TEKTELIC
communications

Federal Communications Commission
Authorization and Evaluation Division

Date: August 14th, 2019

Subject: Product Family Description Regarding Application for Certification of FCC ID: 2ALEPT0006338

To Whom It May Concern:

The Smart Room Sensor is a LoRa sensor for IoT applications. It has two RF variants: NA and DN. The NA and DN variants have the same Tx band, circuitry, antenna, and output power. However, they have different Rx band and antenna.

The Smart Room Sensor also has two functional variants: Base and PIR. Therefore, the product has a total of four variants: NA Base, NA PIR, DN Base, and DN PIR, with product codes T0006115, T0006116, T0006163, T0006164, respectively.

The Base and PIR functional variants are not different in RF circuitry, but are only different in their transducers: Base has the digital/analog input transducer and a moisture detector that PIR does not have, but lacks in the PIR human motion detector. The available transducers in both These differences have been shown in the following table:

Sensing Function	Smart Room Sensor Variant	
	Base	**PIR**
Ambient Temperature	X	X
Ambient Relative Humidity	X	X
MCU Temperature	X	X
Ambient Light	X	X
Accelerometer	X	X
Moisture	X	
PIR (Human Motion Detector)		X
Reed Switch	X	X
External Connector (Digital Input)/ Remote Temperature Sense (Analog Input)	X	

Moisture detection is present in Base only, and is provided by the microcontroller's capacitive sense feature and two metal probes that are fixed to the inside of the Sensor's plastic enclosure. The PIR human motion detector is specific to the PIR variant, and consists of a PIR element and circuitry that signals the microcontroller if human motion is detected within the PIR element field of view. The External Connector, which is only on Base, is a 2-pin externally available connector. The connector can be configured as a digital or an analog input. In the digital mode, it can detect closed and open connections. In the analog mode, it can be connected to a thermistor for remote temperature sensing.

Sincerely,

Tom Danshin,
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TEKTELIC Communications Inc.