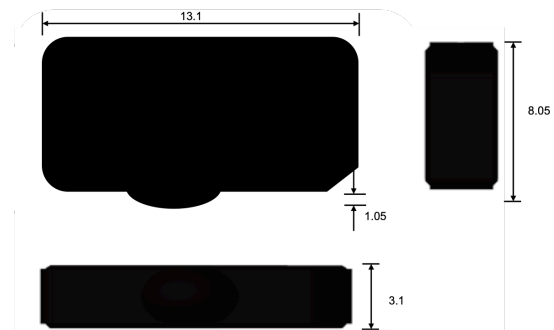
Dimensions in mm

### Operational Specifications

Radio Protocol	EPC Class 1 Gen2v2
Frequency Range (MHz)	866-868 (EU) 902-928 (US)
Read Range (Fixed reader) <sup>1</sup>	M3E/M3D: Up to 3.5 m (11.5 ft)
Read Range (Handheld reader) <sup>1</sup>	Up to 2 m (6.6 ft)
Material Compatibility	Optimized for metal
IC Type (chip)	Magnus S3: M3D / M3E
Memory <sup>2,3</sup>	EPC — 128 bits User — 128 bits Unique TID — 64 bits

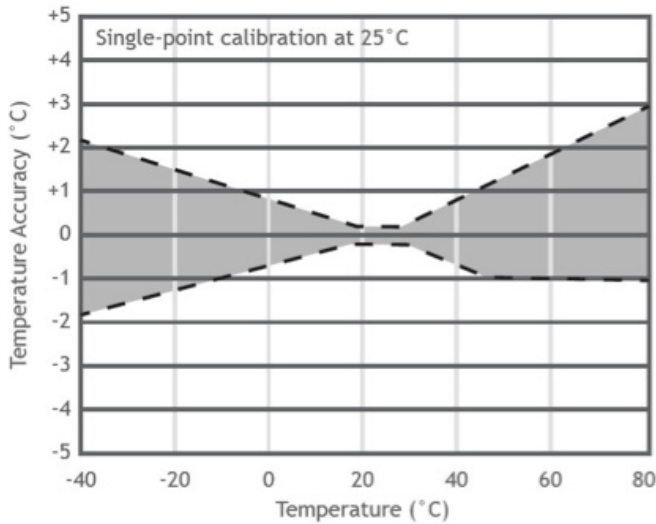
1. Quoted performance achieved using standard testing methodology. Read range will vary with reader hardware and output power. 2. EPC and User memory are reprogrammable, UTID is locked at point of manufacture. 3. Data retention 10 years at our operation temperature.

### M3D — Dimensions



Dimensions in mm

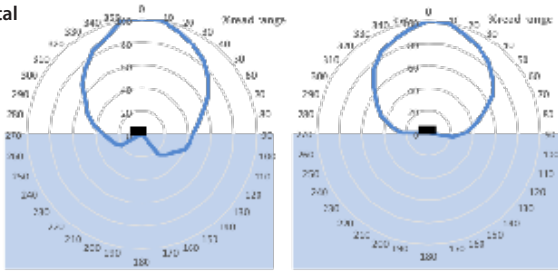
## Temperature Accuracy



## Radiation Patterns

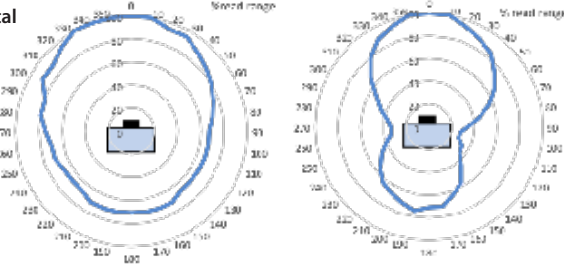
Large Metal

Sheet



Small Metal

Asset



## Environmental Specifications

Operating Temperature <sup>1</sup>	-40°C to +85°C
High-temperature alarm	Up to +125°C
Max Temperature Exposure <sup>1</sup>	+200°C (Long term)
150°C long term 700hrs	Up to 4 m (13.1 ft)
IP Rating	IP68
Shock and Vibration	MIL STD 810-G
	Magnus S3: M3D / M3E
Attachment <sup>2</sup>	Film adhesive (included) for placement only in applications exceeding +85°C
Warranty	1 year

1. Excludes adhesive options, consult adhesive datasheets for recommended temperature ratings. 2. The product has been designed for optimal RF performance when used with 130 micron  $\pm 20\%$  adhesive under the tag.

## Ordering Information

Part Number	CP13965-M3D (US Version) CP13964-M3E (US Version) CP13963-M3D (EU Version) CP13962-M3E (EU Version)
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Warranty	1 year
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## Certifications:



RoHS approved  
CE approved  
ATEX/IECEx certified (option)  
US & Canada (C1D1/D2) certified (option)

## Meeting Your Requirements

Our Sense range of IoT devices has been designed with a wide range of use cases in mind. However, we realise that your exact requirements may not be met by an 'off the shelf' product and a combination of the many features in the Sense range could be required. Our engineers and technical teams like nothing more than to solve specific tracking and communication challenges (it's what gets them out of bed in the morning) and we would be happy to consider a bespoke version of 'Sense' tailored to your particular scenario. **Contact us at [sales@omni-id.com](mailto:sales@omni-id.com) to find out more.**



Omni-ID office locations: [US](#) | [UK](#) | [China](#) | [India](#)

For product or technology inquiries email: [sales@omni-id.com](mailto:sales@omni-id.com)

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