Installation Procedure

Tank Monitor

IMPORTANT ⓘ **It is critical in all installations to ensure monitor's antenna is positioned vertically.** This will achieve optimal signal strength, ensuring that you receive data in a timely manner and prolong the battery life of the monitor.

NOTES ❶ When monitoring multiple tanks that are connected (2x420s, 3x420s etc.), it is important to connect the monitor to the tank that's showing the lowest level. If they're equal, you should monitor the tank with the regulator.
❷ Make sure the gauge is screwed on and fastened properly. Ensure that the gauge is clean and free of dirt and debris.

Do not pressure wash

WARNING Potential electrostatic charging hazard — wipe only with a damp cloth.

INSTALLATION Always follow your local regulations and standards. If locally required, consult with certified personnel to ensure your installation is compliant.

GRA-0070-EN_007 IM-TM5240 2023-4-19

Support

+1 (514) 673-0244

+1 (844) 763-3344 (toll-free)
support@otodata.com
otodatatankmonitors.com/support

Emergency Support

Available 24/7
1-833-529-9499

Specifications

Model: TM5240

Propane, fuel, gases, water, chemicals, lubricants, temperature and more.
A tank monitor to suit your corporate needs.

Input

Remote Ready Hall Effect Module, I²C, 0-5 VDC, Temperature

Reporting & Outputs

Reporting	Tank level (5% variation) Low battery High/Excessive draw Fill Detection Temperature
Data Interface	API Email (to supplier and/or consumer) Raw data Online dashboard Client mobile app
Automated Testing	Network status Lead sensor status Battery status

Electrical Specifications

Refer to markings label for battery pack used

Radio Specifications

Technologies	CAT-M1 and NB-IoT Dual SIM Bluetooth

Environmental Specifications

Operating and storage temperature range	-40 ˚C to 60 ˚C	-40 ˚F to 140 ˚F
Relative humidity range	0% to 100%	
Enclosure rating	IP20 (enclosure designed for IP68)	
Warranty	5+ years	

Certifications

Hazardous location classification Monitors are third-party QPS Evaluation Services Inc. certified for use in hazardous locations. Class I, Div 1, Groups CD, T3. Ex ia IIB T3 Ga. Class I, Zone 0, AEx ia IIB T3 Ga.

IECEx Classification Ex ia IIB T3 Ga

FCC Notice FCC ID : 2ADQFMZ03AD, IC ID : 12649A-MZ03AD

ASSOCIATED APPARTUS ENTITY PARAMETERS
Uo [V] = 3.9V, Io [mA] = 335mA, Po [mW] = 119mW,
Co [μF] = 425uF, Lo [μH] = 10.17uH

Dimensions

Height	16 cm	6.3 in
Width	13 cm	5.1 in
Depth	11 cm	4.3 in

Option

GPS (mobile tank)

This device complies with part 15 of the FCC Rules. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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. **This device is compliant with Industry Canada's RSS standards for licence-exempt radio apparatuses.** Authorized use depends on the following two conditions: (1) the device must not create radio interference, and (2) the device user must accept all radio interference, even if this interference could potentially impair its functioning. **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. **To comply with FCC RF exposure compliance recommendations, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.**

Standard and Multi-sensor Options

Compatible splits and leads

Digital leads: ACDH45 and ACDH46
Splits: ACM12X6SPLIT and ACM12X0SPLIT
Extension: ACHEEXT10 (10 ft) and ACHEEXT20 (20 ft)

For *split* installations, the combination of Entity Parameters of Uo, Io, Po, Co and Lo must satisfy the following conditions:

Entity Parameters: Uo ≤ Ui, Io ≤ Ii, Po ≤ Pi, Co ≥ Ci + Ccable, Lo ≥ Li + Lcable. **Division Parameters:** Voc ≤ Vmax, Is ≤ Imax, Pout ≤ Pmax, Ca ≥ Ci + Ccable, La ≥ Li + Lcable.

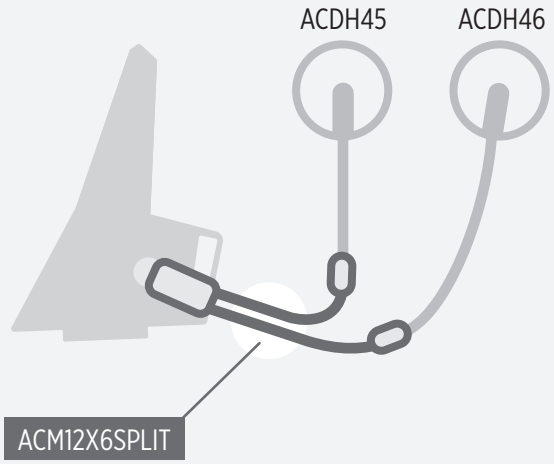
The total length of all extensions used in an install must <u>not exceed</u> 20-feet.

Standard

Single Digital Lead

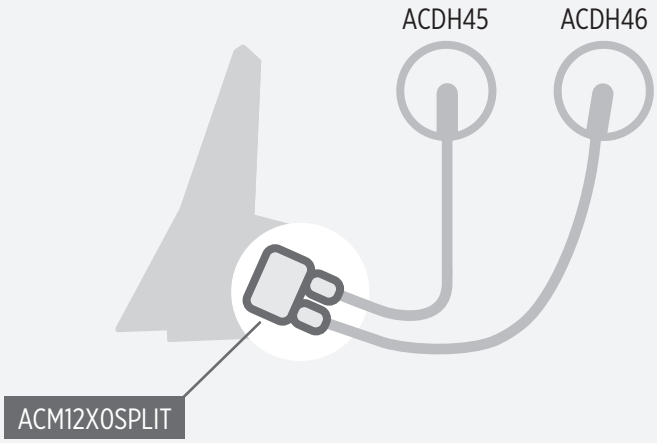
Split 12x6

ACM12X6SPLIT attached to two leads



Split 12x0

ACM12X0SPLIT attached to two leads

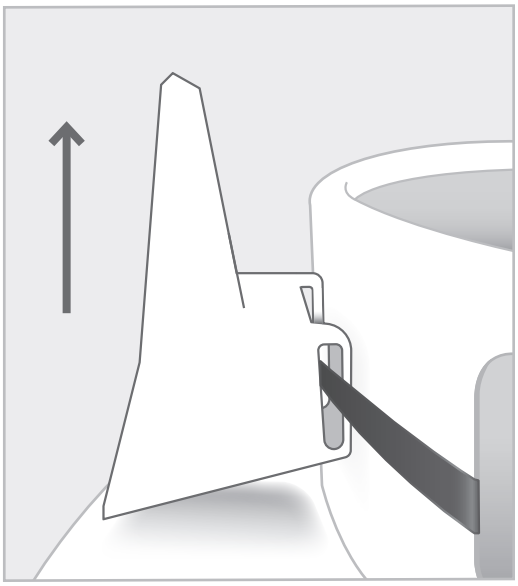


Vertical Tanks

Avoid signal obstruction

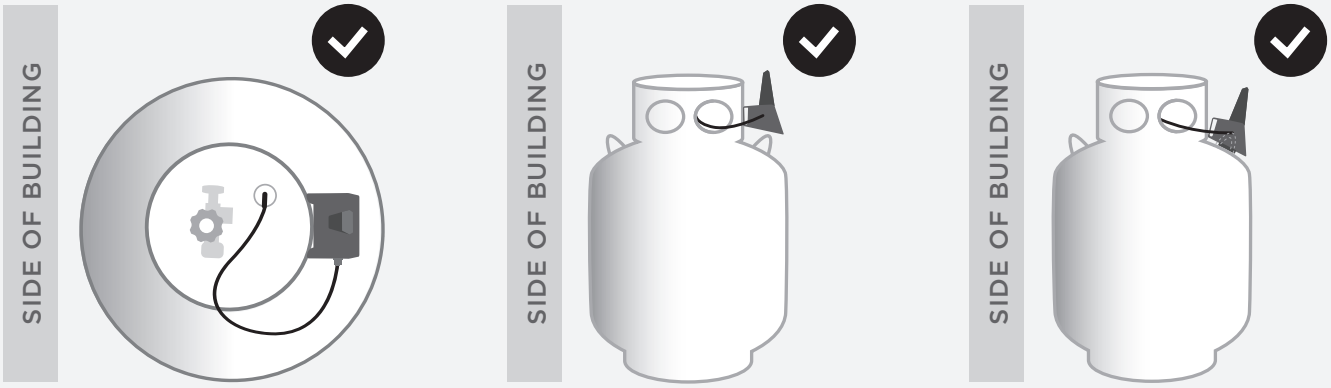
Position away from walls.
Position monitor so antenna is pointing upward.

a) Use the supplied cable tie to secure the unit to the collar or mag-mount it on the shoulder near the collar (you may also strap the unit to a lifting hook);
b) For optimal signal strength, ensure antenna is positioned vertically;
c) Slide the remote sensor into the tank's remote-ready dial until it snaps into place, ensuring that the dial is clean;
d) Ensure the lead wire snaps in properly;
e) Installation is now complete.

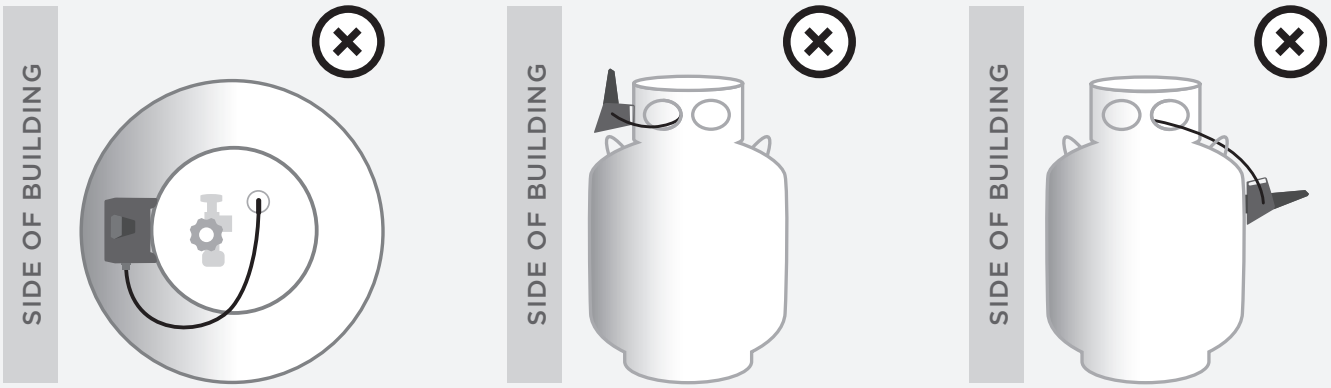


NOTE: For installations carried out as part of the TMAAS program, collar mounting with cable tie is mandatory.

Optimal position



Not optimal (may impact performance)



Horizontal Tanks

Protect your investment

To prevent lid cuts, lead wire must be fastened to feed-line.

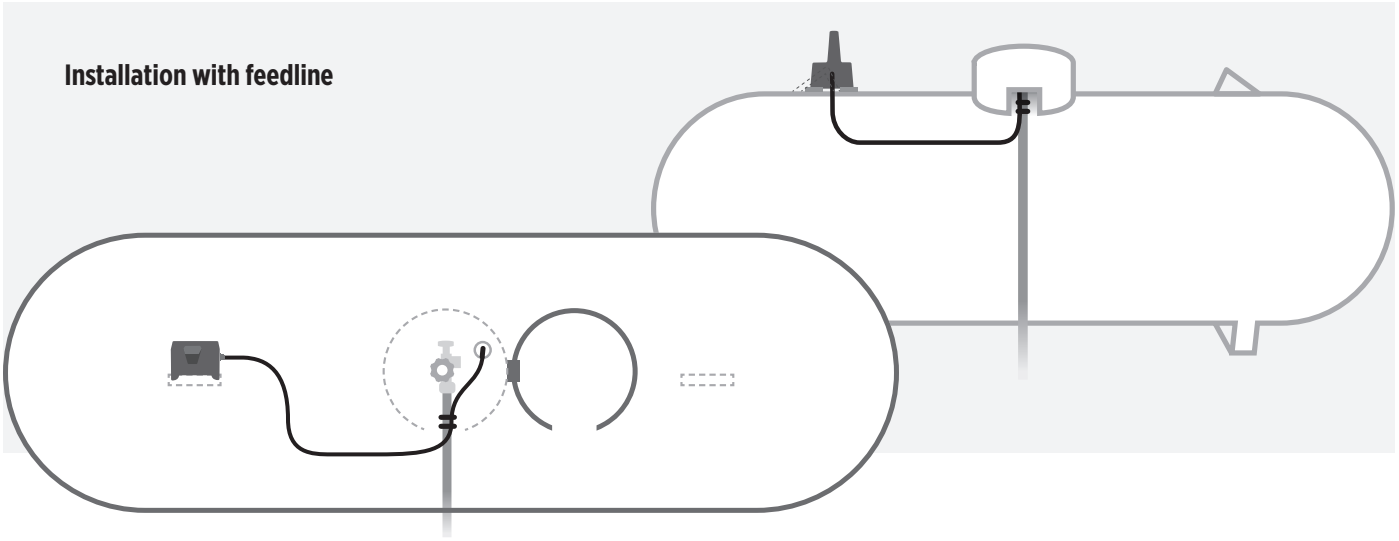
f) Use the supplied cable tie to secure the unit to the collar or mag-mount it on the shoulder near the collar (you may also strap the unit to a lifting hook);

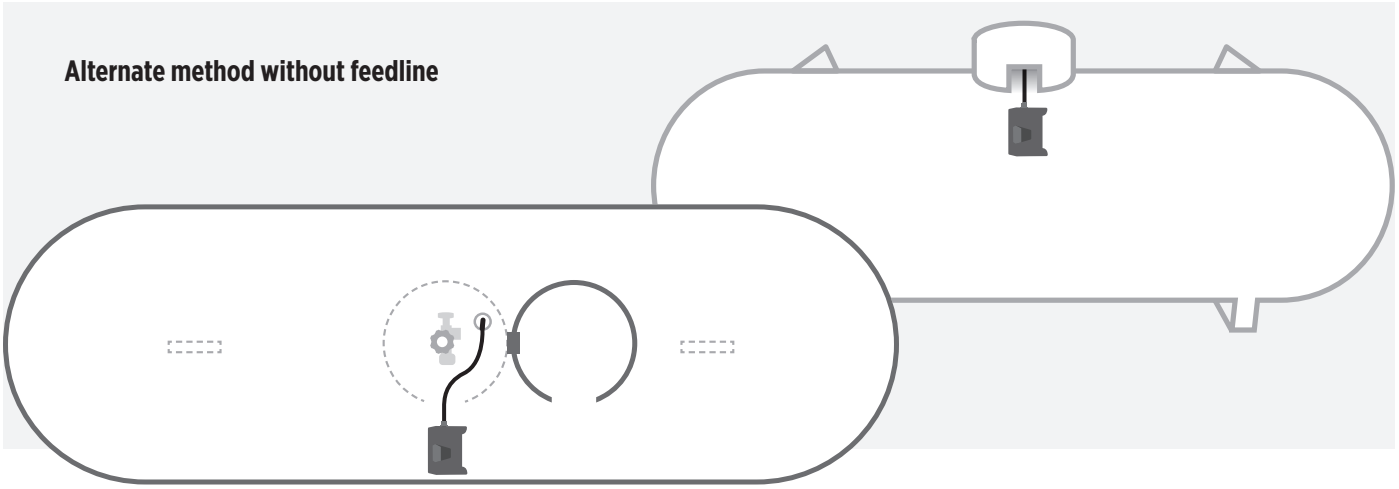
g) For optimal signal strength, please ensure the antenna is positioned vertically;

h) Slide the remote sensor into the tank's remote-ready dial until it snaps into place, ensuring that the dial is clean;

i) Ensure the lead wire snaps in properly;

j) Installation is now complete.





Underground Tanks

Metal pit lids will obstruct monitor's signal

Metal pit lids will obstruct the monitor's signal. Install exclusively under plastic lids.

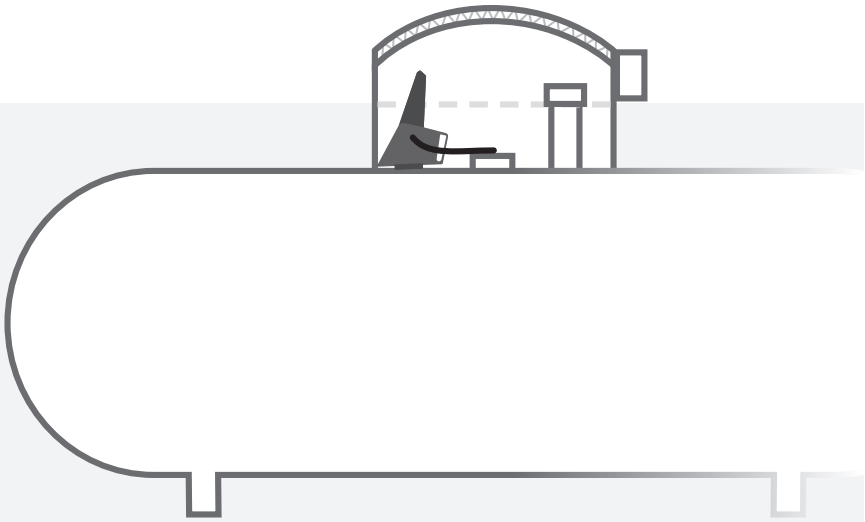
AGUG Tanks

If pit walls are plastic

Pit bracket not required. Position monitor so antenna is facing *toward* plastic wall.

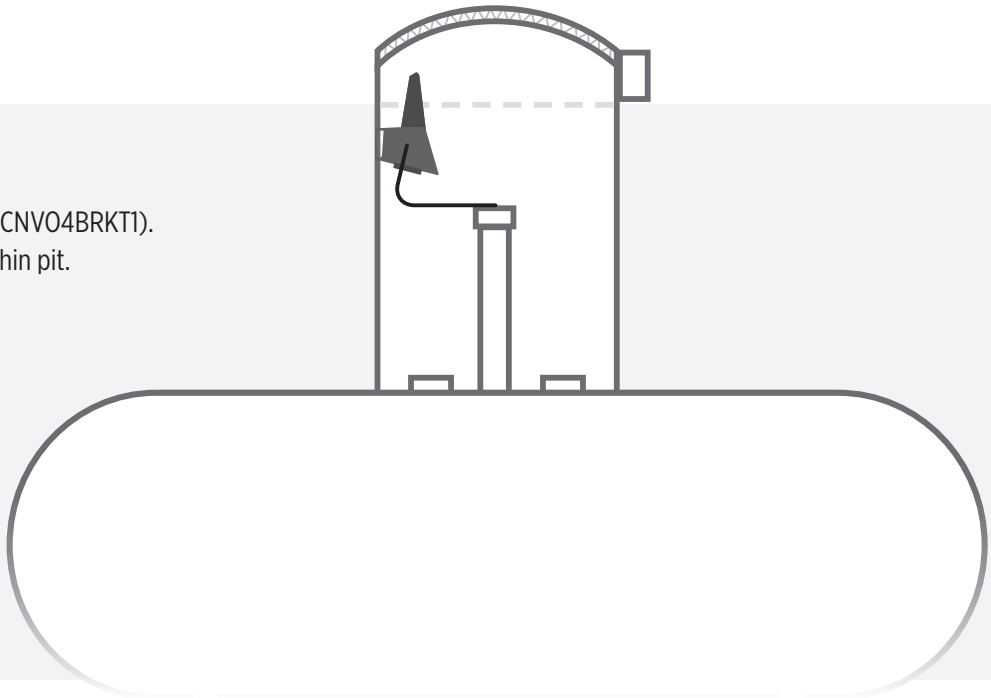
If pit walls are metal

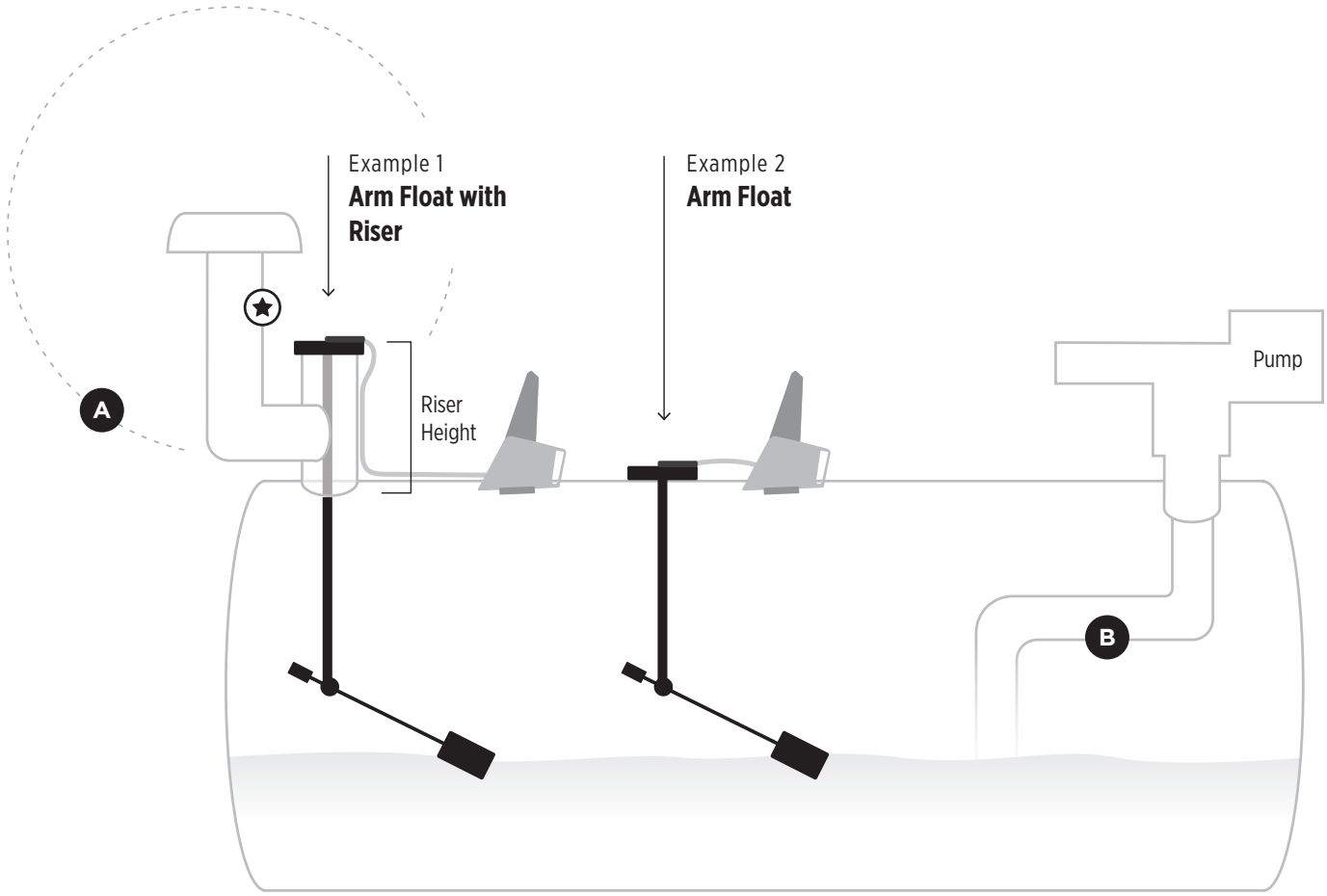
Pit bracket is required (SKU ACNV04BRKT1). Mount monitor so antenna is facing *away* from wall.



Other Tanks

Pit bracket is required (SKU ACNV04BRKT1). Mount as high as possible within pit.





A Hazardous Location Sphere
Extends 5 feet in all directions from top of venting pipe. Monitors must clear this area.

B Obstructions May Cause Read Problems
Walls, piping, fuel line, in-tank braces...etc. may interfere with arm float.

T-Vent Not Legal Everywhere
Verify local regulations.

Important
It is critical in all installations to ensure the monitor's antenna is positioned vertically.

a) This will achieve optimal signal strength, ensuring that you receive the data in a timely manner and;

b) Prolong the battery life of the monitor, saving time and money in the long run.

Installation Procedure

a) Mount the monitor magnetically on top of the tank;

b) Install float in tank;

c) Clip remote-ready sensor to dial ensuring it snaps in securely;

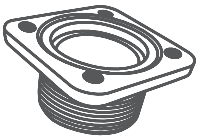
d) Installation complete.

To Order Floats
Floats are made to order.
We require:

a) Inner diameter of tank (height and width);

b) Riser height (if applicable).

Notes

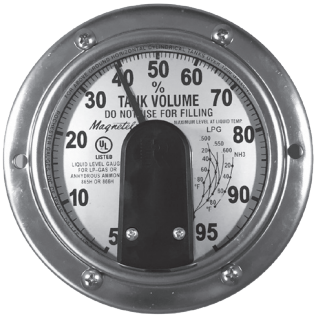


Arm Float is not threaded. Requires 4-bolt adapter (1 ½" or 2").

Plug & Play
Save precious time and money. Plug our monitors in and walk away! No magnet swipe. No programming. Shipped active.

IMPORTANT

Carefully Read Directions Below Before Installation



HALL EFFECT DIAL UNDER PLASTIC COVER (2 SCREW)

To ensure accurate readings, the Otodata Support team must calibrate monitors for <u>ALL</u> bulk storage dials.

Please contact Otodata upon installation of large dials on bulk propane tanks by phone 1-844-763-3344, email support@otodata.ca, or RFS*.

Please have the <u>monitor serial number</u> and <u>accessory descriptions</u> on hand.

i.e. provide dial range (5%-95% or 3%-97%), dial size (4 inch or 8 inch), and lead type:

- Blank Dial Lead (ACKITGBLK10)
- Right Angle Lead (ACHERA)
- Straight Lead (ACHESL)
- Universal/Digital Lead (ACDH45)

*An RFS ("Request for Service") can be initiated via the Otodata Portal (neevo.otodata.ca) by right-clicking the serial number of the monitor from the Monitored Assets page, then selecting "Create a request for service".

Members can watch step-by-step installation videos and shop online

Sign up free today

otodatatankmonitors.com/membership

Members can purchase monitors and accessories like gauges, leads, mounting equipment and more via our online store.

IMPORTANT

Please take a moment to carefully read the installation instructions included with your monitors, and ensure you understand and respect local regulations.

ABOVE-GROUND TANKS

Do not install monitors under lids.

UNDERGROUND TANKS

Plastic lid suggested. Metal lids will obstruct signal.

Reading installation instructions will ensure maximum monitoring performance on all your tanks and installations.