Osensor operating instructions

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1. O-sensor overview

The O-sensor is a wireless device for monitoring temperature, humidity, shock and vibration and light levels.

The device is powered by a pair of AAA Alkaline batteries.

2. O-sensor Activation

1   Activation of O-sensor is done by pressing the push button for at least 5 seconds.

2   Once the push button is pressed, the two indicators light up in green. After 5 seconds the indicator gives a short red blink and the device start to operate.

If the push button press is shorter than 5 seconds, the device will not start to operate

3. Normal operation light sequence

The leds blinking occurs sequentially first A (all blinking) then B.

In the case of normal sensor operation without errors and falls, the following combinations of led exist:

	LedA	LedB	Repetitionrate*	Comments
1	GREEN-3blinks	RED-1blinks	5min	Publish data and MQTT ACK is OK
2	GREEN-1blinks	RED- 2blinks	1min	GetTemperatureStart
3	GREEN-1 blinks	GREEN-1 blinks	When necessary	Capacitor charging May be repeated several times until charging is completed
4	GREEN- const	RED- const	The led A and B are on all time while trying to get time from modem	Get current time from modem. Only after start.
5	GREEN-1 blinks		1 sec**	Constantly. All the time when sensor is working as standard

*Repetition rate may vary according to sensor configuration.

**All other blinks complement this Green blink.

4. AppendixA:Lightcodeslist

4.1   LedIndicationsofERRORS

TheledsblinkingoccurssequentiallyfirstA(allblinking)thenB.

	LedA	LedB	TypeofError
1	RED-3blinks	RED-2blinks	MQTTPublish failed.
2	RED-2 blinks	RED- 1blinks	GetTemperatureERROR
3	RED-2 blinks	RED- 2blinks	GetRHERROR
4	RED-2 blinks	RED- 3blinks	GetLightERROR
5	RED-2 blinks	RED- 4blinks	GetAccelerometerERROR
6	RED-2 blinks	RED- 5blinks	GetBaro ERROR

4.2   Lightsequenceforfirstpowerconnection

Aftersuccessfulcompletionofallstart-upoperations,thesensorgoesintostandby mode with extremely low energy consumption.

	LedA	LedB	comments
1	GREEN-2 blinks	RED-6 blinks	InitThreadstart
2	GREEN-2 blinks	RED- 5blinks	InitThread OK
3	GREEN-1 blinks	GREEN-1 blinks	CapacitorchargingMayberepeated severaltimesuntilchargingis completed
4	Pause10-15sec.		Modeminitialization
5	GREEN-1 blink	RED-1blinks	GetTimeanddate.Mmaybe repeated severaltimes.
6	GREEN-2 blinks	RED- 2blinks	MQTTThreadOK
7	GREEN-2 blinks	RED- 1blinks	RFThread
8	GREEN-2 blinks	RED- 3blinks	DataThreadOK. **Signoftheendoftheload.**

5. UnitMaintenance

System does not require preventive maintenance Clean only with dry cloth.

6. InstallationGuide

To be provided with the product

7. Mainspecifications

Supply	Voltage	Mobile:3.2V,Stationary: 5V
Temperature	Operational Storage	0ºCto+60ºC
Size	Length11.5cm,Width7cm, Height 2.3 cm	
OperatingHumidity	Range:	0-100%
WirelessCommunication1	Bluetooth2.4Ghz Antenna type	Internalantenna
WirelessCommunication2	Radio433Mhz Antenna type	Internalantenna
CPUCapacity	Static RAM FlashMemory	80KByte 384KByte
Sensors Temperature RelativeHumidity	Range: Accuracy: Range: Accuracy:	-30ºCto+60ºC ±0.5ºC 0-100% ±3%
BatteryPac	Type:Mobile Capacity Type:Stationary Capacity	LR03/AM-4AAAUltraAlkaline 1200 mAh PolymerLi-ionRechargableBat. 3.7V 1350mAh

8. Certification :

FCCID:2AAEP-OSENSOR
IC:11128A-OSENSOR

9. ClassB Warnings

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

10. ClassBWarnings

ThisClassBdigitalapparatuscomplieswithCanadianICES-003. *Cet appareil numérique de classe B est conforme à la norme canadienne ICES-003*

11. Modification statements

1) CartaSenseLtd.hasnotapprovedanychangesormodificationsto this device by the user. Any changes or modifications could void theuser's authoritytooperate the equipment.
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2) *CartaSenseLtd.n'approuveaucunemodificationapportéeà l'appareil par l'utilisateur, quelle qu'en soit la nature. Tout changementoumodificationpeuventannulerledroitd'utilisationde l'appareil par l'utilisateur.*

12. RFExposureWarnings

1)Statement:RFExposure -Thisdeviceisonlyauthorized forusein a mobile application. At least 20 cm of separation distance betweenthe(O-SensorMobile&Stationary)deviceandtheuser's body must be maintained at all times

13. FCC/ISEDRegulatorynotices

1) Interferencestatement

i. This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the followingtwoconditions:(1)thisdevicemaynotcauseinterference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

ii. *Le présent appareil est conforme aux CNR d'Industrie Canada applicablesauxappareilsradioexemptsdelicence.L'exploitationest autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

2) Wirelessnotice

i. This device complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency(RF)ExposureGuidelinesandRSS-102oftheISEDradio frequency (RF) Exposure rules. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter

ii. Le présent appareil est conforme à l'exposition aux radiations FCC / ISED définies pour un environnement non contrôlé et répond aux directivesd'expositiondelafréquencedelaFCCradiofréquence(RF) et RSS-102 de la fréquence radio (RF) ISED règles d'exposition. L'émetteur ne doit pas être colocalisé ni fonctionner conjointement avec à autre antenne ou autre émetteur.

b.Warranties

Themanufacturer'swarrantyis1yearByCartasensefromdateofpurchase. See the website www.cartasense.comfor details.

Makesuretocarefullyfollowtheinstructionsforinstallationandcalibration,oryou may damage the product.

CartaSenseLtd.reservesallrightstothisdocumentandtheinformationcontainedherein. Products,names,logosanddesignsdescribedhereinmayinwholeorinpartbesubjectto intellectual property rights.

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