

Transmitter Certification

Test Report

FCC ID: SDBELS

**FCC Rule Part: CFR 47 Part 24 Subpart D, Part 90 Subpart I, Part 101
Subpart C**

ACS Report Number: 05-0268-LD

Manufacturer: Advanced Metering Data Systems, LLC
Equipment Type: Electricity Meter Transmitter
Model: AMDSELS

RF Exposure

General Information:

Applicant: ADVANCED METERING DATA SYSTEMS, LLC
 ACS Project: 05-0268
 FCC ID: SDBELS
 Device Category: Mobile
 Environment: Uncontrolled/General Population

Technical Information:

Antenna Type: PCB - dual helix
 Antenna Gain: 0dBi
 Max Transmitter Output Power: 30.08 dBm
 Max System EIRP: 30.08 dBm
 Operating Configuration: Fixed Mounted to a Wall
 Exposure Conditions: Greater than 20cm

MPE Calculation

The Power Density (mW/cm²) 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)

Calculations were performed at low and high channels within the band of operation. The low channel coincided with the maximum transmitter output power of 1W.

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
Transmit Freq. (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)
896.05	30.08	0.60	1018.59	0	1.000	20	0.203
959.93125	28.45	0.64	699.84	0	1.000	20	0.139

Installation Guidelines

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

“RF Exposure (Intentional Radiators Only)

In accordance with FCC requirements of human exposure to radiofrequency fields, the radiating element shall be installed such that a minimum separation distance of (20cm).”

Conclusion

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