micro TEMP™ Intrinsically Safe

Wireless Temperature Monitoring

Rugged, Wireless, Non-Intrusive **Temperature Sensors**

First Choice for any Industrial Applications Including HazLoc

Out-of-range temperatures can not only damage machinery and plant equipment, but can compromise the quality of your processes. This makes temperature measurement a priority for many Petrochemical and Downstream Oil & Gas systems.

microTEMP™ Intrinsically Safe is a fully wireless, non-intrusive, network of sensors, designed for direct and remote temperature measurement. Powered by long-life batteries (10 years), it operates using long-range, sub-gigahertz LoRaWAN® wireless connectivity.

Each microTEMP sensor measures and records temperature data and time, storing the information in memory. Data is transmitted every 12 readings to the webPIMS™ application for database storage, trending, and analysis. webPIMS can alert users if a received temperature exceeds user-defined limits via e-mail or SMS text messaging.

Multi-Point Monitoring

connect up to 1,000+ microTEMP sensors per gateway up to ~1 mile (1.6km) range

Continuous Monitoring

Constant temperature monitoring -40°F (-40°C) up to 1,112°F (600°C) • Quick to respond to temperature changes

Real-Time Alerts

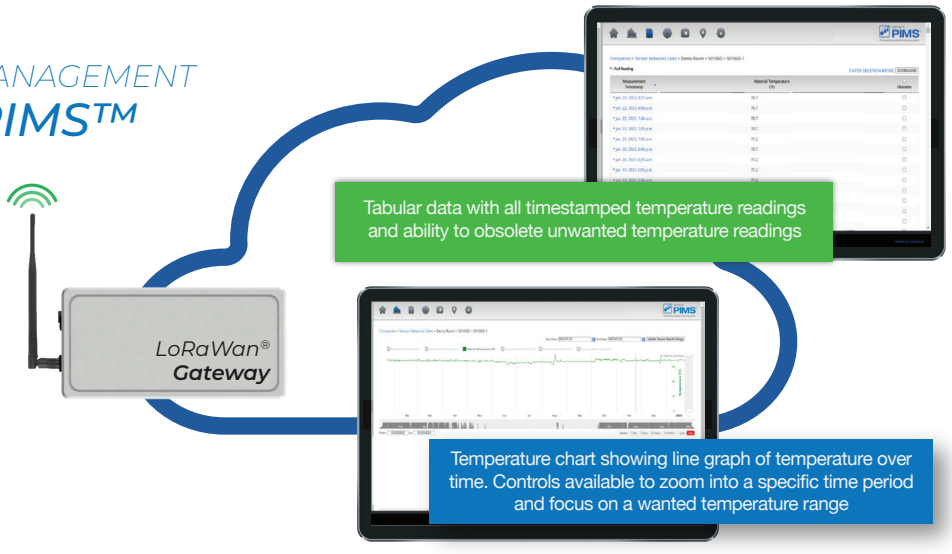
Take action immediately if temperature rises or falls outside set ranges • Get alerts via email and SMS text to protect your assets around-the-clock

Easy Installation & Integration

Add microTEMP nodes onto an a new or existing LoRa Wan network • Considerably more cost effective than intrusive, wired thermocouples

DATA MANAGEMENT

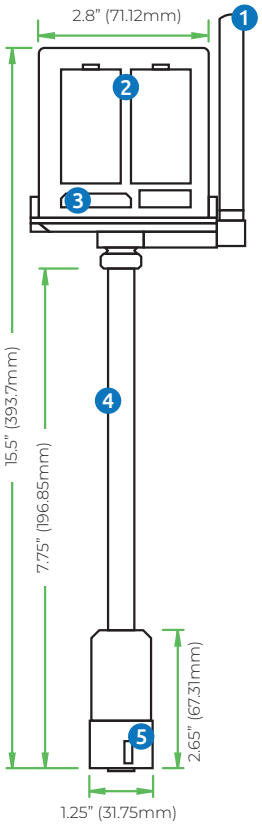
webPIMS™



microTEMP I.S.
TECH EXPOSED

- **Operates using LoRa-WAN Sub-Gigi-hertz digital radio frequency.**
- **10-years at 6 data transmissions/day** (2x D-Size Batteries - 3.6VDC).
- **Built-in thermocouple for surface temperature readings.**
- **Ethernet or Cellular back-haul through gateway.**
- **Installed temporarily or permanently in under 5 minutes per sensor.**
- **Hazardous-area certified to UL/CSA Class 1 Div. 2, Gas Groups A-D, T4 & ATEX IECEX Zone 0.**

1. *LoRaWAN High-Gain Antenna*
2. *Two D-Cell batteries*
   provide 10 years of wireless operation.
   Commercially available (non-proprietary)
3. *LoRa Radio*
4. *Stainless Steel Heat Stand-Off*
5. *Temperature Sensor*

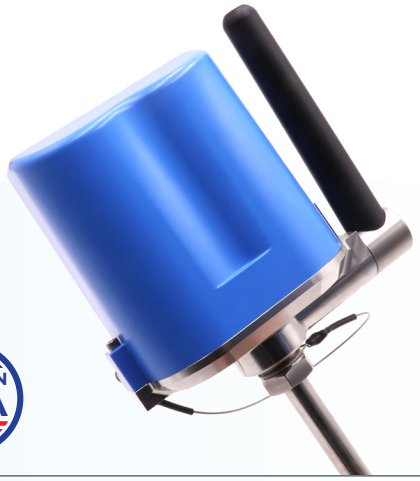


microTEMP attached with a band clamp out of insulation

microTEMP specifications

sensor tip diameter	1.25 in. (31.75mm)
sensor surface temperature	-40°F (-40°C) up to 1,112°F (600°C)
weight	31.0 oz. (880g)
size (height × housing dia.)	15½×2.8"(394x70mm)
hazardous location rating intrinsic safety	See chart on the right
Temperature Accuracy*	-40°F to 392°F ± 5.8°F (-40°C to 200°C ± 3.2°C) and >392°F (200°C) ± 2.0%
Ingress Protection Rating	IP-67
Resolution	0.45°F (0.25°C)
battery life (typical)†	10 yr. @ 6 transmission/day 68°F (20°C)
construction	316 stainless steel
mounting	band clamp
data	temperature, time/date stamp
data access	cloud-based via webPIMS™ portal
local network	LoRaWAN (node to gateway)
connectivity	gateway to cloud (cellular or ethernet)
sensor count	1,000+ microTEMP units per gateway
gateway‡	outdoor; cast alum.; Approx. 12×6×4" (305×152×102mm); 6.0lb (2.7kg)

† Typical Values. Results may vary site to site.
** Temperature Accuracy measured per SNI lab procedure xxxxx.*
‡ Without antennas.



MADE IN USA

UK CA 2503 CE 2776 Ex II 1 G Ex ia IIC T4 Ga, Ta = -40°C to +70°C
CML 21ATEX2356X | CML 21UKEX2357X | IECEx CML 21.0044X

NATL LISTED MET c US
Ex ia IIC T4 Ga | Class I, Div 1, Gp A-D T4 Ex ia
Class I Zone 0, AEx ia IIC T4 Ga | Class I, Div 1 Gp A-D T4
Ta = -40°C to +70°C
E114158 - Hazardous Location

WARNING: USE ONLY TADIRAN TL-5930, SL-2780 OR XENO XL-205F BATTERIES
WARNING: SPECIAL CONDITIONS FOR SAFE USE, SEE INSTRUCTIONS

IP 67
BATTERY POWERED: 2 Cells, 7.2V, 0.94W
PROGRAMMING PORT: Um = 5V

Contains:
IC: 23069-CW24012
FCC: 2ANDP-CW24-012
Made in the USA

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