

AT4 wireless, S.A.U.

Parque Tecnológico de Andalucía, C/ Severo Ochoa nº 2
29590 Campanillas - Malaga
Spain

Date: **Sept 22, 2016**

RF exposure analysis for the equipment LS-G6-ANALOG-4 (FCC ID: 2AHN4-LS-G6-ANALOG4; IC: 21260-LSG6ANALOG4)

The device LS-G6-ANALOG-4 (FCC ID: 2AHN4-LS-G6-ANALOG4; IC: 21260-LSG6ANALOG4) is an analog wireless datalogger integrating a 902-928 MHz FHSS transmitter. This device is to be used only for fixed and mobile applications.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all the persons and must not be co-located or operating in conjunction with any other antenna or transmitter except as under the conditions described KDB 447498 D01 General RF Exposure Guidance.

MPE exposure limits

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure:

Frequency Range (MHz)	Power density (mW/cm ²)	Averaging time (minutes)
300 – 1500	f (MHz) /1500	30

The table below is excerpted from RSS-102, Issue 5, 4, titled "Table 4: RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)":

Frequency Range (MHz)	Power density (W/m ²)	Averaging time (minutes)
300-6000	0.02619 f ^{0.6834}	6

Compliance analysis

Using the equation $S = \frac{PG}{4\pi R^2}$ to calculate the exposure to electromagnetic fields

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)

compliance with FCC/IC MPE limits is demonstrated following the calculations:

Frequency Band	Mode	Frequency Range (MHz)	Maximum conducted output power (dBm)	Duty cycle (%)	Antenna gain (dBi)	Evaluation distance for compliance with MPE limits (cm)	$S = \frac{PG}{4\pi R^2}$ (mW/cm ²)	FCC MPE limit (mW/cm ²)	IC MPE limit (mW/cm ²)
902-928 MHz	FHSS-LORA	902.30 - 914.90	18,17	100,0%	3,00	20	0,02605	0,60153	0,27405

Yours sincerely,



p.a.

Name: Mr Jordi Llosa
Position: CTO
Company: Worldsensing, S.L.
Phone: +34 93 418 05 85
e-mail: jllosa@worldsensing.com