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Product sheet K-Meleon BOX 4* (On shelf)

DESCRIPTION

The sensor **K-Meleon EYE**, marketed by GST (GreenSysTech) and intended for the remote monitoring of the filling / emptying of containers **of solids and liquids**, consists of a communicating sensor autonomous in energy and its installation accessories. This sensor measures and transmits, by default **from every 5 min to every 48 hours**, various information from the container to a gateway via the LoRaWAN communication protocol, based on LoRa (Long Range) Internet of Things technology. The paid connection to this network (a few hundredths of euros per transaction per sensor excluding subscription) is the responsibility of the customer when it is managed by GST or by a LoRaWAN operator. It is free when the customer invests in his own LoraWAN infrastructure (Gateway) that he connects to his ETHERNET network. Once the sensor information is received via the Gateway by the server of the client, GST or a third party provider, the tracking of the container park takes place via a paid web application, with login and password, when the service is provided by GST.

Characteristics

- Dimensions: 95 mm (D-max) x 110 mm (H-max)
- Range of the beam oriented towards the inside of the container:
 - **Short range : 50 cm – 14 m** – Accuracy : +/-4 cm
 - **Long range : 14 m – 21 m** – Accuracy : 1.5 %
- Range of the beam in outdoor environment: Depending on reflectivity
- Weight : 550g
- Index IP : 65
- Operating temperature: -10°C to +60°C
- Material : ABS
- Fixation : (1) Drilling the silo roof + (2) Gluing the nut + (3) Screwing the sensor into the nut
- Antenna : (1) internal to the sensor OR (2) optional remote wire antenna
- Wireless communication standard protocol : LoRaWan (LPWA) EU868/AS923/US915
- Energie : **Batteries**
- Fréquence de mesure + transmission des données : Variable from **5 min to every 48 hours**
- **4* = 4 implemented features** in this variant of sensor:
 - Fill rate or level (% or m), Batteries level (V)
 - Air temperature (°C), Air moisture rate (%)
- Other features implemented on demand to this version of custom made sensor :
 - *Detection of internal temperature rise in the container above a pre-set threshold*
- Installation on the roof of the silo near the center, facing downwards, VERTICAL or OBLIQUE



Application

- **Remote monitoring of the FILLING RATE (FR) of containers of solids or liquids** (non-flammable)
- ¹Types of containers: Vertical, wall, suspended silos, tanks, tanks, stock of raw materials or production inputs
- ²Type of content: livestock feed, milk, sand, whey,... (depending on density, see with GST)

Advantages

- **Easy and rapid installation by the client** from the manual and accessories
- **Energy autonomy up to 10 years with 1 measure and transmission every 7 hours**, under the conditions: new battery recommended by GST / temperature of 25 °C / good communication channel.
- Sensor compliant with LORAWAN public operated networks (dedicated to connected objects) and private network. Sigfox version of the sensor is planned for 2020.
- Proposed in **ready to use pack** : (i) Sensor + (ii) DATA (unlimited number of uplink in the respect of the protocol + (iii) Access to the online supervision platform (Subscription)
- **Ability to remotely modify the measurement frequency** by sending paying commands, called **downlink**, to the sensor via the LORA network. Example: **in SUMMER choose 1 measurement per 12H** and change it **in WINTER at 1 measurement per 4H** to save energy in battery version