

Gas 5.0 module

Installation instructions

IL42-5053A Word version for editing

Revision	Date	Brief description
A	December 2021	Initial release

WARNING!

Installation and service of metering equipment should be performed by authorized and qualified utility personnel. Use authorized utility procedures to install and service metering equipment. Incorrect assembly could potentially cause a leak or escape of gas from the meter.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Introduction

The gas module is designed for use with most residential diaphragm gas meters. Modules for residential meters are available in three distinct types:

- Type A: Honeywell, Elster American Meter, American Meter Company products
- Type R & R415: Sensus, INvensys, Equimeter, Rockwell products
- Type S: Itron, Schlumberger, Actaris, Metris, Sprague

The gas module meets or exceeds the following UL standards:

- UL 60079-0:2019 Ed.7
- UL 60079-11:2013 Ed.6+R:28Mar2014
- UL 61010-1:2012 Ed.3+R:19Jul2019

Tools, equipment, and materials

All or some of the following items may be needed to install the module, depending upon the type of meter/index and the condition of the old index cover and gaskets:

- Gas module
- Connexo FieldSense Installer (FINS)
- Index screws, steel, zinc finish, #8-15 × 3/8-inch, pan head (2 each)
- Meter mounting screws, stainless steel, 1/4-20 × 3 3/8-inch, combination head (3 or 4 each, depending upon the meter type, supplied with the module)
- Index cover (if old one is not reusable)
- Index cover gasket (supplied with the module)
- Putty knife or scraper to remove old gaskets
- #2 Phillips screwdriver
- Awl to remove existing tamper seals
- Tamper seals (2 each, supplied with the module)
- Pressure compensation factor value, if needed (obtain from Honeywell Smart Energy)

Preparation

Before removing the existing index and index cover, make sure that the module style is compatible with the meter style.

Figure 1. Gas module for Type A index

Need new artwork

Special conditions of use

This is a fixed installation. The mounting screws are used to connect the module to the gas meter and provide grounding.

Installing the index

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CAUTION!

This device contains components that are sensitive to electrostatic discharge (ESD). When installing, servicing, or removing this device, clean the external surfaces of the module with a clean wet or damp cloth. Avoid installing the module in dry & dusty environments. Failure to properly clean and install the module as instructed can result in equipment damage.

1. Remove the existing index cover and index (or module) from the meter (see **Figure 2**). Use an awl to remove the existing tamper seals (see **Figure 3**).



Figure 2



Figure 3

2. Clean any debris from the index and cover.
3. Using a scraper or putty knife, remove the gasket and any adhesive material from the meter.
4. Align the index wriggler (4a) with the module wriggler(4b) (see **Figure 4c**).



Figure 4a

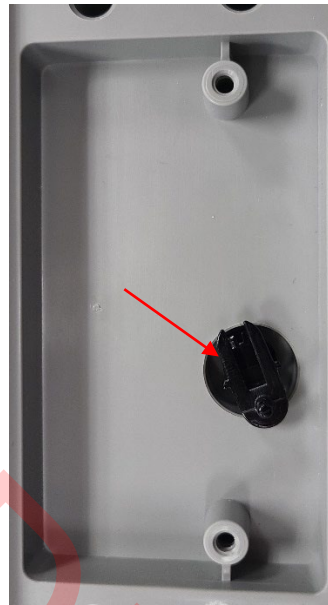


Figure 4b



Figure 4c

5. Attach the index to the module using the appropriate index screws (**Figure 5**). Do not over tighten the screws.



Figure 5

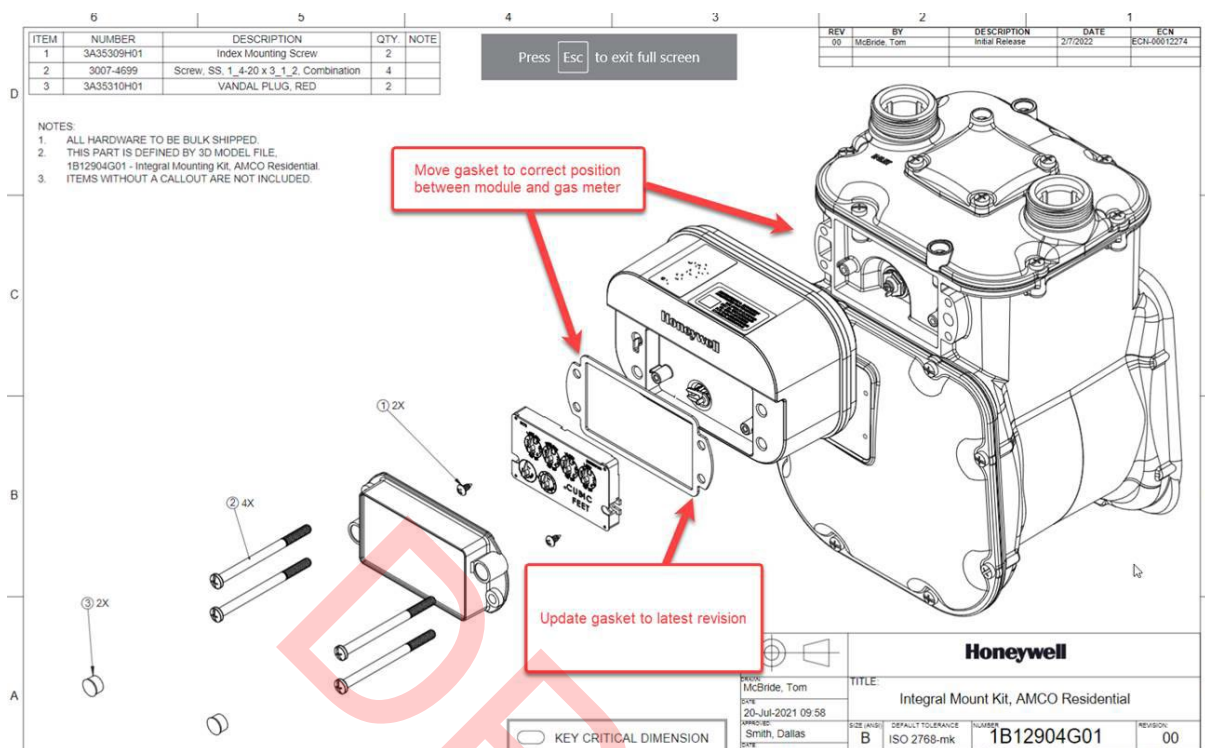


Figure 6 – Exploded View (work in progress)

Checking mechanical operation

This procedure will make sure the attached index rotates freely and without resistance.

1. Rotate the index drive dial clockwise 3 times.
2. If the index drive dial turns easily, rotate the drive dial counterclockwise 3 times to remove the counts or sub-counts from the mechanical index. If it does not turn easily, unscrew the index/module assembly & repeat Step 4 in “Installing the index.”
3. Make sure that the gasket material on the index cover is free of rips or tears. If the gasket cover is ripped or torn, remove the damaged gasket and replace it with a new gasket.

Sub-counts added to the electronic index during this procedure will be cleared when the index reading is programmed into the module.

Mounting the module/index assembly

Before mounting the assembly, be sure to have a screwdriver, index cover, and gasket within easy reach.

Caution!

It is important that the wriggler on the module is correctly engaged onto the meter. If it is not, it could produce an erroneous indication during utility leak test procedures that monitor drive dial (proving dial) movement. Incorrectly engaged wrigglers can also cause meter damage. It is important that the following procedure is performed correctly.

1. Visually align the module wriggler with the meter wriggler or meter adapter (drive dog). If the wriggler cannot be put in a fixed position, position it correctly by rotating the drive dial with your finger.
2. Mate the module wriggler (**Figure 7a**) with the meter wriggler or meter adapter (drive dog) (**Figure 7b**) and hold the mated assembly against the meter.
3. While holding the assembly against the meter, gently try to turn the drive wheel clockwise and then counterclockwise.
 - If the drive wheel meets resistance in both directions, it is properly mated. Continue with Step 5.
 - If it meets no resistance in either direction & can freely rotate 360 degrees, then make sure the meter is completely free of old gasket material then forcefully press the module on to the meter. Repeat Step 4. If the unit still doesn't correctly engage with the meter, return the unit to Honeywell Smart Energy.
4. While holding the module firmly in place so that you don't lose wriggler alignment, place the index cover & cover gasket onto the module/index assembly. Make sure the index cover is properly positioned with its vent holes at the bottom. See **Figure 7c**.



Figure 7a



Figure 7b



Figure 7c

5. Using the appropriate mounting bolts, screw the module/index/cover assembly to the meter and tighten the bolts using a torque driver. Set the torque driver to 20 in-lbs (± 4 in-lbs tolerance) to secure the assembly to the meter.
6. Install the tamper seals into the index cover receptacles. See **Figure 8**.



Figure 8

Programming the module

Although modules may contain default or utility-specified values that are programmed during manufacturing it is important to program certain data after the module has been installed in the field. Programming should be performed even if the index is set to 0000. Follow the instructions in the Connexo FieldSense Installer documentation. When prompted to hold a magnet on the unit, hold the magnet to the module as illustrated below.

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Repair & maintenance of the module

The modules do not contain any user-serviceable parts. Contact Honeywell Smart Energy for information on returning the module to the factory.

Intrinsic safety & compliance information

Hazardous location rating information

Item	Description
Manufacturer	Honeywell / KeyTronic EMS
Type identification	NXCMR200-H, NXCMR200-HCI, NXCMR200-S, NXCMR200-SCI, and NXCMR200-I
Certificate issuer	<i>Logo for certificate issuer & control number information</i>
CSA certificate number	<i>Number to be provided</i>
Ratings	<ul style="list-style-type: none">• Class I, Zone 0 AEx ia IIB T4 Ga;• Class I Division 1 Groups C D T4• Ex ia IIB T4 Ga • -40 °C = Ta = 65 °C• IP67

FCC & Innovation, Science and Economic Development Canada compliance

The radio module is inserted into the housing of the device at manufacture. It has no user serviceable parts.

FCC & ISED information:

- FCC ID: QZC-NXCMR200
- IC ID: 4557A-NXCMR200
- FCC ID: XMR2020BG95M2
- IC ID: 10224A-2020BG95M2

User Information (Part 15.105): 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 the 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

If you experience trouble with this equipment, please use the Return Material Request (RMR) feature available at the Online Customer Services at www.elstersolutions.com. Do not attempt to repair this equipment itself unless you are replacing the entire module.

Compliance Statement (FCC Part 15.19 and ISED Canada): This device complies with Part 15 of the FCC Rules and with ISED Canada license-exempt RSS standard(s). 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.

Énoncé de Conformité: Cet appareil est conforme à la Partie 15 des règles de la FCC et aux CNR d'ISED Canada applicables aux appareils radio exempts de licence. L'utilisation de cet appareil est soumise aux deux conditions suivantes : (1) Cet appareil ne doit pas provoquer d'interférences nocives et (2) cet appareil doit accepter toutes les interférences reçues notamment celles pouvant provoquer un fonctionnement intempestif de l'appareil.

Warning (Part 15.21): Changes or modifications not expressly approved by Honeywell could void the user's authority to operate the equipment.

RF Radiation Safety Guidelines: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated to provide a separation distance of at least 28 cm from all persons.

Directives de Sécurité de Radiofréquence: Cet équipement est conforme aux limites d'exposition aux radiations définies par la Commission Fédéral des Communications (FCC) pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance d'au moins 28 cm de séparation de toutes personnes.

Collocation Statement: This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Déclaration de Co-localisation: Cet émetteur ne doit pas être co-localisé ou opérant en conjonction avec aucune autre antenne ou transmetteur.

ISED Canada ICES-003 Compliance Label: CAN ICES-3 (B)/NMB-3(B)

Disposal information

This product contains electronics components which should be disposed of in accordance with applicable regulations.