



# DIALOG® 3G USER'S FCC ID: NTAXMETER21

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***WATER***



Overview	1
Document Contents Overview	1
Documentation Conventions	1
Documentation	1
Conventions	1
Document Contents Overview	1
Documentation Conventions	1
Documentation	1
Conventions	1
See Contents on page iii for the complete table of contents	1
Patent Notice	1
Compliance Statement	1
Transmission Duty Cycle	1
Trademark Notice	6
Patent Notice	6
Compliance Statement	6
Identification	1
Trademark Notice	1
Patent Notice	1
Compliance Statement	1
Transmission Duty Cycle	1
Trademark Notice	1
Patent Notice	1
Compliance Statement	1
Transmission Duty Cycle	1
Transportation Classification	1
Product Return	1
Document Ideas & Suggestions	1
Performance:	8
Leak Detection:	8
Tamper:	8
Theft:	8
Zero Consumption:	8
Data Logging:	8
Batteries:	8
Configurations:	9

Product Return	1
Document Ideas & Suggestions	1
Product Return	1
Document Ideas & Suggestions	1

# Before You Begin

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The DIALOG® 3G endpoint (DTMW) is an RF transceiver used to communicate metered consumption data in Automatic Meter Reading (AMR) systems.

3G features an exclusive design that completely encapsulates the encoder electronics, transceiver, antenna, and batteries under the register glass. A design called ConnectionFree™.

Chapter	Description
<b>Chapter 1.</b> <i>Getting Started</i>	Provides an overview of the DTMW endpoint installation, including installation options, siting, and required tools.
<b>Chapter 2.</b> <i>Installing the</i>	Provides step-by-step instructions for wiring the endpoint to a register and installing the endpoint using the rod mount, on a wall or similar surface, or on a pipe.

Convention	Example
Hypertext links are <a href="#">blue</a> .	<a href="#">See Contents on page iii for the complete table of contents</a>

**CAUTION:** The User and the Installer should be aware that changes and modifications to the equipment not expressly approved by Master Meter could void warranty and the user's authority to operate the equipment. Professionally trained personnel should install the equipment.



The antenna used for this transmitter must be installed to normally provide minimum 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

**ATTENTION!** This type of note is used to warn of potential physical harm to the user or hardware. It is critical that you pay strict attention to WARNING notes, read the information carefully, and heed the advice/instructions.

# Cautionary

## Note on

## Repairs &

## Modifications

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### **ATTENTION!:**

Attempts to repair a 3G endpoint by unauthorized personnel (any one other than a Master Meter factory certified professional) may subject the person to shock hazard scenario if removal of protective covers is attempted. Unauthorized repair may void the warranty and/or maintenance contract with your company.



### **ATTENTION!:**

This unit cannot be modified and is not repairable. Modification of this device could cause non-compliance with FCC rules. Attempts to modify this device will void the warranty.

### **ATTENTION!:**

Follow these procedures to avoid injury to yourself or others.

# General Admin

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## Identification

DTMW - 3G Endpoint Installation Guide

## Trademark Notice

3G is a registered trademark of Master Meter, Inc. All other product names and logos in this document are used for identification purposes only and may be trademarks or registered trademarks of their respective companies.

## Patent Notice

3G intellectual property is protected by US and foreign patents, and/or patents pending.

## Compliance Statement

The digital portion of the transceiver 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:

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

This device complies with Part 15 of 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

## Transmission Duty Cycle

The transmission duty cycle is limited by its design not to exceed 1.0%

**Transportation Classification**

The Federal Aviation Administration prohibits operating transmitters and receivers on all commercial aircraft. When activated, endpoints are considered operating transmitters and receivers and cannot be shipped by air.

**Product Return**

To comply with FCC, UN, and Department of Transportation regulations, all units must be returned in their original packaging following Master Meter's Return Material Authorization (RMA) process.

**Document Ideas & Suggestions**

We want to hear your ideas on how we might improve and add value to this document. If you have comments or suggestions on how we may improve this document, send them to:

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- E-mail: [mbutler@mastermeter.com](mailto:mbutler@mastermeter.com)
- Phone: 1-800-635-8725

# About 3G

The 3G endpoint for water is an AMR module fully integrated into the meter register that actively records consumption data, data logs this information, and provides a vigilant suite of Revenue Impact Alerts – Leak, Theft, Tamper, and Zero Consumption.

**Performance:** Consumption data is sent continually every 11 seconds in the unlicensed 902-928 MHz bandwidth at 63 mW power. An integral Real Time Clock (RTC) ensures consistency in the transmission cycle. 3G is available in a standard configuration for Master Meter products, as well as a universal design – the Interpreter - which replaces the original register for most any bayonet top mount design such as, but not limited to; AMCO, Badger, Hersey, Neptune, Precision, and Sensus.

**Leak Detection:** actively monitors for continues rotation of the register gears, and if it does not stop for 4 hours, we raise an electronic flag. And if this flag stays up for 24 hours, we transmit an alarm.

**Tamper:** 3G actively monitors against the use of magnetic tamper devices such as large speaker magnetic that are commonly used in a n attempt to magnetically decouple the register from the meter.

**Theft:** 3G actively monitors for reverse flow movement using motion sensing components in the AMR module/register. This vigilant indicator protects against meter reversal (theft), incorrectly installed meter, and backflow situations.

**Zero Consumption:** 3G monitors for extended periods of zero consumption and flags the account, notifying utility personnel of a possible stuck meter or vacated service.

**Data Logging:** 4,000 points of scalable, customizable consumption data are continually stored inside the 3G module. Consumption resolution is possible down to the minute.

**Batteries:** 3G uses dual non-replaceable long life lithium Thionyl Chloride batteries that allows for a generous 20 year warranted battery life



**Configurations:** 3G endpoints may be installed in the following ways:

- Installed on a new Master Meter product, or by retrofitting a standard register on an existing meter.
- Retrofitting competitor products with the 3G Interpreter by swapping off the bayonet mounted standard register and replacing it with the 3G.

# Included Materials

The following materials are supplied by Master Meter:

- Standard 3G register (figure 1)



Figure 1

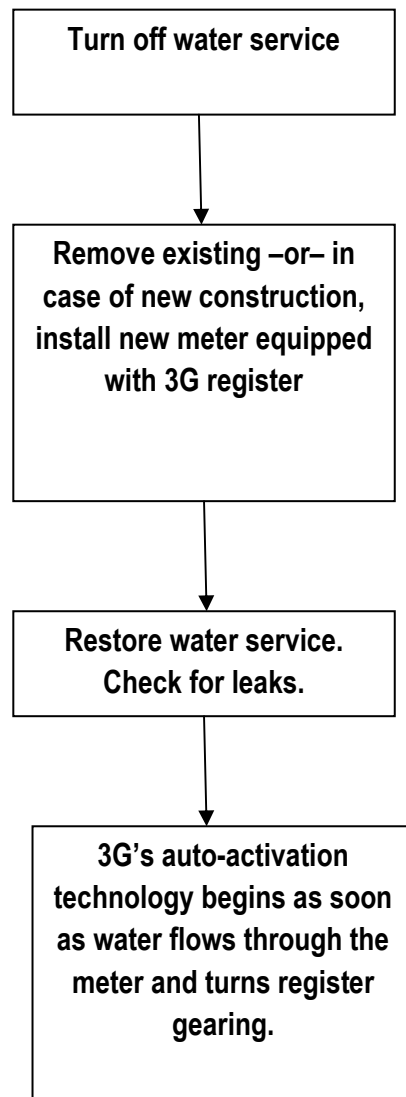
# Materials not Included

- Mechanical tools such as screwdrivers, pliers and wrenches are not provided by Master Meter.
- Manual labor required to install or replace exiting registers and meter components is not included.

# Installation Process Chart

## New Meter Application

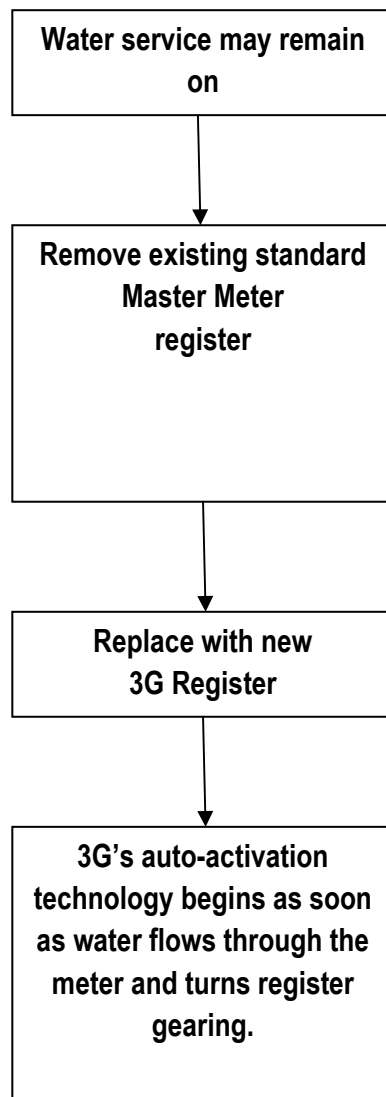
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# Installation Process Chart

## Retrofit Application

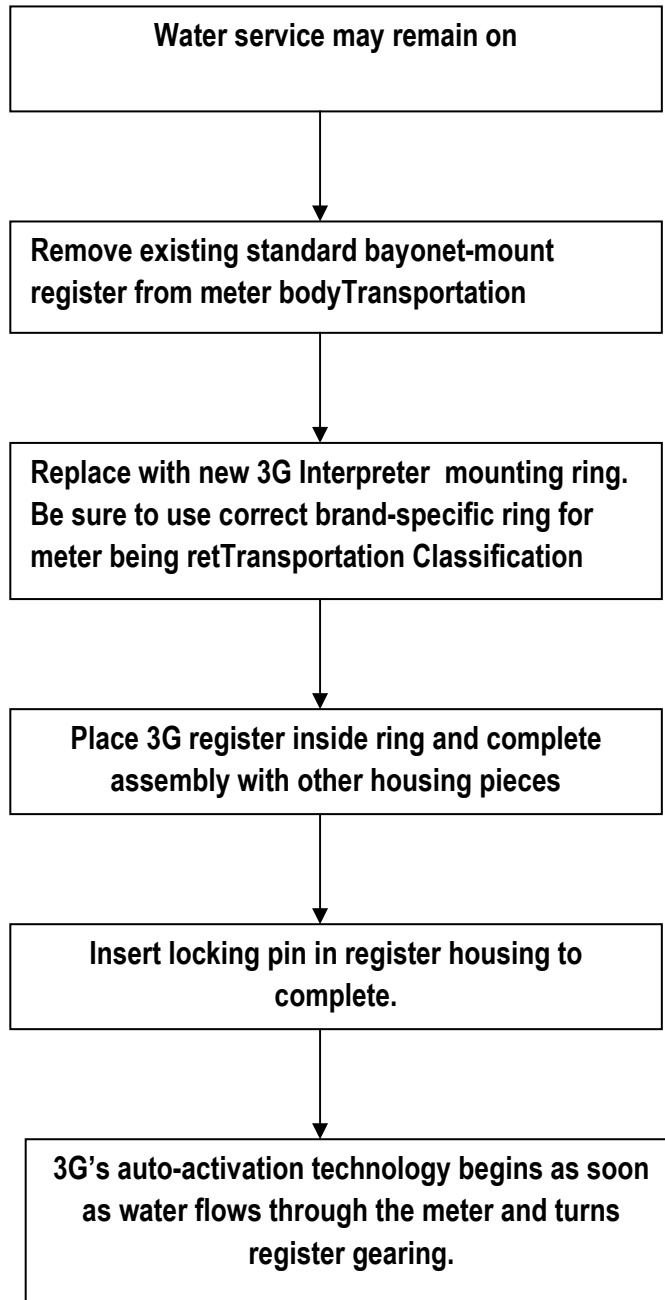
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# Installation Process Chart

## Non-Master Meter Retrofit Application

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# Associated FCC ID Devices

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FCC ID: **NTADMMR1** – Rx & Tx from / to DTMW

FCC ID: **NTAMMR1** - Rx & Tx from / to DTMW

FCC ID: **NTAMMR2** – Rx from DTMW

FCC ID: **NTAMMR3** - Rx from DTMW

FCC ID: **NTAEMMR1** - Rx & Tx from / to DTMW

FCC ID: **NTALCRSA** - Rx from DTMW