

Installation Guide

Kamstrup Pit antenna 5"
- for the US market



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1 FCC

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 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 causes 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 to an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or Kamstrup directly

The antennas with part number 6697914, 6697915 and 6697916 are included in the flowIQ® X250 FCC ID: **OUY-FLWX250**.

The antennas with part number 6697912 and 6697913 works as a passive reflector that replicates the signal from the meter.

2 General information

The Kamstrup pit antenna is used for increasing the readable range of the meter, to ensure optimal data transfer when the meter is installed in a hard to read location such as a pit.

There are two different connection models covered by this guide.

A drive-by-only antenna to support AMR meters, this has an inductive coupler.

A dual band antenna for Kamstrup AMI meters, that have a Kamstrup 2-pin antenna connection [AMI plug].

Read this guide and follow a few guidelines as illustrated, and you will get the best benefit from your installation.

Meters supported:

Kamstrup 2-pin connection

For flowIQ® 2250, 3250

Kamstrup Inductive Coupler

For flowIQ® 2100, 3100-series (US only)

Antenna model	Part number
Kamstrup Pit antenna 5" w. coupler 6.6 ft.	6697912
Kamstrup Pit antenna 5" w. coupler 24.6 ft	6697913
Kamstrup Pit antenna 5" w. AMI plug 2.0 ft.	6697916
Kamstrup Pit antenna 5" w. AMI plug 6.6 ft.	6697914
Kamstrup Pit antenna 5" w. AMI plug 24.6 ft.	6697915

The design of the antenna allows for a retrofit installation site with a 2" centered hole.

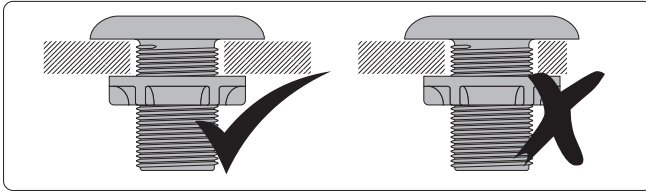
The design meets the ADA demands for maximum height lower than ½ inch.

3 Installation preconditions

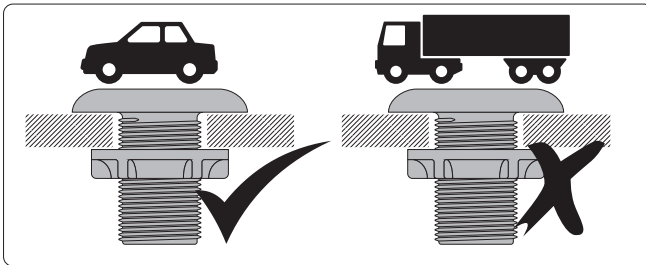
Installing the antenna in the pit cover requires a 1-3/4" to 2" diameter hole (45-50 mm) up to 2" thick (54 mm).

The antenna must be placed on a pit cover that is strong enough to minimize deflection under heavy load. It is important to mount the antenna on a flat surface to obtain the mechanical strength.

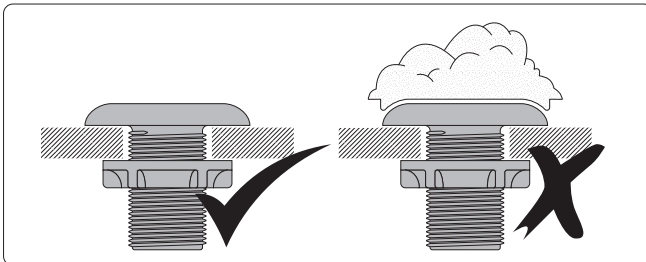
Note: If the antenna is larger than a recessed area, the antenna must be supported from underneath to maintain the structural strength.



The antenna can be installed in driveways for light automotive traffic.



To ensure the signal strength, it must be free of obstacles. This means that the antenna must not be covered by soil, water, leaves, vehicles or snow. Outdoor sealants can be used to prevent water penetrating between the antenna and the cover.



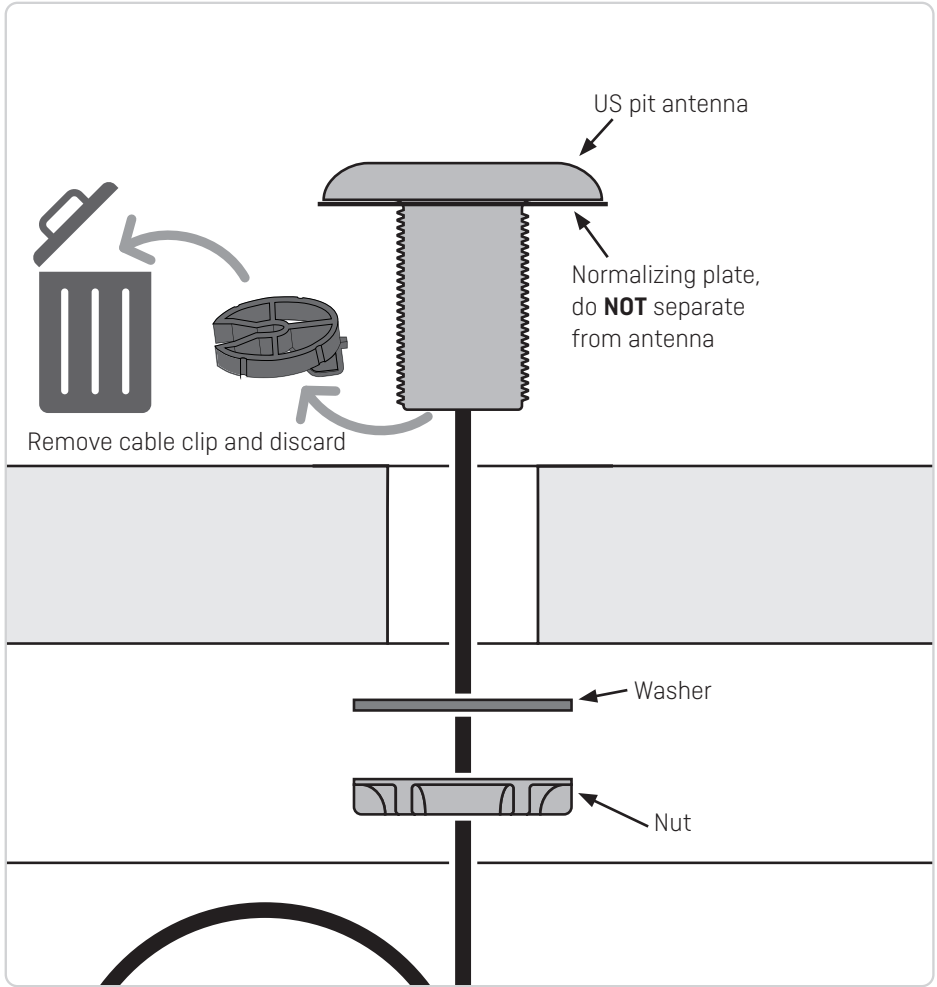
During installation, it must be ensured that there is enough cable in order to lift the cover away securely without harming the equipment.

Make sure that you have the correct length of cable.

Avoid mounting near electric cables.

Avoid tight bend or squeeze of the antenna cable.

Never install the antenna in a corner or near metal or metal pipes.



4 Installation

4.1 The coupler

The coupler makes the antenna a passive reflector that replicates the signal from the meter.

6697912 Pit antenna 5" with 6.6 ft. cable, coupler connection.

6697913 Pit antenna 5" with 24.6 ft. cable, coupler connection.

The antenna cable can be removed from the coupler during installation.

Note: Never cut or damage the antenna cable, the antenna cable must not be shortened.

First, detach the wire loop, then release the clip from the ring using a pen or screwdriver to wedge it free.



Remove the antenna cable from the coupler housing.

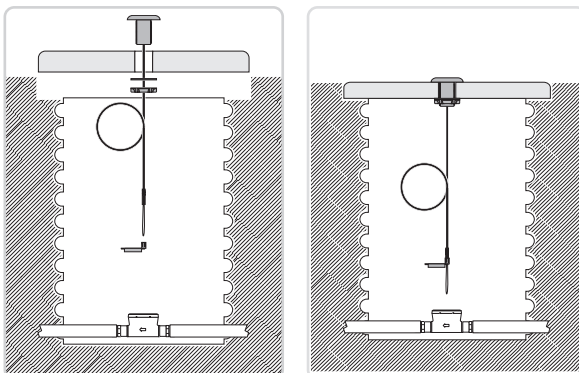
Remove the hex nut and rubber washer from the antenna

Pull the cable through the cover.

Add the rubber washer and the hex nut

Install the meter in the lid, tighten the antenna by hand, and do not use excessive force.

Note: The antenna top must rest flat on the pit cover.



Kamstrup Pit antenna 5"

Assemble the coupler again.

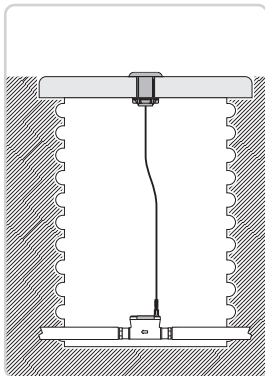
Clean the coupler housing before re-attaching the cable.

Attach the wire to the coupler housing.

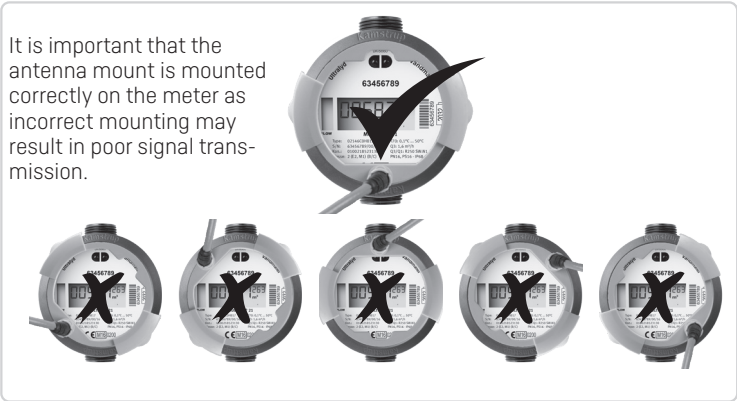
Note: Make sure that the thin antenna cable is placed in the guide at the bottom of the coupler.

Ensure the cable is proper connected to the coupler housing. Listen for a snap.

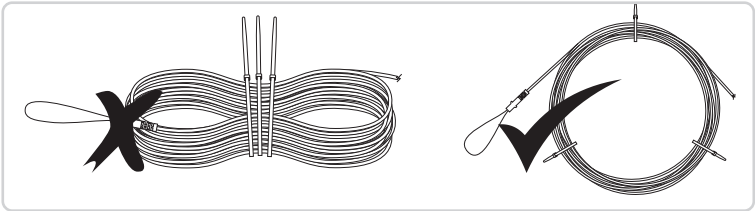
Connect the coupler to the meter.



Note: Make sure the coupler and meter stays clean, as a dirty surface will reduce antenna performance.



Excess cable must not be tied up tightly as this can affect the signal.



4.2 The AMI plug

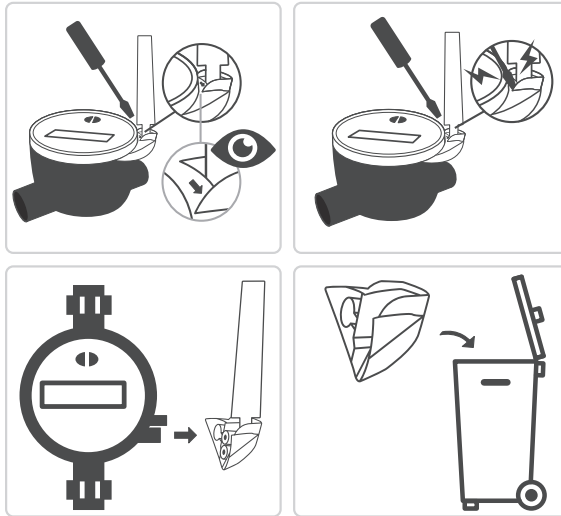
The AMI plug is a Kamstrup design, ensuring a unique connector on the x250-series meters.

The antenna is listed under the FCC ID of the meter: OUY-FLOWX250

- 6697914 Pit antenna 5" with 6.6 ft. cable, AMI connection
- 6697915 Pit antenna 5" with 24.6 ft. cable, AMI connection
- 6697916 Pit antenna 5" with 2.0 ft. cable, AMI connection

If the meter already has an antenna installed:
Remove the sealing house to remove the antenna.

Follow the arrow on the sealing house, insert a small flat-headed screwdriver and hit the screw-driver to break the sealing house of the meter. The sealing house is a single use unit and can't be reused.



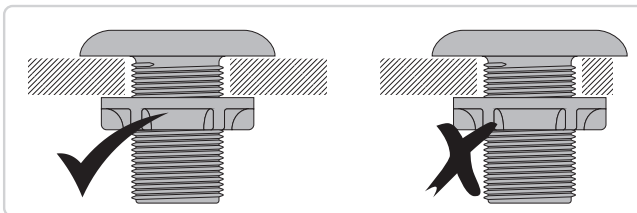
Pull the antenna cable through the cover.

Add the rubber washer and the hex nut.

Place the washer and nut on the antenna and tighten to the pit cover.

The antenna top must rest flat on the pit cover.

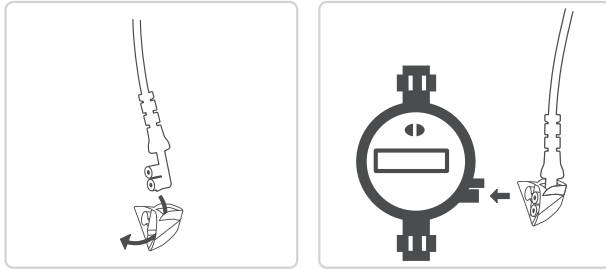
Note: If the antennas is larger than a recessed area, the antenna must be supported from underneath to maintain the structural strength.



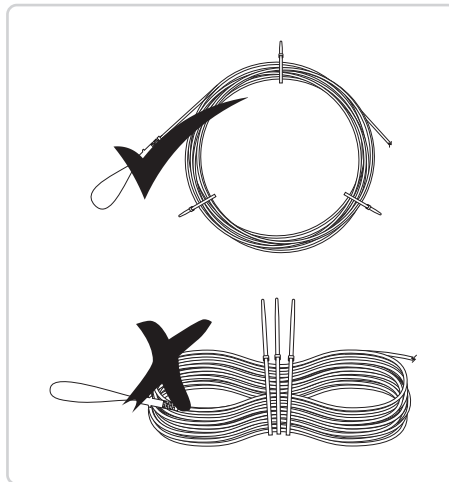
Insert the AMI plug into the new sealing house (3026926), following the antenna.

Connect the assembly to the meter housing and confirm that the connection is secure, listen for a snap.

Do not modify the connection to turn the plug. This will reverse the polarity of the antenna and hurt the antenna performance.



Excess cable must not be tied up tightly as this can affect the signal.



4.2.1 AMI plug for READy MTU

When using the antenna with the READy MTU.

Use the same principle to remove the cover.

When installing the antenna to the MTU, use the correct cover following your READy MTU.

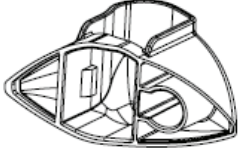
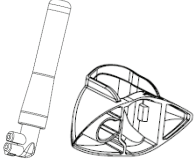
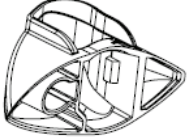
The cover is not included in the antenna package.

5 Antenna accessories

The antenna is delivered ready to install. There are no screws needed, only a nut and washer fastened underneath the antenna top.

The coupler needs no extra parts.

The AMI antenna seal housing can be order separately if missing or broken.

Item	Part number	
Sealing house for use with external antenna on x250-series meters.	3026926	
Stub antenna with sealing house for use with x250-series meters.	6556545	
Sealing house for stub antenna (only) for use with x250-series meters.	3026892	

For parts to the meter or REAdy MTU, see the instruction manual for the product on www.kamstrup.com or contact your local Kamstrup office.

For further information, please contact Kamstrup:

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