



Manuel & Operating Instructions Sensor Models M1015 – Pro + Sensors

INTENDED USE OF THE M1015 SENSOR IS TO MEASURE THE AMOUNT OF LIQUID PROPANE (AND OTHER LIQUIDS) INSIDE A PROPANE TANK MEETING THE SPECIFATIONS BELOW, UNDER THE CONDITIONS LISTED BELOW.

THIS DEVICE IS INTENDED FOR OUTDOOR USE ONLY.

SPECIFICATIONS	
MEASUREMENT METHOD	Ultrasonic
FLUID	Propane
TANK TYPES	Steel Tanks Note: Also works with aluminum tanks with alternate mounting. Not intended for use on composite cylinders.
TANK SIZES	Vertical DOT Cylinders of 20 -100 lb (5 - 25 gal) and vertical tanks up to 11' tall. Horizontal tanks up to 11' diameter
Envelope Dimensions	196 x 106 x 15 mm (7.7 x 4.2 x 0.59 in)
Mounting location	Tank Bottom
Suitable for these locations	CLASS I, DIVISION 1, GROUP D, T4 CLASS I, ZONE 0, AEx ia IIA, T4, Ga Ex ia IIA, T4, Ga IP 54 Canada cert number: ETL21CA104765039X
OPERATING TEMPERATURE RANGE	-40° TO 55°C
TEMPERATURE CODE	T4
BATTERY	2 AAA (Energizer Ultimate Lithium only)
HUMIDITY RANGE	0 - 100%
MAX ALTITUDE	4000m
AMBIENT CONDITIONS FOR TESTING	23°C, 14.7 PSIA

MOPEKA PRODUCTS LLC

MAILING ADDRESS: 1223 Industrial St, Suite A, New Braunfels, TX 78130

www.mopeka.com

support@mopeka.com



WARNING

USE OF THIS DEVICE IN A MANNER OTHER THAN STATED IN THIS MANUAL, MAY RESULT IN IMPAIRMENT OF THE DESIGNED SAFETY PROTECTION AND THUS AN UNSAFE CONDITION.

WARNING

EXPLOSION HAZARD-BATTERIES MUST ONLY BE CHANGED IN AN AREA FREE OF IGNITIBLE CONCENTRATIONS.

WARNING

TO REDUCE THE RISK OF EXPLOSION DO NOT MIX OLD BATTERIES WITH USED BATTERIES, OR MIX BATTERIES FROM OTHER MANUFACTURERS.

WARNING

ONLY USE BATTER MANUFACTURER: ENERGIZER, PN L92 (ULTIMATE LITHIUM)

WARNING

THIS DEVICE IS NOT TO BE REPAIRED OR OTHERWISE MODIFIED.

WARNING

POTENTIAL ELECTROSTATIC CHARGING HAZARD

ATTENTION

L'UTILISATION DE CET APPAREIL D'UNE AUTRE MANIÈRE QUE CELLE MENTIONNÉE DANS CE MANUEL PEUT ENTRAÎNER UNE DÉTÉRIORATION DE LA PROTECTION DE SÉCURITÉ CONÇUE ET AINSI UNE CONDITION DANGEREUSE.

ATTENTION

LES BATTERIES À RISQUE D'EXPLOSION DOIVENT ÊTRE CHANGÉES UNIQUEMENT DANS UN ENDROIT EXEMPT DE CONCENTRATIONS INFLAMMABLES.

ATTENTION

POUR RÉDUIRE LE RISQUE D'EXPLOSION, NE MÉLANGEZ PAS DE VIEILLES BATTERIES AVEC DES BATTERIES USÉES, OU MÉLANGEZ DES BATTERIES D'AUTRES FABRICANTS.

ATTENTION

UTILISER UNIQUEMENT LE FABRICANT DE LA PÂTE : ENERGIZER, PN L92 (ULTIMATE LITHIUM)

ATTENTION

CET APPAREIL NE DOIT PAS ÊTRE RÉPARÉ OU MODIFIÉ AUTREMENT.

ATTENTION

RISQUE DE CHARGE ÉLECTROSTATIQUE POTENTIEL



FCC Statement

This equipment has been tested and found to comply with the limits for a [Class B](#) digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Any changes or modifications not expressly approved by [Mopeka Products, LLC](#) for compliance could void the user's authority to operate this equipment.

RF Exposure

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least [20 cm](#) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.”



General Instructions & Warnings

Only install this device as described below. No field assembly is required. The sync process to the app on your smart device, as described below, should occur in an area clearly out of any explosive atmosphere.

Once device is synced to the smart device/app, the device is “in service” and operating normally. Device will then operate continually until battery is exhausted. There is no “Power Off” mode from that point forward. Once in service, the device may then be moved, repositioned, or removed from the tank as needed, without any special instruction or changes to the device.

This equipment is not intended for repair or maintenance, other than changing batteries.

Any modification of the device may result in an unsafe condition.

Do not use device for any other application, other environment, or in any other manner than as stated in this manual. Any such misuse may result in an unsafe condition.



Mopeka Pro + Instructions (APP USER/HOMEOWNER)

Startup:

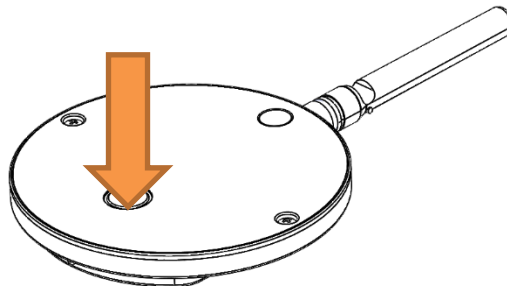
1. Remove 2 screws and lid.
2. Install 2 AAA batteries. Two AAA Energizer Ultimate Lithium batteries are required. Note: Battery orientation is shown in the bottom of the sensor under each battery.

Cellular:

3. Sensor will beep 2x when batteries are inserted. Wait for 3 beeps, to indicate successful cellular/cloud connection. First start up may take longer to achieve 3 beeps because of initial cellular provisioning.
4. Note: Any time button is pressed, data will also be uploaded to the cloud. So, for example, after pressing the button to sync the sensor to the app, you will hear 3 beeps after data is uploaded to the cloud.

BLE & Cellular:

5. Reinstall lid and screws. Torque = 9 in lbs.
6. Open Mopeka app.
7. Press button for 2 seconds to sync sensor to app.
8. In the app, go to sensor page; click on settings icon; and enter appropriate tank size. Other settings may be adjusted as desired.
9. Be sure to create a user login (person icon in upper left corner of main app screen) to enable all features of the app such as remote checking tank level.



Installation:

10. Prior to installation, install sonic grease on center pad as shown.
11. Push and hold sync button (3 seconds) until beeping starts.
12. The beeping is an indicator of the correct installation position and ultrasonic function.
13. Note: LED light will flash simultaneously with beeper, as visual indicator if background noise makes hearing beeper difficult.
14. Beeping will be rapid when button is first pressed.
15. Install sensor on tank bottom. See installation tips below.



16. As sensor begins to read tank level, beeping will slow indicating good quality readings.
17. Wait for 10-20 seconds to evaluate beeping (and thus installation position.)
18. If beeping stops, reading quality is adequate and installation is complete.
19. If beeping has not stopped, reposition sensor and reevaluate beeping.
20. Note that instead of using beeper, the Mopeka Tank Check app may be used to evaluate tank level and reading quality in further detail, including a bubble leveling tool that can help ensure proper, horizontal position of sensor.



Mopeka Pro + Instructions – FOR INSTALLER USING MOPEKA MONITORING SERVICE

Startup:

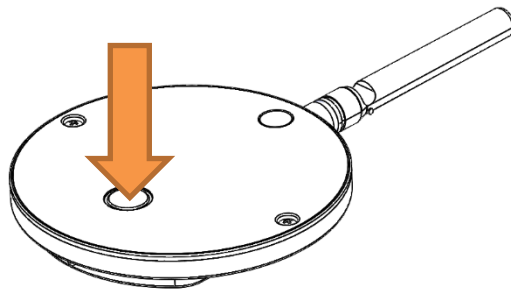
1. Remove 2 screws and lid.
2. Install 2 AAA batteries. 2, AAA Energizer Ultimate Lithium batteries are required. Note: Battery orientation is shown in the bottom of the sensor under each battery.

Cellular:

3. Sensor will beep 2x when batteries are inserted. Wait for 3 beeps, to indicate successful cellular/cloud connection. First start up may take longer to achieve 3 beeps because of initial cellular provisioning.
4. Note: Any time button is pressed, data will also be uploaded to the cloud. So, for example, after pressing the button to sync the sensor to the app, you will hear 3 beeps after data is uploaded to the cloud.
5. Reinstall lid and screws. Torque = 9 in lbs.
6. Scan QR code on sensor. The automated link in the QR code will open the Mopeka cloud to enter all the relevant information required, such as customer name, tank size, etc.
7. After all customer information is entered, push the sync button on sensor (1x, and immediately release) to initiate a data upload to the cloud.
8. System is now ready to install the sensor on the tank.

Installation:

9. Prior to installation, install sonic grease on center pad as shown.
10. Push and hold sync button (3 seconds) until beeping starts.



11. The beeping is an indicator of the correct installation position and ultrasonic function.
12. Note: LED light will flash simultaneously with beeper, as visual indicator if background noise makes hearing beeper difficult.
13. Beeping will be rapid when button is first pressed.



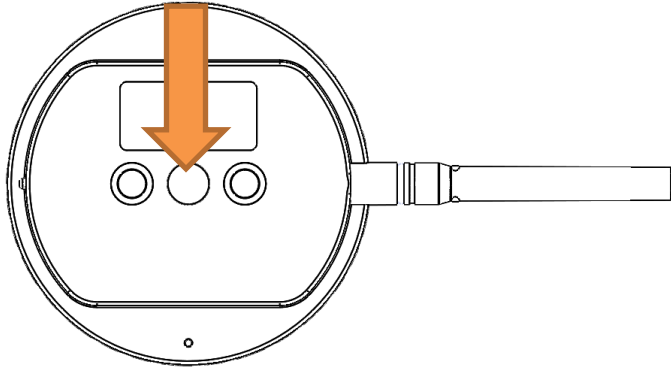
14. Install sensor on tank bottom. See installation tips below.
15. As sensor begins to read tank level, beeping will slow indicating good quality readings.
16. Wait for 10-20 seconds to evaluate beeping (and thus installation position.)
17. If beeping stops, reading quality is adequate and installation is complete.
18. If beeping has not stopped, reposition sensor and reevaluate beeping.
19. The Mopeka Tank Check app may be used to evaluate tank level and reading quality in further detail, including a bubble leveling tool that can help ensure proper, horizontal position of sensor.
20. After successful install, check cloud page again and verify sensor is now updating in the cloud system. Note: You may press the button on sensor anytime, to initiate a cloud update.
21. Sensors normally update every 6 hours otherwise.

To Setup Bluetooth access to Mopeka app (for homeowners/users that want to also directly read sensor in app):

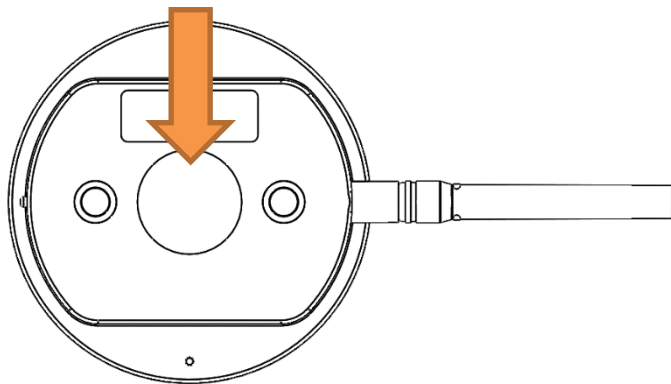
22. Open Mopeka app.
23. Press button for 2 seconds to sync sensor to app.
24. In the app, go to sensor page; click on settings icon; and enter appropriate tank size. Other settings may be adjusted as desired.
25. Be sure to create a user login (person icon in upper left corner of main app screen) to enable all features of the app.

Installation Tips:

Residential Sensor, apply grease to pad shown. Note also that if sensor is repositioned several times, it may be necessary to reapply grease, to ensure good coverage of the round pad.



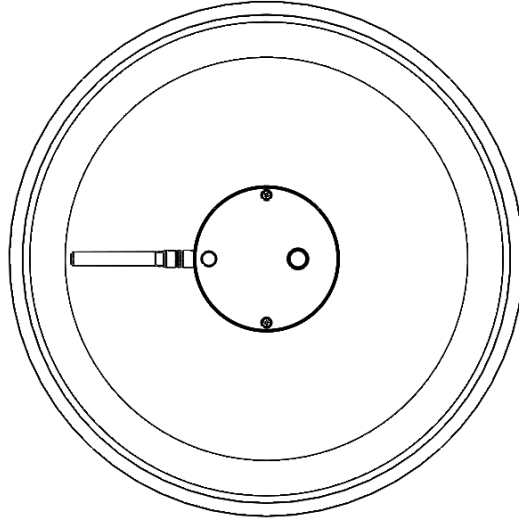
Bulk Storage Tank Sensor, apply grease to circular area shown.



For vertical tanks, the sensor should be installed in the center, bottom of tank as shown.

Place blocks, if needed, under tank to allow adequate clearance for sensor. Sensor should not contact the ground.

Tank should be as level as possible to ensure proper ultrasonic performance.

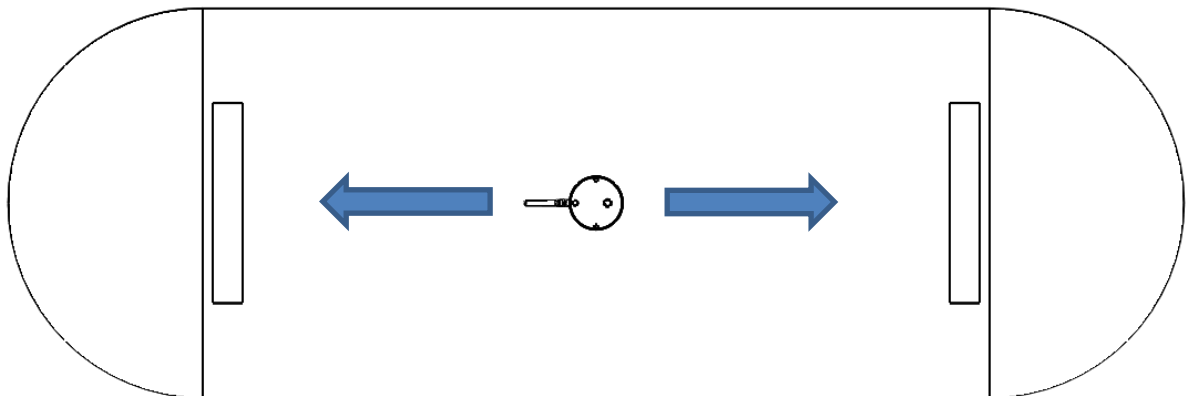


BOTTOM VIEW OF VERTICAL TANK

For horizontal tanks, install sensor on bottom centerline of tank. Sensor should be level to work properly.

Sensor may be installed anywhere along bottom centerline of tank (as indicated by blue arrows below). Older tanks may have a buildup of sludge inside the bottom of tank that can affect sensor performance. Relocating the sensor along the bottom centerline will usually resolve this issue, as there is typically a spot where tank filling will keep one area clear of sludge.

On bulk storage tanks, it is typically recommended to locate the sensor a few feet away from the bottom fill valve inlet, as that area is kept clear of sludge by the filling process.



BOTTOM VIEW OF HORIZONTAL TANK



REVISION TABLE

<u>REVISION</u>	<u>DESCRIPTION</u>	<u>DATE</u>
A	RELEASE	11/12/2021
B	ADDED TORQUE FOR SCREWS	11/12/2021
C	AA CHANGED TO AAA BATTERIES	11/17/2021
D	CORRECTED CERTIFICATION INFO	3/25/2022
E	ADDED FCC STATEMENT	5/20/22