# MDS-LD200 Online Microwave Contact-Type Moisture Measuring Instrument

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## Product Introduction

The MDS-LD200 Online Microwave Contact-Type Moisture Measuring Instrument is an industrial online instrument that uses microwave technology for moisture detection. Designed for the continuous measurement of the internal core moisture and overall spatial moisture content of various materials, it can be installed in multiple process points such as belt conveyors, screw feeders, mixing devices, and silos. It enables fast, online, and dynamic real-time moisture detection with a response time of just 1 second.

Its core advantage lies in the contact-type measurement method. The microwaves can penetrate the material surface, reaching depths of 80–160 mm for measurement. The results are more representative of the material's true overall moisture content and are not affected by material color, particle size, or on-site dust and steam interference. The device features automatic temperature compensation to ensure measurement accuracy under varying working conditions. The main control unit supports a one-to-many design, allowing connection of up to 10 sensors for high system integration. With an IP67 high protection rating, it can adapt to harsh industrial environments.

This instrument is widely used in industries such as iron and steel, coal, tobacco, papermaking, wood, and food. It is suitable for granular, fibrous, powdery, and flaky materials, providing reliable assurance for precise moisture control and process optimization during production.

## Product Advantages

**Microwave Penetration for Core Moisture Measurement:**

Uses microwave technology to penetrate the material surface, measuring core moisture at depths of 80–160 mm. The results provide a more accurate representation of the overall moisture content.

**Strong Anti-Interference for Stable Results:**

The measurement process is unaffected by environmental factors such as changes in material color, particle size, or on-site dust and steam, ensuring stable and reliable readings.

**Online Real-Time, Fast Response:**

Supports online dynamic real-time detection with a response time of just 1 second. It quickly reflects moisture changes and can directly participate in process automation control.

**One Main Control for Multi-Point Measurement:**

The main control unit features a one-to-many design, allowing connection of up to 10 sensors for centralized control of multiple measurement points, offering high integration and cost-effectiveness.

**Robust and Durable, Adapts to Harsh Environments:**

With an IP67 high protection rating, it withstands demanding industrial conditions such as high temperature and high humidity (ambient humidity ≤95%), ensuring long-term stable operation.

## Technical Specifications

| Parameter | Technical Indicator |
|---|---|
| **Measurement Range** | 0–50% |
| **Accuracy** | ±0.1% (moisture content) |
| **Measurement Frequency** | 100–150MHz (Radiation energy: 13DB) |
| **Measurement Depth** | 80–160mm (depends on material/compaction level) |
| **Material Temperature** | 2–70°C |
| **Ambient Humidity** | ≤95% |
| **Protection Rating** | IP67 |
| **Response Time** | 1s |
| **Power Supply** | DC24V (18–36V) |
| **Power Consumption** | MAX 5W |
| **Isolation Mode** | Power, 485 communication, analog output, and housing are isolated from each other |
| **Analog Output** | DC4–20mA, MAX 500Ω |
| **Temperature Influence** | With temperature compensation (built-in PT100 temperature sensor) |
| **Transmission Distance** | MAX 500m |
| **Communication Address** | Selectable via rotary switch for addresses 0–9 |