



Subject: C2PC - Differences between HMN SENSA.VALV and SENSA.PRES/SENSA.TEMP

Applicant: EDGE TECHNOLOGIES SAS

Product (PMN): SENSAIO Model (HVIN): SENSA915A

Host (HMN): Original: SENSA.VALV - News: SENSA.PRES & SENSA.TEMP

FCC ID: 2A2T5-SENSA915A IC ID: 29177-SENSA915A

To Whom It May Concern:

Here is a description of differences between *HMN SENSA.VALV* and *SENS.PRES/SENSA.TEMP*.

SENSAiO products are *wireless transmitters with data measurement capability.* It is composed of 2 elements :

- Electronic cartridge with radio chipset and embedded antenna which is strictly identical to SENSA.VALV described in initial FCC and ISED certification
- Deported sensor boards for process measurement: Pressure board for SENSA.PRES and Temperature board for SENSA.TEMP

RF chipset and antenna are part of Electronic cartridge which is common to SENSA.VALV, SENSA.PRES and SENSA.TEMP.

Differences are sensor boards and dedicated process connection mechanical part that allows to measure different physical phenomenon like :

- Valve position for SENSA. VALV with I²C IMU
- Pressure for SENSA.PRES with I²C piezoresistive pressure sensor
- Temperature for SENSA. TEMP with RTD or TCK temperature probe

Behavior of these 3 HMN are identical:

- 1. Cartridge wakes up periodically
- 2. Cartridge initiates measure on sensorboard
- 3. Sensorboard transmits measured data to Cartridge
- 4. Cartridge transmits data in RF (LoRa or BLE)
- 5. Cartridge goes to sleep state



Compliance for RF exposure requirement is demonstrated in test report.

RF reports differences explanation:

RF Reports shows differences between *HMN SENSA.VALV* and *SENSA.PRESS/SENSA.TEMP*, under regulatory limits. Edge Technology confirms that neither antenna PCB design, RF passives values or gain setting have been changed and *VALV*, *PRES* and *TEMP* cartridges are manufactured with identical bill of materials.

1% and 10% precision RF passives deviations and mechanical differences between *HMN SENSA.VALV* and *SENSA.PRES/SENSA.TEMP* causes these gain disparities. Cartridge tested with *HMN SENSA.VALV* have been selected among ten other cartridges in order to have a maximum gain setup. *SENSA.PRES* and *SENSA.TEMP* cartridges have not been selected so their gains can only be lower.

If you have any queries, please do not hesitate to contact us.

Regards,

Thomas GUILLET