Excellence in Compliance Testing

Certification Exhibit

FCC ID: SDBLGZ1000
IC: 2220A-LGZ1000

FCC Rule Part: 15.247, CFR 47 Part 24 Subpart D, Part 90 Subpart I, Part 101 Subpart C
IC Radio Standards Specification: RSS-210, RSS-119, RSS-134

ACS Project Number: 10-0444

Manufacturer: Sensus Metering Systems, Inc
Model: 560 Xz

RF Exposure

General Information:

Applicant: Sensus Metering Systems, Inc.
ACS Project: 10-0444
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

Technical Information for Flexnet Radio:

Antenna Type: Printed Monopole antenna
Antenna Gain: 0 dBi
Maximum Transmitter Conducted Power: 30.13 dBm
Maximum System EIRP: 30.13 dBm, 1030.39 mW
Exposure Conditions: Greater than 20 centimeters

Technical Information for Zigbee Radio:

Antenna Type: Meandered F, PCB antenna
Antenna Gain: -6 dBi
Maximum Transmitter Conducted Power: 21.17 dBm, 130.9 mW
Maximum System EIRP: 15.17 dBm, 32.9 mW
Exposure Conditions: Greater than 20 centimeters

MPE Calculation

The Power Density (mW/cm^2) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = power density (in appropriate units, e.g. mW/cm2)
P = power input to the antenna (in appropriate units, e.g., mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Table 1: Flexnet Radio

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
Transmit Frequency (MHz)	**Radio Power (dBm)**	**Power Density Limit (mW/Cm2)**	**Radio Power (mW)**	**Antenna Gain (dBi)**	**Antenna Gain (mW eq.)**	**Distance (cm)**	**Power Density (mW/cm^2)**
959.95625	30.13	0.64	1030.39	0	1.000	20	0.205

Table 2: Zigbee Radio

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
Transmit Frequency (MHz)	**Radio Power (dBm)**	**Power Density Limit (mW/Cm2)**	**Radio Power (mW)**	**Antenna Gain (dBi)**	**Antenna Gain (mW eq.)**	**Distance (cm)**	**Power Density (mW/cm^2)**
2480	21.17	1.00	130.92	-6	0.251	20	0.007

Installation Guidelines

The installation manual should contain text similar to the following advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

RF Exposure

In accordance with FCC requirements of human exposure to radio frequency fields, the radiating element shall be installed such that a minimum separation distance of 20 centimeters will be maintained.

Conclusion

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.