mPower Electronics
Making Powerful Senses

UNI321 RT

Quick Start Guide

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PN: M001-4033-000 v1.1

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 the display is not damaged or peeling. (The blue protective film may be removed.)

Avertissement

- N'utilisez jamais le moniteur lorsque le couvercle est enlevé.
- Retirer le couvercle du moniteur et la batterie uniquement dans une zone connue comme non dangereuse.
- Utilisez uniquement le numéro de pièce de la batterie au lithium mPower M500-0001-000 [1.17.02.0002].
- Cet instrument n'a pas été testé dans une atmosphère explosive gaz / air ayant une concentration en oxygène supérieure à 21%.
- La substitution de composants compromettra l'aptitude à la sécurité intrinsèque et annulera la garantie.
- Il est recommandé de tester avec un gaz de concentration c onnu pour confirmer que l'instrument fonctionne correctem ent avant de l'utiliser.
- Avant l'utilisation, assurez-vous que la couche ESD incolore de l'écran n'est pas endommagée ou épluchée. (Le film protecteur bleu peut être enlevé.)

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

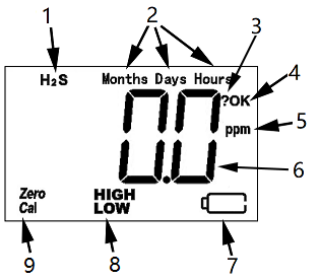
The UNI321 RT user interface consists of the LCD display, LEDs, an alarm buzzer, two keys: Left Key [Confirm/Number increasing] and Right Key [Power/Cursor moving], an alligator clip, and a sensor.

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.

Display

1. Gas name, includes: CO, H_2S, O_2
2. Remaining time unit: Months, Days or Hours
3. Question mark
4. Unit status indicator "OK"
5. Gas concentration unit
6. Gas reading / Remaining operation time
7. Low battery indicator
8. Alarm type indicator
9. Calibration indicator



Normal Mode

In normal mode, the unit displays real time readings. When the remaining life time is less than 90 days, the LCD switches to show the remaining time. In case of a gas alarm, the alarm type is displayed: Low or High alarm.

The user can check the PEAK value for toxic gas sensors (or PEAK/MIN values for O_2) and the event logs by pressing the Right key.

Daily Self-Test

Press the Left Key once to trigger the red Alarm LEDs for the LCD backlight. Then press the Left Key again while Alarm LEDs are on to do Daily Self-Test.

Confirm that the following tests are performed:

a) LED flashes, Buzzer beeps, Vibrator is on

b) All LCD segments are shown

c) Remain life time is shown

c) High and Low alarm settings are shown

d) Days to Calibration over Due is shown

f) Days to Bump over Due is shown

g) Display returns to the normal mode

Bump Test

A recorded Bump Test can only be done using MP100T docking box or an MP300 CaliCase with mPower Suite software. Please refer to the software user guide.

Enter Configuration Mode

Press and hold the Left Key and the Right Key together for 3 seconds to enter 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.

The default password is 0000, so if this is unchanged, simply press the Right Key 4 times and then the Left Key to enter Config Mode.

Exit Configuration Mode

Press the Right Key to go through the menu items until the LCD displays "Exit?", then press the Left Key to exit back to Normal Mode.

Zero (Fresh Air) Calibration

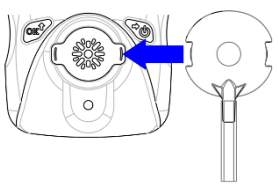
Zero calibration sets the base line for the sensor and is done in fresh air or other clean air source. When the LCD displays "AiR", press the Left Key to start zero calibration. When the 15-second count-down is finished, the zero calibration result "pass" or "fail" will be displayed.

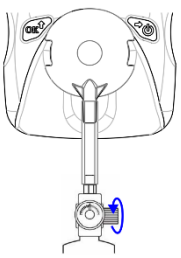
To abort zero calibration during the 15-second count-down, press the Right Key and the display acknowledges with "AbRt".

Span Calibration

Span calibration uses a known concentration gas to determine the response of the sensor to the gas.

1. Attach the Calibration Adapter over the inlet port on the front of unit by pressing it into place. Use a





fixed-flow regulator with a flowrate of about 0.3 to 0.5 LPM. Higher flowrates can be used if necessary, but not lower.

Span Calibration (continued)

2. Enter Config Mode and scroll to "SPAN?"
3. Start the gas flow, and press the Left key to start the calibration countdown. The default count time is 60 seconds.
4. When finished, a "pass" or "fail" result will be displayed. Turn off the gas supply, remove the calibration adapter, and exit to Normal Mode.
5. To abort at any time during the count-down, press the Right Key and "AbRT" is displayed.

Hibernation Mode*

Once the unit is turned on, it runs continuously until the remaining life time ends. To save battery power when the unit is not used, it can be put into Hibernation Mode using the docking box by pressing the Bump key for 5 seconds. To exit from Hibernation Mode, press and hold the Right Key on the unit for 3 seconds to wake it up again.

*Hibernation is for UNI 321 RT models MP101 and MP102 only.

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.

Maintenance and Service

The UNI 321 RT 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 ≤ T_{amb} ≤ 50°C

IECEx: Ex ia IIC T4

ATEX: II 1G Ex ia IIC T4 (pending)

Year of Manufacture

The year of manufacture can be identified by the fifth and sixth digits of the instrument serial number. For example, 16 indicates that the unit was made in 2016.

Proper Product Disposal at The 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.