CEMELI ZX-5DK

CEMELI ZX-5DK Electronic Digital Display Counter User Manual

Model: ZX-5DK

Brand: CEMELI

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the CEMELI ZX-5DK Electronic Digital Display Counter. This device is designed for industrial applications requiring precise counting, utilizing a magnetic sensor for automatic induction. Please read this manual thoroughly before use to ensure proper functionality and safety.

2. Package Contents

Verify that all items listed below are present in your package:

- One (1) Electronic Digital Display Counter (ZX-5DK)
- One (1) Strong Magnet
- One (1) Magnetron Induction Switch (Proximity Sensor)
- One (1) Mounting Bracket

3. Product Overview

The CEMELI ZX-5DK is a compact and reliable digital counter. It features a clear display, two control buttons, and connects to an external magnetic proximity sensor for automatic counting.

Figure 3.1: Main components of the CEMELI ZX-5DK counter system, including the display unit, magnetic sensor, and mounting bracket.

Figure 3.2: Front view of the ZX-5DK counter, showing the digital display and the "POWER" and "RESET" buttons.

4. Specifications

The following are the technical specifications for the CEMELI ZX-5DK Electronic Digital Display Counter:

Parameter	Value
Power Supply	1.5V AA No.5 battery
Counting Range	00000 - 99999 cycles
Maximum Counting Frequency	20 Hz
Minimum Counting Pulse Width	2 ms
Magnet Induction Approach Distance	10 - 15 mm
Magnet Induction Distance (Max)	35 mm
Reset Mode	Panel button (R) / External terminal
Minimum Clear Pulse Width	1 second
Ambient Temperature	-5°C to 40°C
Item Weight	1.76 ounces (approx. 50g)
Package Dimensions	1.18 x 0.79 x 0.39 inches

5. Setup

5.1. Battery Installation

1. Locate the battery compartment on the rear of the counter unit.
2. Slide open the battery compartment cover.
3. Insert one (1) 1.5V AA (No.5) battery, ensuring correct polarity (+/-).
4. Close the battery compartment cover securely.

Figure 5.1: Battery compartment with an AA battery installed. Ensure correct polarity.

5.2. Sensor Connection

Connect the magnetron induction switch (proximity sensor) to the counter unit:

1. Identify the sensor cable with its bare wire ends.
2. Locate the terminal block on the rear of the counter unit, next to the battery compartment.
3. Loosen the screws on the terminal block.
4. Insert the sensor wires into the appropriate terminals. Refer to the wiring diagram if available (not provided in source, so general instruction). Typically, red is positive, blue is negative, and black is signal.
5. Tighten the screws to secure the wires.

Figure 5.2: Sensor wires connected to the terminal block on the back of the counter.

5.3. Mounting the Counter and Sensor

Use the provided mounting bracket to secure the counter and position the magnetic sensor:

1. Mount the counter unit in a suitable location using screws through the mounting holes on the bracket.
2. Position the magnetic sensor and the strong magnet such that the magnet passes within the specified induction approach distance (10-15mm) of the sensor for each count.
3. Ensure the magnet and sensor are aligned correctly for reliable detection. The maximum induction distance is 35mm, but optimal performance is within 10-15mm.

Figure 5.3: The magnetic sensor, magnet, and mounting bracket, ready for installation.

6. Operating Instructions

6.1. Powering On/Off

Press the "POWER" button (left button) to turn the counter on or off. The display will illuminate when powered on.

6.2. Automatic Counting

Once powered on and the sensor is correctly installed, the counter will automatically increment by one each time the strong magnet passes within the induction range of the magnetic sensor. Ensure the magnet passes the sensor cleanly to avoid missed counts or double counts.

6.3. Resetting the Counter

To reset the displayed count to zero:

- **Panel Reset:** Press and hold the "RESET" button (right button) on the front panel for approximately 1 second. The display will clear to "00000".
- **External Terminal Reset:** If an external reset switch is connected to the designated terminals, activate the external switch for at least 1 second to clear the count.

7. Maintenance

7.1. Battery Replacement

When the display becomes dim or the counter stops responding, it is time to replace the AA battery. Follow the steps in Section 5.1 for battery installation.

7.2. Cleaning

Wipe the counter unit and sensor with a soft, dry cloth. Do not use abrasive cleaners or solvents, as these may damage the plastic housing or electronic components.

7.3. Environmental Conditions

Operate the counter within the specified ambient temperature range of -5°C to 40°C. Avoid exposing the unit to excessive moisture, dust, or direct sunlight for prolonged periods.

8. Troubleshooting

- **Counter not displaying:**
  - Check if the battery is installed correctly and has sufficient charge. Replace if necessary.
  - Ensure the "POWER" button has been pressed to turn the unit on.
- **Counter not incrementing:**
  - Verify the magnetic sensor is correctly connected to the terminal block.
  - Check the alignment and distance between the magnet and the sensor. The magnet must pass within 10-15mm of the sensor.
  - Ensure the magnet is strong enough and the sensor is functioning.
- **Inaccurate counting:**
  - Adjust the position of the magnet and sensor to ensure a clean, single detection per event.
  - Ensure the counting frequency does not exceed the maximum of 20 Hz.
  - Check for external magnetic interference that might affect the sensor.
- **Counter not resetting:**
  - Ensure the "RESET" button is pressed and held for at least 1 second.

- If using an external reset, verify its connection and functionality.

9. Warranty and Support

CEMELI products are manufactured to high-quality standards. For warranty information or technical support, please refer to the retailer or contact CEMELI customer service through their official channels. Keep your purchase receipt as proof of purchase.

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