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mPower Electronics UNI 321 Single Gas Detector

mPower Electronics UNI 321 Single Gas Detector User Guide

Contents

mPower Electronics UNI 321 Single Gas Detector

Specifications

- Model: UNI 321
- Battery: Lithium mPower M500-0001-000 [1.17.02.0002] (3.6 V, 2700 mAh, AA size)
- Manufacturer: mPower Electronics Inc.
- Address: 3046 Scott Blvd. Santa Clara, CA 95054
- Website: **www.mpowerinc.com**
- Email: **info@mpowerinc.com**
- PN: M001-4030-000
- Version: v1.33

Product Usage Instructions

Read Before Operating
The User's Guide must be carefully read by all individuals who will be using, maintaining, or servicing this product. Follow the manufacturer's instructions for proper use, maintenance, and servicing to ensure optimal performance.

User Interface
The UNI 321's user interface includes an LCD display, LEDs, alarm buzzer, two keys (Left Key for Confirm/Number increasing and Right Key for Power/Cursor moving), an alligator clip, and a sensor. The display shows gas name, remaining time unit, gas concentration unit, and more.

Turning the Unit On
To turn on the unit, press and hold the Right Key for 3 seconds until the LCD displays on, the buzzer beeps, and the green LED lights up. The unit enters a warm-up and self-test sequence before entering normal mode. Once on, it runs continuously until the end of its life.

Normal Mode
In normal mode, the unit monitors gas concentration. The LCD displays remaining life time in the absence of gas alarms. In case of an alarm, it indicates whether it's a Low or High alarm.

Enter Config Mode

To enter config mode, press and hold the Left Key and Right Key together for 3 seconds. Enter the password using the keys and navigate using the cursor. Once done, exit password input to enter Config Mode.

Exit Config Mode
To exit Config Mode and return to normal mode, press Left when prompted with Exit? on the LCD.

Zero (Fresh Air) Calibration
To perform zero calibration, initiate it when the LCD displays AiR by pressing the Left Key. The result of zero calibration (pass or fail) will be displayed after a 15-second countdown.

Bump Test
A recorded Bump Test requires an MP300 CaliCase with mPower Suite software. For manual bump checks, apply test gas and ensure alarms are triggered as a verification method.

FAQ
Q: How can I perform a manual bump check?
A: To perform a manual bump check, apply test gas to the sensor and verify that the alarms are triggered as part of the verification process.

Warning

- Never operate the monitor when the cover is removed.
- Remove the monitor cover and battery only in area known as non-hazardous.
- Use only mPower's lithium battery part number M500-0001-000 [1.17.02.0002] (3.6 V, 2700 mAh, AA size).
- This instrument has not been tested in an explosive gas/air atmosphere having oxygen concentration greater than 21%.
- Substitution of components will impair suitability for intrinsic safety and void warranty.
- It is recommended to bump test with a known concentration gas to confirm the instrument is functioning properly before use.
- Before use, ensure that the colorless ESD layer on thedisplay is not damaged or peeling. (The blue protective film may be removed.)

Read Before Operating

The User's Guide must be carefully read by all individuals who have or will have the responsibility of using, maintaining, or servicing this product.
The product will perform as designed only if it is used, maintained, and serviced in accordance with the manufacturer's instructions.
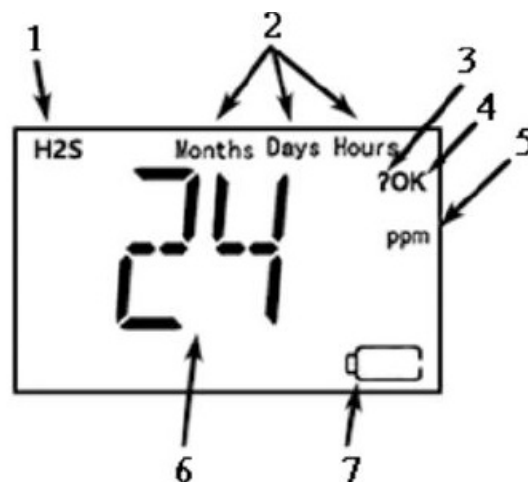
User Interface
The UNI 321's user interface consists of the LCD display, LEDs, an alarm buzzer, two keys: Left Key [Confirm/Number increasing] and Right Key [Power/Cursor moving], an alligator clip, and a sensor.

Display

1. Gas name, includes: CO, H2S, O2
2. Remaining time unit: Months, Days or Hours
3. Question mark
4. Unit status indicator "OK"
5. Gas concentration unit, for alarm setting display
6. Remaining operation time
7. Low Battery

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Turning the Unit On

Press and hold the Right Key for 3 seconds, until unit LCD displays "on", the buzzer beeps, and the green LED is on. After power on, the unit enters a warm up and self-test sequence, and then enters normal mode. Once the unit is turned on, it runs continuously until the remaining life time ends, and cannot be turned off.

• **Normal Mode**

In normal mode, the unit starts monitoring gas concentration. The LCD displays the remaining life time when there's no gas alarm. In case of a gas alarm, the alarm type is displayed: Low or High alarm.

• **Enter Config Mode**

Press and hold the Left Key and the Right Key together for 3 seconds, the unit enters config mode. The LCD displays "PWD" to prompt password entry. To input a password, use the Left Key to increase the number, and the Right Key to move the cursor. After all four digits are entered, the cursor will move to "OK". Use the Left Key to exit password input and enter Config Mode.

- **Exit Config Mode**

  When the LCD displays "Exit?", press Left to exit from Config Mode back to normal mode.

- **Zero (Fresh Air) Calibration**

  Zero calibration sets the base line for the sensor and is done in fresh air or other clean air source. When the LCD displays "AiR", press the Left Key to start zero calibration. When the 15-second count-down is finished, the zero calibration result "pass" or "fail" will be displayed.

  To abort zero calibration during the 15-second count-down, press the Right Key and the display acknowledges with "AbRt".

- **Bump Test**

  A recorded Bump Test can only be done using an MP300 CaliCase with mPower Suite software. Please refer to the software user guide. A manual bump check can be performed by applying test gas and verifying that the alarms are triggered.

Daily Self-Test

1. Press the Left Key
2. Confirm that the following tests are performed:
   - LED flashes, Buzzer beeps, Vibrator is on
   - All LCD segments are shown
   - High and Low alarm settings are shown
   - Peak reading is shown if it occurred during the last 24 hours
   - Minimum Oxygen reading is shown if it occurred during the last 24 hours
   - Display returns to normal mode

Maintenance and Service

The UNI 321 is maintenance-free.

Safety Certifications

UL/cUL:

- Class I, Group A,B,C,D
- Class II, Group E,F,G
- Class III; T4, -20°C ≤ Tamb ≤ 50°C
- IECEx: Ex ia IIC T4
- ATEX: II 1G Ex ia IIC T4

UNI 321 Factory Calibration Certificate
The instrument was factory inspected, tested and calibrated in accordance with the conditions and requirements of our registered Quality System, Operating Standards and Sales Agreements.

End of Life Alarm

When the last hour of operating life is reached, the unit displays "EOL" and beeps once per minute. The unit can be shut off by pressing the Left key or by just waiting until the hour has passed.
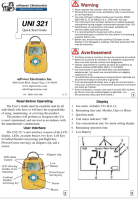
Proper Product Disposal at End of Life

The Waste Electrical and Electronic Equipment (WEEE) directive (2002/96/EC) is intended to promote recycling of electrical and electronic equipment and their components at the end of life. This symbol (crossed-out wheeled bin) indicates separate collection of waste electrical and electronic equipment in the EU countries. This product may contain one or more nickel-metal hydride (NiMH), lithium-ion, or alkaline batteries. Specific battery information is given in this user guide. Batteries must be recycled or disposed of properly. At the end of its life, this product must undergo separate collection and recycling from general or household waste. Please use the return and collection system available in your country for the disposal of this product.

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Documents / Resources

mPower Electronics UNI 321 Single Gas Detector [pdf] User Guide
M500-0001-000, 1.17.02.0002, UNI 321 Single Gas Detector, UNI 321, Single Gas Detector, Gas Detector, Detector

References

- **User Manual**