

Wireless Temperature Sensor TSWEM-2104

User Manual

1. Overview

TSWEM-2100 is a device for accurate metering of indoor temperature, particularly in apartment or commercial buildings. The TS2WEM100 contains the 916.5 MHz Transceiver Module I21RU4A, which provides wireless connections to the apartment Wireless Energy Module WEM using the Intech21 Wireless Control Network.

The Intech 21 Wireless Control Network is designed to simplify deployment and reduce cost of installation of the Building Monitoring and Control System.

This system's standard operation is to perform a variety of Data Acquisition and Control functions, e.g. Power Meter reading, Smoke Detector monitoring, Temperature Sensor reading, Electrical Heating/Cooling control, and operating the Electrical Power Load Control devices for power savings etc.

The system is WEB-enabled, with the purpose of easy user access via the Internet to the building's real-time data as well as to the information stored in the Central Database.

The Wireless Network has self-configuring self healing features with an intrinsic structural hierarchical organization. The network units like TSWEM-2104 do not require hardware preprogramming prior to or during installation and the units are easily interchangeable, which reduces the possibility of installation errors by personnel.

The Wireless Network operates in 902-928MHz frequency band dedicated for non-licensed Industrial Scientific Medical (ISM) applications in the USA. Versions for other frequency bands are also available.



TSWEM-2104 has an auxiliary input, which can be connected to a smoke detector output, thus providing fire alarm to the Building Monitoring and Control System.

2. Specifications

Power requirements	<ul style="list-style-type: none"> ▪ Model TSWEM-2104. Powered directly from 120V, 60Hz
Temperature Sensor Accuracy	±1.0°F
Wireless Interface	<p>Built-In Wireless Network Communication Device. ISM License-Free Frequency Band: 902 MHz - 928 MHz This device contains 916.5 MHz Transceiver Module: I21RU4A FCC ID: P8A-I21RU4A, IC ID: 7719A-I21RU4A.</p> <p>RF Transmitted Power: 0 dBm (1 mW)</p>
Auxiliary Input	Smoke detector signal wire input: 9VDC
Size	3.2 x 4.5 x 2.8 inches
Weight	< 0.8 lb
Environmental Conditions	<ul style="list-style-type: none"> • Indoors use. • Placement: Wall-Mount, Flush-Mount • Temperature Range: 0°C to +50°C • Altitude up to 2000m • Maximum relative humidity 85% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C • POLLUTION DEGREE 2 in accordance with IEC664
Baseline Standards and Approvals	<p>47 CFR Ch. 1 (10-1-06 Edition) - FCC Part 15 - Radio Frequency Devices – Subpart B – Unintentional Radiators</p> <p>ICES-003 - Issue 4 February 2004 - Spectrum Management and Telecommunications Policy - Interference-Causing Equipment Standard - Digital Apparatus</p> <p>(UL Listed)</p>

Connection Diagram

