

Installation of an Inclinometer : TiltLog

Installation procedure – EXTERNAL

Code **FE_006**
Owner Département IoT

Revisions

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1. INTRODUCTION

TiltLog is a highly accurate inclinometer, designed for long term monitoring, and working with the low power transmission protocol LoRaWAN (EU868MHz).

2. POWERING THE DEVICE

Depending on the device, you may need to plug the battery that was unplugged for safety reasons during shipment or for saving battery lifetime during long storage. Battery is always included in the device, so you just have to unscrew the 4 screws of the TiltLog and plug the cable of the battery in the connector. Be careful when screwing again to ensure watertightness.

3. PREREQUISITE

The TiltLog transmits data over LoRaWAN. Before installation, **please ensure there is a LoRaWAN coverage where the device is going to be installed.**

Regarding the coverage, there are two possibilities: via Socotec Monitoring gateway or via Orange connectivity. Please refer to IoT Socotec Monitoring France department (Fablab) for any further information.

4. INSTALLATION

4.1. TiltLog orientation

The TiltLog measures rotations around two axis :

- X axis, represented in blue on the drawing.
- Y axis, represented in yellow on the drawing.

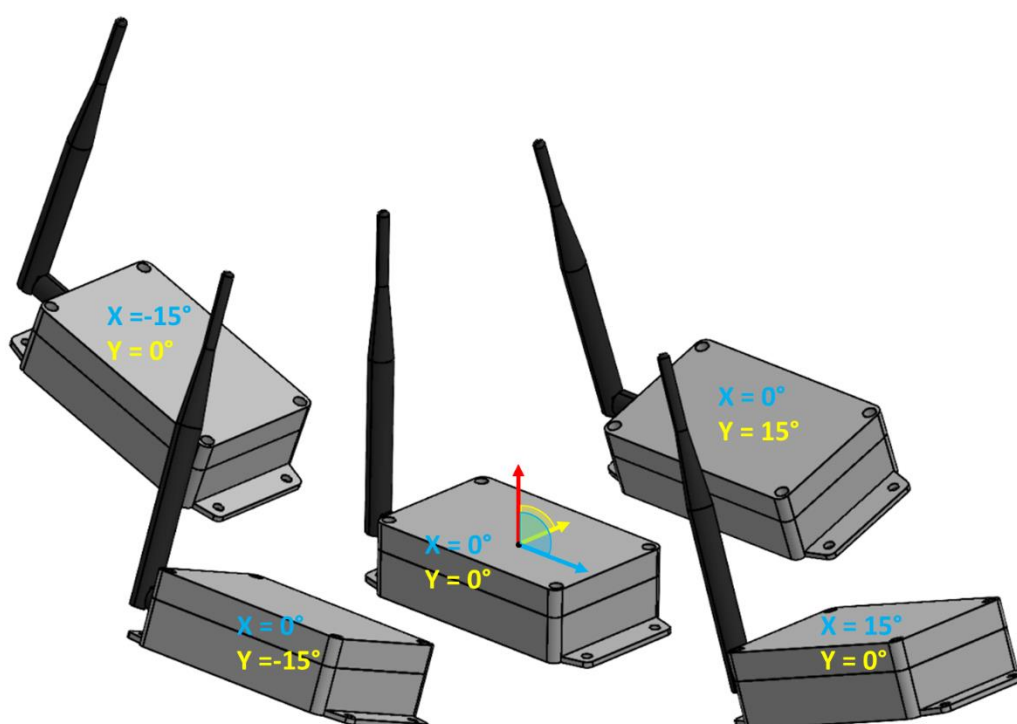


Figure 1: TiltLogs axis orientation

4.2. TILTLOG INSTALLATION

TiltLog is an high accuracy inclination sensor, best performances are achieved when it is installed horizontally, roughly around 0°.

4.2.1. Horizontal surface installation

On any horizontal surface, i.e. any floor or roof which inclination do not exceed 10¹ degrees, the Tiltlog must be laid flat. The logo and the antenna must point in the upright direction.



Fig.2 : good installation (above view)



Fig.3 : acceptable² installation (above view)

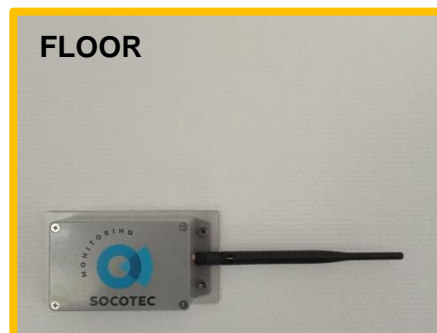


Fig.4 : acceptable² installation (above view)

TiltLog	GOOD	TiltLog	GOOD	TiltLog	GOOD
Antenna	GOOD	Antenna	ACCEPTABLE	Antenna	ACCEPTABLE

¹: angle between the surface and an ideal horizontal surface (absolute value).

²: installation acceptable only on railway sleepers

4.2.2. Vertical surface installation

On any vertical surface, i.e. any wall or partition which inclination do not exceed 10² degrees, the Tiltlog should be placed flat on a metal bracket. The logo and the antenna must point in the upright direction.



Fig.5 : good installation (front view)

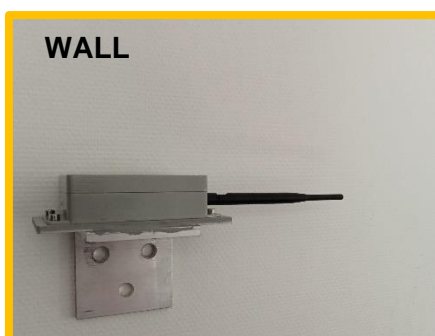


Fig.6 : acceptable installation (front view)



Fig.7 : bad installation (front view)

TiltLog	GOOD	TiltLog	GOOD	TiltLog	BAD
Antenna	GOOD	Antenna	ACCEPTABLE	Antenna	GOOD

³: angle between the surface and an ideal vertical surface (absolute value).

4.1. After the installation

An **installation report is mandatory**. Each sensor must be **photographed and listed with its serial number**.

In order to assert that every sensor has been properly installed, check the data and verify that :

- $X \simeq 0^\circ$
- $Y \simeq 0^\circ$