HALOGEN MOISTURE ANALYZER

TMA SERIES

Touch Screen Moisture Analyzer

5-inch colour TFT · German HBM load cell · 450 W ring halogen heating



9

MODELS

50 / 100 / 120 g

0.001–0.005 g

READABILITY

A / B / C groups

50–180 °C

HEATING RANGE

450 W ring halogen

01 / OVERVIEW

Product overview

The TMA Series uses an IoT-enabled 5-inch colour TFT control system with an integrated high-definition touch screen. Every moisture analyzer in the series is fitted with a German HBM load cell — a branded sensor that ensures high accuracy and stability of the weighing results. The housing is precision-cast from environmentally friendly ABS material, and the interface switches between Chinese and English with a single tap. A high-efficiency die-cast aluminium alloy base makes the load-bearing foundation solid and rigid, while the whole instrument uses a stainless steel deck plate and stainless steel weighing pan. Resolution reaches up to 1.2 million counts, with a high-speed 24-bit AD converter for excellent immunity to interference, radiation and static electricity. Functions include a dual weighing readout mode, heating time setting, heating temperature setting, tare, automatic drying, timed drying, current record and history record, plus built-in storage of experimental weighing data. It is widely used to determine the moisture content of samples in tobacco, papermaking, tea, food, grain, chemical raw materials, pharmaceuticals, textiles and other industries.

02 / KEY BENEFITS

Feature highlights

Colour touch screen

A 5-inch colour TFT touch screen with a clear, intuitive interface and one-tap switching between Chinese and English.

German HBM load cell

Branded load cell with high accuracy and stability, 1.2 million counts of resolution and a high-speed 24-bit AD converter.

Ring halogen heating

A 450 W high-efficiency ring halogen lamp paired with a stainless steel heating chamber heats faster, more evenly and with lower power consumption than a conventional plastic-lid chamber. Samples are less likely to scorch, so the test results are more accurate. The temperature is adjustable from 50 to 180 °C.

Records & data output

Tare, automatic drying, timed drying, current record and history record, with built-in storage of experimental weighing data. A standard RS232 interface connects to a wide range of devices, and up to 160 sets of measurement data can be stored and recalled at any time.

Standard functions

- ✓ 5-inch colour TFT touch screen with one-tap Chinese / English switching
- ✓ Precision-cast ABS housing on a die-cast aluminium alloy base
- ✓ High-speed 24-bit AD converter, resistant to interference, radiation and static
- ✓ Tare, automatic drying, timed drying, current and history records
- ✓ German HBM load cell for high accuracy and long-term stability
- ✓ Stainless steel deck plate and pan, resolution up to 1.2 million counts
- ✓ Dual weighing readout, heating time and heating temperature setting
- ✓ Built-in storage of test data and RS232 interface for printer or PC

> **Loss-on-drying principle** — a halogen lamp heats the sample while the balance tracks weight loss in real time; moisture content is calculated automatically.

03 / HARDWARE

Instrument components

Numbered guide to the heating chamber, sample pan, control screen and rear connections.



04 / CONNECTIVITY

RS232 data interface

A standard RS232 interface connects the analyzer to a printer or a PC, so weighing and moisture results can be printed, exported and archived without transcription errors.

- ✓ Built-in storage for up to **160 sets of measurement data**
- ✓ Current record and history record, recallable at any time
- ✓ Compatible with a wide range of external devices
- ✓ Optional RS232-USB serial cable and micro printer



05 / MODEL SELECTION

Models & capacities

Nine models in three readability groups: A = 0.001 g, B = 0.002 g, C = 0.005 g.

Item	TMA-50A	TMA-100A	TMA-120A	TMA-50B	TMA-100B	TMA-120B	TMA-50C	TMA-100C	TMA-120C
Capacity	50 g	100 g	120 g	50 g	100 g	120 g	50 g	100 g	120 g
Readability	0.001 g			0.002 g			0.005 g		
Moisture readability	0.01 %			0.02 %			0.05 %		
Recommended sample	±0.5 (sample ≥ 2 g)								
Heating source	High-efficiency ring halogen lamp								
Unit	g								
Pan size	90 mm								
Measuring modes	Automatic mode, timed mode								
Communication	RS232								

Note: the catalogue grouped 0.002 g / 0.005 g in one merged column; here they are separated into the B and C groups. Full common specifications — display, heating time, temperature setting, power, dimensions and weights — are listed in the technical specifications table above.

- **A GROUP** 0.001 g / 0.01 % — highest resolution
- **B GROUP** 0.002 g / 0.02 % — balanced performance
- **C GROUP** 0.005 g / 0.05 % — economical choice

> Model codes: **TMA-**[capacity 50 / 100 / 120]-[group A / B / C]. All models share the same housing, heating system and interface.

06 / TECHNICAL DATA

Technical specifications

Capacity	50 g / 100 g / 120 g
Readability	0.001 g (A) · 0.002 g (B) · 0.005 g (C)
Moisture readability	0.01 % (A) · 0.02 % (B) · 0.05 % (C)
Recommended sample weight	±0.5 (sample ≥ 2 g)
Heating source	High-efficiency ring halogen lamp
Heating power	450 W ring halogen lamp
Unit	g
Pan size	90 mm
Measuring modes	Automatic mode, timed mode
Display	Moisture %, solids %, weight, time, temperature, weight-loss rate, moisture regain
Heating time	1–60 min in 30 s steps, 60–90 min in 1 min steps
Heating temperature setting	50–180 °C
Power supply	Adapter input: 100–240 V~ 200 mA, 50–60 Hz
Overall dimensions	200 × 360 × 180 mm
Communication interface	RS232
Data storage	Up to 160 sets of measurement data
Net weight	3 kg
Shipping weight	4.5 kg
Shipping dimensions	47 × 34 × 31 cm

07 / OPTIONS

Optional accessories



Micro printer · Weighing pan · Stainless steel weight set · RS232-USB serial cable

08 / APPLICATIONS

Typical applications

Moisture content determination across laboratory and production environments.

Tobacco	Papermaking	Tea	Food
Grain	Chemical raw materials	Pharmaceuticals	Textiles

09 / SUPPLY

OEM / ODM & service

Factory-direct

Standard models ship from our own factory, with calibration and inspection before dispatch.

Custom configuration

Capacity, voltage, branding and documentation can be specified for your market.

CONTACT

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Mon – Sat 09:00 – 18:00 (GMT+8) · Reply within one working day

Scan to chat on WhatsApp

Request a quotation — send us the model code, your sample type and destination country. A technical sales engineer will reply with a configuration and price within one working day.