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KAIWEETS KM602, KTA01

KAIWEETS Smart Multimeter KM602 and Non-Contact RPM Tachometer KTA01 User Manual

Comprehensive instructions for safe and effective use.

1. INTRODUCTION

This manual provides detailed instructions for the operation and maintenance of your KAIWEETS Smart Multimeter KM602 and KAIWEETS Non-Contact RPM Tachometer KTA01. Please read this manual thoroughly before using the devices to ensure safe and correct operation. Keep this manual for future reference.



Image 1.1: The KAIWEETS Smart Multimeter KM602 and Non-Contact RPM Tachometer KTA01, along with their respective accessories including test leads, charging cable, carrying case, and batteries.

2. SAFETY INFORMATION

Always adhere to the following safety precautions to prevent personal injury or damage to the devices.

- **General Safety:** Do not operate the devices if they appear damaged or if the casing is open. Ensure your hands are dry before handling electrical components.
- **Multimeter Safety:**
 - Do not apply voltage or current that exceeds the maximum rated values specified in the specifications section.
 - Always disconnect the test leads from the circuit before changing functions.
 - Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
 - Ensure the correct function and range are selected before making measurements.
- **Tachometer Safety:**
 - Do not stare directly into the laser beam. Avoid directing the laser at people or animals.
 - Use the device only as intended for RPM measurement.
 - Ensure the measurement area is clear of obstructions and moving parts are safely guarded.

3. PRODUCT OVERVIEW

3.1 KAIWEETS Smart Multimeter KM602

The KM602 is a smart digital multimeter designed for various electrical measurements. It features an automatic identification mode for common measurements and a manual mode for professional use.



Image 3.1: The KAIWEETS Smart Multimeter KM602 displaying its 'Auto Smart Mode' feature, which automatically recognizes and tests DC voltage, AC voltage, resistance, and continuity.

Key Features:

- **Smart Mode:** Automatically recognizes and tests DC/AC voltage, resistance, and continuity.
- **Manual Mode:** Allows selection of specific measurement functions.
- **Rechargeable Battery:** Built-in 1200mAh lithium battery.
- **Color Full-Screen Display:** Large, clear display for easy readings.

Rechargeable Battery

Built-in 1200mAh lithium battery for longer use and hassle-free charging

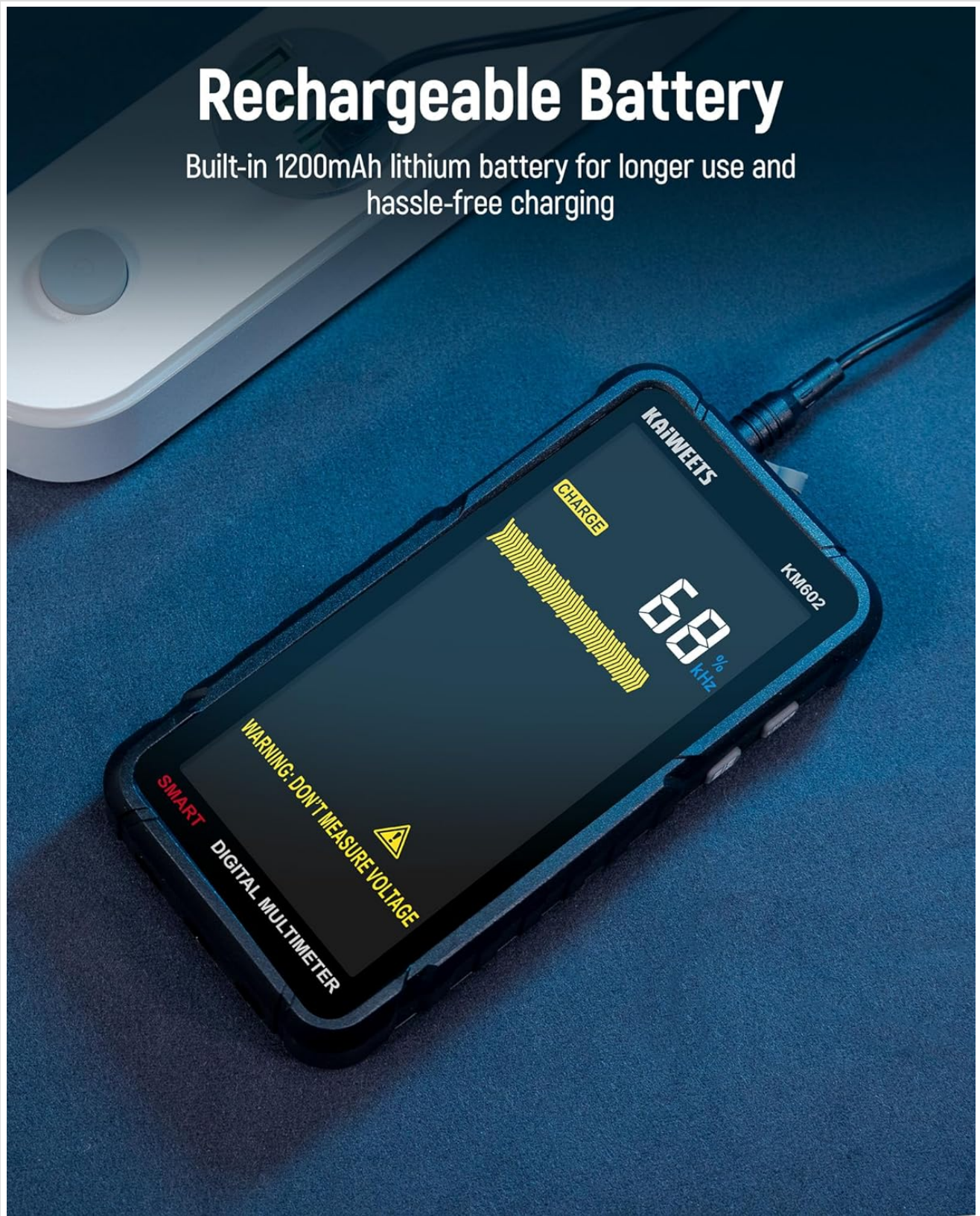


Image 3.2: The KAIWEETS Smart Multimeter KM602 connected via USB-C for charging its internal 1200mAh rechargeable lithium battery, indicating its charging status on the display.



Image 3.3: A close-up view of the KAIWEETS Smart Multimeter KM602's color full-screen display, showing clear and vibrant readings for various electrical parameters, highlighting its enhanced readability.

3.2 KAIWEETS Non-Contact RPM Tachometer KTA01

The KTA01 is a digital tachometer designed for non-contact measurement of rotational speed (RPM) and counting. It uses a laser to detect rotation from a reflective strip.

RPM AND COUNTING

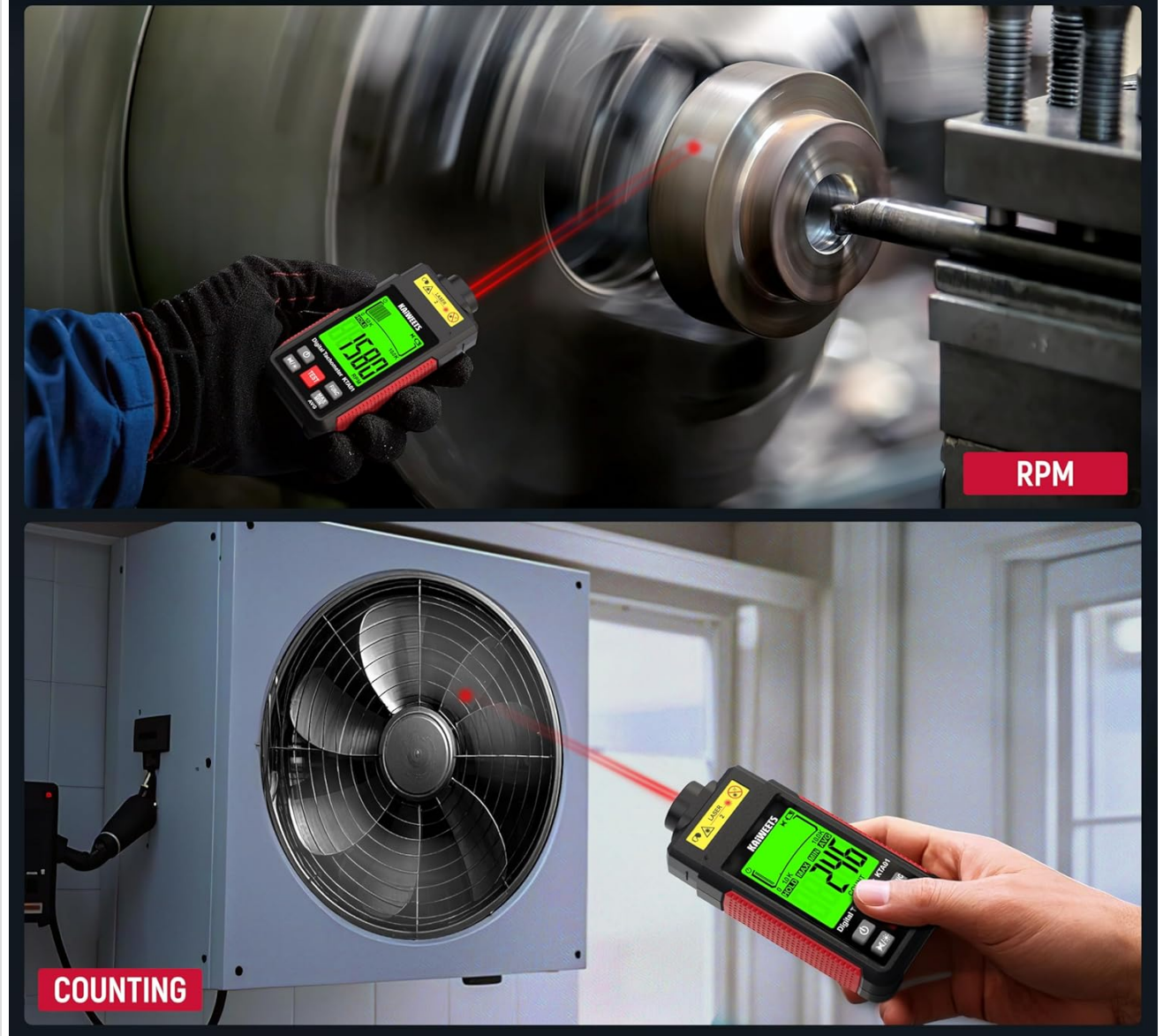


Image 3.4: The KAIWEETS Non-Contact RPM Tachometer KTA01 in use, demonstrating its capability to measure RPM on a rotating machine part and perform counting functions, indicated by the laser beam.

Key Features:

- **Non-Contact Measurement:** Safely measures RPM without physical contact.
- **Data Hold:** Freezes the current reading on the display.
- **Backlight:** Improves visibility in low-light conditions.
- **Max/Min/Avg:** Records maximum, minimum, and average readings.
- **Auto Off:** Conserves battery life.



Image 3.5: An illustration highlighting the key features of the KAIWEETS Non-Contact RPM Tachometer KTA01, including Data Hold, Backlight, Max/Min/Avg functions, Battery indicator, Auto off, and Sound on/off.

4. SETUP

4.1 KAIWEETS Smart Multimeter KM602

- **Charging:** Connect the provided USB-C cable to the multimeter and a standard USB power adapter (not included) to charge the internal battery. The display will indicate charging status.
- **Test Lead Connection:** Insert the red test lead into the 'INPUT' jack and the black test lead into the 'COM' jack for most measurements. For current measurements, refer to the specific instructions in the operating section.

4.2 KAIWEETS Non-Contact RPM Tachometer KTA01

- **Battery Installation:** Open the battery compartment on the back of the device and insert the required batteries (typically AAA, refer to specifications) ensuring correct polarity.
- **Reflective Strip Application:** For accurate RPM measurements, attach a small piece of the provided

reflective strip to the rotating object. Ensure the strip is clean and securely adhered.

5. OPERATING INSTRUCTIONS

5.1 KAIWEETS Smart Multimeter KM602

Press the power button to turn on the multimeter.

5.1.1 Smart Mode (Auto)

Upon power-on, the multimeter typically defaults to Smart Mode. In this mode, it automatically detects and measures:

- DC Voltage
- AC Voltage
- Resistance
- Continuity

Simply connect the test leads to the circuit or component, and the multimeter will display the appropriate measurement.

5.1.2 Manual Mode

Press the 'FUNC' button to cycle through different measurement functions if you need to select a specific mode not automatically detected by Smart Mode, or for specialized measurements.

5.1.3 Specific Measurements

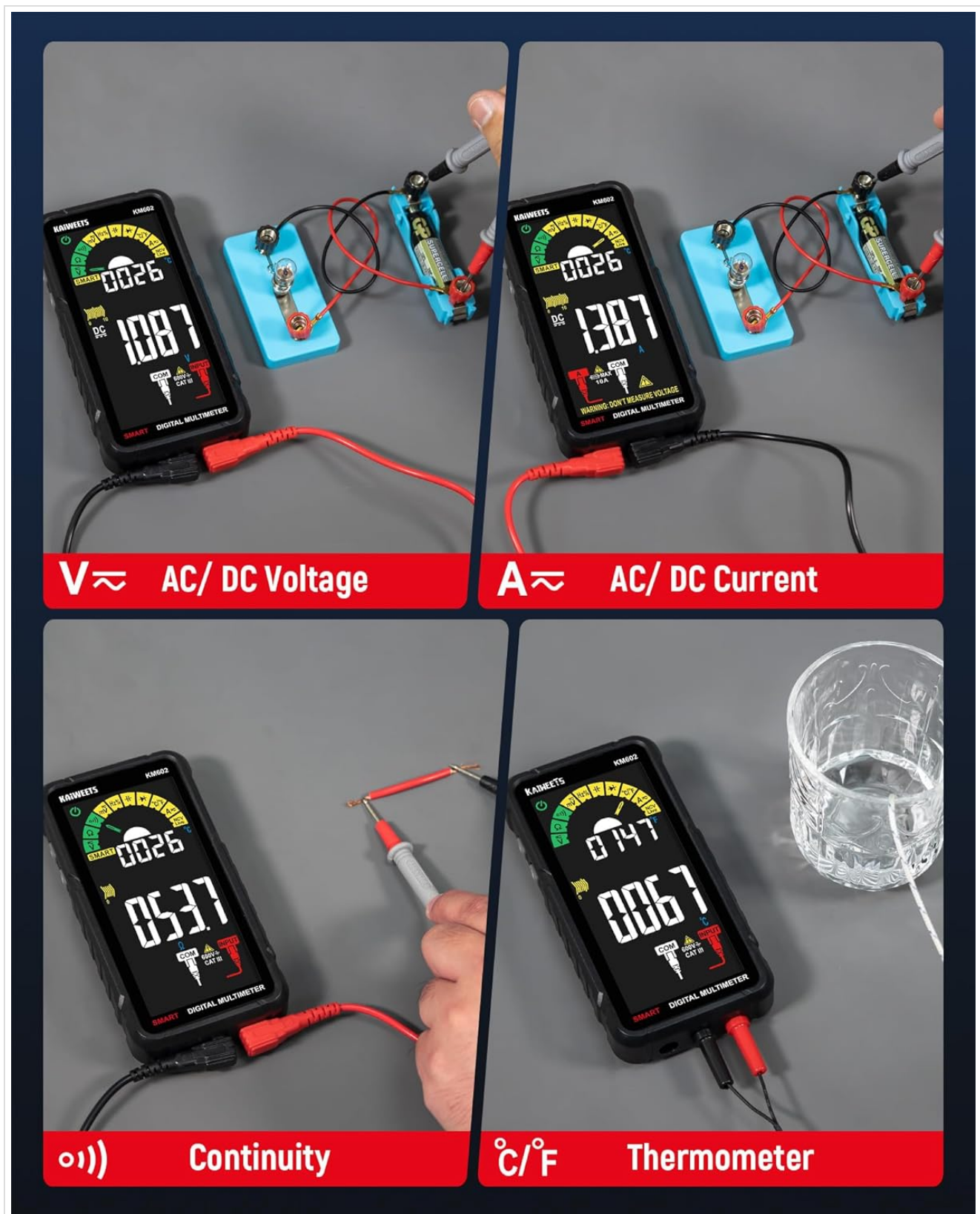


Image 5.1: The KAIWEETS Smart Multimeter KM602 demonstrating its versatility by performing four different measurements: AC/DC Voltage, AC/DC Current, Continuity, and Temperature (using a thermocouple).

- **Voltage (AC/DC):** Connect test leads in parallel with the circuit.
- **Current (AC/DC):** Connect test leads in series with the circuit. Ensure the correct input jack is used for current measurement (e.g., 10A or mA).
- **Resistance:** Connect test leads across the component when power is off.
- **Continuity:** Connect test leads across the circuit or component. An audible beep indicates continuity.
- **Temperature:** Use the provided thermocouple and select the temperature function.

5.2 KAIWEETS Non-Contact RPM Tachometer KTA01

Press the power button to turn on the tachometer.

5.2.1 RPM Measurement Procedure

1. **Apply Reflective Strip:** Tear off a small piece of reflective strip and stick it onto the object to be measured.
2. **Aim Laser:** Turn on the tester, select the mode (if applicable), and aim the laser at the reflective strip area from an appropriate distance.
3. **Start Measurement:** Press the 'TEST' button to initiate the measurement. The RPM reading will be displayed.



Image 5.2: A step-by-step guide illustrating the use of the KAIWEETS Non-Contact RPM Tachometer KTA01: 1) applying a reflective strip, 2) aiming the laser at the strip, and 3) pressing the test button to measure RPM.

5.2.2 Functions

- **HOLD:** Press to freeze the current reading. Press again to release.
- **MAX/MIN/AVG:** Press the 'MAX MIN AVG' button to cycle through maximum, minimum, and average recorded values during a measurement session.
- **Backlight:** Use the backlight button to illuminate the display in dark environments.

- **Sound On/Off:** Toggle audible alerts.

5.2.3 Applications

The KTA01 tachometer is suitable for a wide range of applications:

- Manufacturing processes
- Chemical industry equipment
- Electric motor diagnostics
- Engine testing and maintenance



Image 5.3: The KAIWEETS Non-Contact RPM Tachometer KTA01 shown in various industrial and automotive settings, illustrating its wide application in manufacturing, chemical industry, electric motor maintenance, and engine diagnostics.

6. MAINTENANCE

- **Cleaning:** Wipe the device casing with a damp cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the devices in a cool, dry place away from direct sunlight and extreme temperatures. If storing

for extended periods, remove batteries from the tachometer.

- **Battery Care (KM602):** Recharge the multimeter regularly to maintain battery health. Avoid fully discharging the battery frequently.
- **Calibration:** For professional applications requiring high accuracy, periodic calibration by a qualified service center is recommended.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Multimeter does not power on.	Low battery (KM602).	Charge the multimeter battery.
Tachometer does not power on.	Dead or incorrectly installed batteries.	Replace batteries or check polarity.
Multimeter shows 'OL' (Overload).	Measurement exceeds selected range or device capability.	Switch to a higher range (if in manual mode) or ensure measurement is within specifications.
Inaccurate Tachometer readings.	Reflective strip not properly applied or dirty. Laser not aimed correctly.	Ensure reflective strip is clean and securely attached. Re-aim the laser directly at the strip.
No continuity beep on multimeter.	Open circuit. Leads not making good contact.	Check the circuit for breaks. Ensure leads are firmly connected.

8. SPECIFICATIONS

8.1 KAIWEETS Smart Multimeter KM602

Parameter	Value
DC Voltage Range	Up to 600V
AC Voltage Range	Up to 600V
DC Current Range	Up to 10A
AC Current Range	Up to 10A
Resistance Range	Up to 60MΩ
Capacitance Range	Up to 100mF
Frequency Range	Up to 10MHz
Temperature Range	-20°C to 1000°C (-4°F to 1832°F)
Display	Color LCD
Battery	1200mAh Rechargeable Lithium
Safety Rating	CAT III 600V

8.2 KAIWEETS Non-Contact RPM Tachometer KTA01

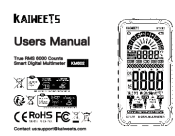
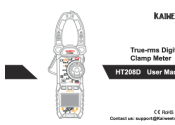


Parameter	Value
RPM Measurement Range	2.5 to 99,999 RPM
Counting Range	0 to 99,999
Measurement Distance	50mm to 500mm (2in to 20in)
Display	LCD with Backlight
Laser Class	Class 2
Power Supply	AAA Batteries (not included)


9. WARRANTY AND SUPPORT

KAIWEETS products are designed for reliability and performance. For warranty information and technical support, please refer to the warranty card included with your product or visit the official KAIWEETS website. Do not attempt to repair the devices yourself, as this may void the warranty and pose safety risks.

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Related Documents - KM602, KTA01

	<p>KAIWEETS KM602 Smart Digital Multimeter User Manual</p> <p>User manual for the KAIWEETS KM602 Smart Digital Multimeter, a True RMS 6000 Counts device. Learn about its features, safety specifications, operating instructions, and measurement functions.</p>
	<p>KAIWEETS HT208D True-rms Digital Clamp Meter User Manual</p> <p>Comprehensive user manual for the KAIWEETS HT208D True-rms Digital Clamp Meter, covering features, safety, operation, and specifications for AC/DC current, voltage, frequency, resistance, and more.</p>
	<p>KAIWEETS HT206D Digital Clamp Meter User Manual and Specifications</p> <p>Comprehensive user manual for the KAIWEETS HT206D digital clamp meter. Includes detailed instructions on operation, safety precautions, features, specifications, and maintenance for this T-RMS auto-ranging AC/DC clamp meter.</p>
	<p>KAIWEETS HT118A True-RMS Digital Multimeter: User Manual and Specifications</p> <p>Detailed user manual for the KAIWEETS HT118A True-RMS Digital Multimeter. Includes safety instructions, multimeter features, measurement operations, general and accuracy specifications, and maintenance guidelines.</p>

<div data-bbox="124 107 300 425"><p>KAIWEETS TRUE RMS 6000 COUNTS DIGITAL MULTIMETER</p><p>Contact us: support@kaiweets.com</p></div>	<div data-bbox="339 190 1420 340"><p>KAIWEETS HT112B Digital Multimeter User Manual</p><p>User manual for the KAIWEETS HT112B True RMS 6000 Counts Digital Multimeter, detailing safety instructions, operation procedures, measurement functions, specifications, and warranty information.</p></div>
<div data-bbox="135 504 282 913"><p>Operation Manual</p><p>KAIWEETS</p><p>ST120 Smart Pen-type Multimeter</p><p>Please read this manual thoroughly before use and keep it for later reference.</p><p>After-sale: support@kaiweets.com</p><div data-bbox="135 705 282 779"><p>UK REP</p><p>UK Authorized Representative</p><p>Company name: VIC Consulting Limited</p><p>Address: 220-1st Consulting Limited Office 101, Central Plaza, London Road, Southampton, Hampshire, Bournemouth, Dorset, T98 8JL</p><p>Tel: +44 (0)1483 77888</p><p>Email: info@vicuk.com</p></div><p>Safety Statement</p><p>⚠ Warning: Operation that may cause danger to users.</p><p>Safety Instructions</p><p>The meter conforms to IEC61010-1 CAT.III 600V overvoltage safety standard and pollution level 2.</p><p>1</p></div>	<div data-bbox="339 660 1425 810"><p>KAIWEETS ST120 Smart Pen-type Multimeter Operation Manual</p><p>This manual provides detailed instructions for operating the KAIWEETS ST120 Smart Pen-type Multimeter, including safety precautions, product overview, measurement functions, technical specifications, and maintenance procedures.</p></div>