Excellence in Compliance Testing

Certification Exhibit

FCC ID: SDBS100QZ

FCC Rule Part: Part 90 Subpart I

ACS Project Number: 12-2077

Manufacturer: Sensus Metering Systems, Inc.
Model: S100QZ

RF Exposure

General Information:

Applicant: Sensus Metering Systems, Inc.
ACS Project: 12-2077
Device Category: Fixed
Environment: General Population/Uncontrolled Exposure

Technical Information:

Antenna Type: Whip Antenna
Antenna Gain: 12.21 dBi (10.06 dBd)
Maximum Transmitter Conducted Power: 40.9 dBm
Maximum System EIRP: 53.11dBm, 204,644.5 mW
Exposure Conditions: Greater than 230 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)

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)**
461.5625	40.9	0.31	12302.69	12.21	16.634	230	0.308

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 230 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.