

**To:** File

**From:** Timothy R. Walters

**Subject:** **Residential Gas 3, Generation 2 (25-1075/25-1080/25-1081)**  
**Limited Modular Approval Request** **3/26/08**

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## **1 Scope**

FCC Public Notice **DA 00-1407** released June 26, 2000 communicated guidelines for products requesting Limited Modular Approval (LMA). In particular, 8 requirements for Modular Approval were enumerated along with a request that each of the 8 be explained for any product requesting such approval.

It is the purpose of this document to respond to the modular approval guidelines in regard to the Cellnet product: **Residential Gas 3, Generation 2 (25-1075/25-1080/25-1081)**. It is also the purpose of this document to demonstrate how the Grantee, Cellnet, can demonstrate that it will retain control over the final installation of the device such that compliance of the end product is assured.

## **2 Compliance to Modular Approval Requirements**

### **2.1 Buffered Modulation / Data Inputs**

The **Residential Gas 3, Generation 2 (25-1075/25-1080/25-1081)** does not have external modulation or data inputs. Rather, the RF section is driven by an on-board microprocessor which directly controls the RF data lines and operates so as to not allow excessive modulation.

### **2.2 Power Supply Regulation**

The **Residential Gas 3, Generation 2 (25-1075/25-1080/25-1081)** uses a switching buck regulator to provide all the electronics with a supply that is fixed, even when the input voltage is varied.

### **2.3 Antenna Requirement**

The **Residential Gas 3, Generation 2 (25-1075/25-1080/25-1081)** includes an integrated antenna. The antenna is a loop-type partially integrated into the PCB used in conjunction with another U-shaped metal structure permanently soldered on to the PCB and is not changeable.

### **2.4 Stand-Alone Testing**

All testing on the **Residential Gas 3, Generation 2 (25-1075/25-1080/25-1081)** module was conducted stand-alone. No shields or enclosures were used, other than that fully integrated to the module itself. No ferrites were used on data or power lines during testing. The device is battery (DC) powered.

### **2.5 Labeling**

As indicated, each module will have its own FCC ID label. In addition, devices into which it is placed will have a sticker indicating that this module is contained within. Exact text will be as specified in the FCC Public Notice.

### **2.6 Specific Rules and Operating Requirements**

The **Residential Gas 3, Generation 2 (25-1075/25-1080/25-1081)** complies with all the pertinent rules for its section.

### **2.7 RF Exposure Requirements**

The **Residential Gas 3, Generation 2 (25-1075/25-1080/25-1081)** complies with all exposure requirements. As a component used in the Utility industry, this product is not intended for use near human operators.

### **3 Demonstration for Limited Modular Approval**

The Grantee, Cellnet, will retain control of the final installation of the device, **Residential Gas 3, Generation 2 (25-1075/25-1080/25-1081)**, upon only specifically approved host devices. Compliance to Rule Part 15.247 has been demonstrated by testing the device for Radiation Emissions upon those specific host devices listed below:

For **Residential Gas 3, Generation 2 (25-1075)**, the host device produced by manufacturer Elster American Meter Company (formerly known as American Meter Company) model AC-250 Gas Meter

For **Residential Gas 3, Generation 2 (25-1080)**, the host device produced by manufacturer Actaris (formerly known as Sprague Meter Company and formerly known as Schlumberger) model 250 Gas Meter

For **Residential Gas 3, Generation 2 (25-1081)**, the host device produced by manufacturer Sensus (formerly known as Invensys, formerly known as Rockwell, formerly known as Equimeter) model RT-275 Gas Meter

Limited Modular Approval is sought for equipment authorization upon these specified host devices. The Grantee, Cellnet, controls the end product's installation upon these specific host devices through particular installation guidelines by trained personnel supervised by Cellnet. The module can only be installed upon the host device in one particular mechanical orientation with specific screws and fasteners supplied by Cellnet. The Grantee, Cellnet, is responsible that these devices are maintained properly and remain installed correctly through published installation guidelines. Tampering with the installed device is monitored by the Grantee, Cellnet, by mechanical and electronic signal means. The installation upon the specified host devices listed above are similar to the conditions and mechanical orientations in which the modules were tested to comply with Radiated Emissions requirements.