Excellence in Compliance Testing

Certification Exhibit

FCC ID: SDBTGB001HP
IC: 2220A-TGB001

FCC Rule Part: CFR 47 Part 24 Subpart D, Part 101 Subpart C
IC Radio Standards Specification: RSS 119, RSS 134

ACS Project Number: 12-2044

Manufacturer: Sensus Metering Systems, Inc.
Model: TGB001HP

RF Exposure

General Information:

Applicant: Sensus Metering Systems, Inc.
ACS Project: 12-2044
Device Category: Fixed
Environment: General Population/Uncontrolled Exposure

Technical Information:

Antenna Type: Monopole Antenna
Antenna Gain: 12.15 dBi
Maximum Transmitter Conducted Power: 45.08 dBm
Maximum System EIRP: 57.23 dBm, 528,445.3 mW
Exposure Conditions: Greater than 265 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)

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)
930.5	45	0.62	31622.78	12.15	16.406	265	0.588
940.0125	45.08	0.63	32210.69	12.15	16.406	265	0.599
928.925	44.97	0.62	31405.09	12.15	16.406	265	0.584
932.25	44.98	0.62	31477.48	12.15	16.406	265	0.585
941.4875	45.08	0.63	32210.69	12.15	16.406	265	0.599
952.5	44.57	0.64	28641.78	12.15	16.406	265	0.532
959.925	44.09	0.64	25644.84	12.15	16.406	265	0.477

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 265 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.