Request for Limited Modular Approval

Sensys Networks, Inc is requesting a Limited modular approval for our VSN240 sensor and RP240 products. The RP240 implements the exact same circuit design as the VSN240, minus the magnetic sensors. They also run different software images. Below we have addressed and adhered to seven of the eight requirements of the Modular application criteria. The request for a limited approval opposed to a complete modular approval comes in regards to the shielding of our products (see question 1).

Sensys Networks will retain total control over the final installation of both the VSN240 and RP240, as they will be factory tuned, and be installed in completely self contained units. Installation of the modular component will never be done by the customer, therefore, full compliance of the end product is always ensured.

The labeling of either product will incorporate a label on the outside cover, that will define that device contains FCCID TDB-VSN240.

1. The modular transmitter must have its own RF shielding. This is intended to ensure that the module does not have to rely upon the shielding provided by the device into which it is installed in order for all modular transmitter emissions to comply with Part 15 limits. It is also intended to prevent coupling between the RF circuitry of the module and any wires or circuits in the device into which the module is installed. Such coupling may result in non-compliant operation.

   The EUT complied with all FCC Part 15 limits without ANY shielding, because our product does not depend on shielding to keep us within the standardized limits. Either device, VSN240 and RP240 is a complete standalone device, with no opportunity for coupling.

2. The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with Part 15 requirements under conditions of excessive

data rates or over-modulation.

The VSN240 and RP240 have buffering in both the microprocessor and the radio.

3. The modular transmitter must have its own power supply regulation. This is intended to ensure that the module will comply with Part 15 requirements regardless of the design of the power supplying circuitry in the device into which the module is installed.

   The power supply for the transmitter does have its own power regulator.

4. The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204(c). The antenna must either be permanently attached or employ a "unique" antenna coupler (at all connections between the module and the antenna, including the cable). Any antenna used with the module must be approved with the module, either at the time of initial authorization or through a Class II permissive change. The "professional installation" provision of Section 15.203 may not be applied to modules.

   Both the VSN240 and RP240 utilize the same permanently attached antenna, which has been has been tested and passed all FCC limitations.

5. The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing. This is intended to demonstrate that the module is capable of complying with Part 15 emission limits regardless of the device into which it is eventually installed. Unless the transmitter module will be battery powered, it must comply with

the AC line conducted requirements found in Section 15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites; unless they will be marketed with the module (see Section 15.27(a)). The length of these lines shall be length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified or commercially available (see Section 15.31(i)).

It was tested in a stand alone configuration, with a battery (without any ferrites) providing DC power.

6. The modular transmitter must be labeled with its own FCC ID number, and, if the FCC ID is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: XYZMODEL1" or "Contains FCC ID: XYZMODEL1." Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.

   The modular transmitter will be printed on the circuit board, and both the cases for the VSB240 and RP240 will have the necessary labeling.

7. The modular transmitter must comply with any specific rule or operating requirements applicable to the transmitter and the

manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization. For example, there are very strict operational and timing requirements that must be met before a transmitter is authorized for operation under Section 15.231. For instance, data transmission is prohibited, except for operation under Section 15.231(e), in which case there are separate field strength level and timing requirements. Compliance with these requirements must be assured

Both devices are factory tuned, and require no special instructions.

8. The modular transmitter must comply with any applicable RF exposure requirements. For example, FCC Rules in Sections 2.1091, 2.1093 and specific Sections of Part 15, including 15.319(i), 15.407(f), 15.253(f) and 15.255(g), require that Unlicensed PCS, UNII and millimeter wave devices perform routine environmental evaluation for RF Exposure to demonstrate compliance. In addition, spread spectrum transmitters operating under Section 15.247 are required to address RF Exposure compliance in accordance with Section 15.247(b)(4). Modular transmitters approved under other Sections of Part 15, when necessary, may also need to address certain RF Exposure concerns, typically by providing specific installation and operating instructions for users, installers and other interested parties to ensure compliance.

   This information is contained in the VSN240 FCC test results document.

_____ VP Engineering, October 13, 2005

Robert A Kavaler