## Thomas N. Cokenias EMC & Radio Approvals

Test & Consulting Services for Commercial, Military, International Compliance P.O. Box 1086

El Granada, CA 94018 email: tom@tncokenias.org

Compliance Certification Services 561F Monterey Road Morgan Hill, CA 95037

Attention: Mike Kuo

Re: Limited Modular approval for Part 15 DTS Product

Applicant: Invensys Controls FCC ID: **QI2-EMS2400** 

Dear Mike,

Invensys has developed a 2405-2475 MHz DTS product for which they are seeking **limited modular approval**. The transceiver board will be used in a variety of products manufactured by Invensys, such as utility meters, thermostats, and energy management systems.

The referenced device is a single board product with a permanently attached omni monopole antenna or with an internal inverted F printed circuit antenna Maximum output power is 4.49 dBm nominal.

FCC Public Notice DA00-1407, released June 26, 2000, contains the equipment authorization requirements for a modular or limited modular certification. Eight basic requirements are called out. Relevance to the Invensys product with respect to each requirement are as follows:

## 1. The modular transmitter must have its own RF shielding.

The Invensys product referenced above (hereafter the EUT) has its own shield can. Tests show the EUT requires no additional shielding to meet radiated emissions.

## 2. The modular transmitter must have buffered modulation/data inputs

The EUT **does not** have buffered data inputs. Invensys will control the designs of the products in which the EUT will be incorporated and as such will be able to insure that data rates and voltage levels will not result in undesired operation and will continue to adhere to Part 15 requirements.

## 3. The modular transmitter must have its own power supply regulation.

The EUT **does not** have its own power supply regulation. Invensys will control the designs of the products in which the EUT will be incorporated and as such will be able to insure that DC power input levels will not result in undesired operation and will continue to adhere to Part 15 requirements.

tel: 650-726-1263 fax: 650-726-1252 tom@tncokenias.org

4. The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204(c).

The EUT has a printed circuit board antenna and **complies** with this requirement.

5. The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing.

The EUT was tested stand alone and **meets** this requirement.

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.

The EUT has its own FCC ID label. For those products that will incorporate the EUT, invensys will place an additional label for products that obscure a clear view of the EUT FCC ID label.

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.

**User instructions** will be submitted with the EUT application for certification.

8. The modular transmitter must comply with any applicable RF exposure requirements.

The EUT meets MPE limits at a calculated 3.5 cm separation distance.

Invensys will have control over the future designs of products that will use the referenced modular transceiver. As such, Invensys will be in the position to insure that operating parameters will be within the limits that will maintain compliance with all Part 15 requirements.

A copy of this letter has been submitted to Invensys Controls.

4n When

If you have questions or need further information, please contact the undersigned.

Sincerely,

T.N. Cokenias Agent for Invensys

tel: 650-726-1263 fax: 650-726-1252 tom@tncokenias.org