Doc. Type:	Product
Sub. Type:	Specification
Status:	**Rev 3.0**
P/N:	Newsteo Temperature LOG range - 1 sensor
Author:	AC

Newsteo Temperature LOG range - 1 sensor
Product Specification

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Revisions

Revision	Issue Date	Author	Comments
3.0	2020 January 24th	Newsteo	

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1 Introduction

Object:
Define the products specifications in term of technical characteristics, physical dimensions, aperture, accessories and casing.
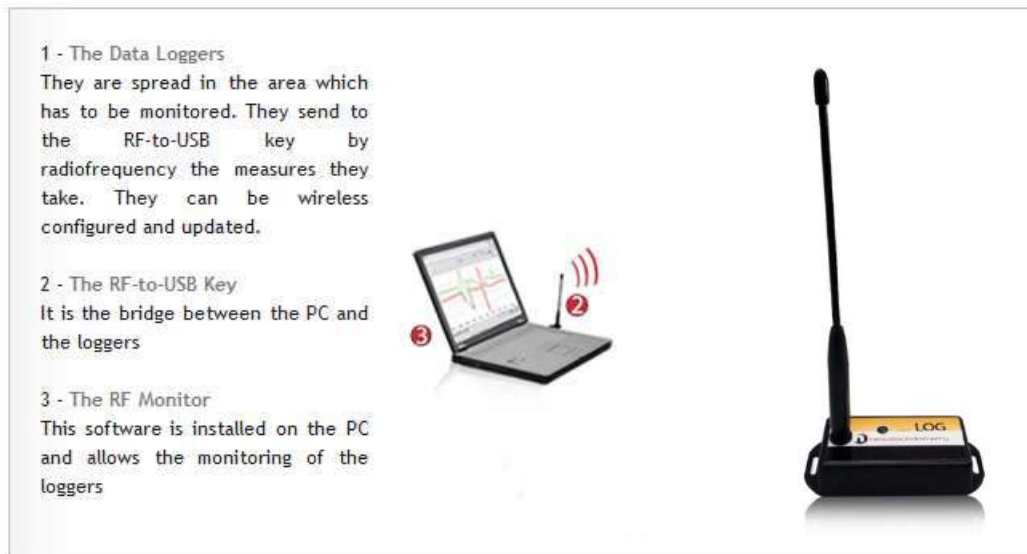
Products: LOG temperature range, Data Loggers with 1 temperature sensor

References	Description
PFPN-LOG26-001	Newsteo temperature Data Logger with external antenna and high accuracy

References	Description
PFPN-LOG86-001	Newsteo temperature Data Logger with external antenna and high accuracy IP65

References	Description
PFPN-LOG36-001	Newsteo temperature Data Logger with external antenna and high accuracy IP65 EN12830 certified

2   Summary of the product functioning

1 - The Data Loggers
They are spread in the area which has to be monitored. They send to the RF-to-USB key by radiofrequency the measures they take. They can be wireless configured and updated.

2 - The RF-to-USB Key
It is the bridge between the PC and the loggers

3 - The RF Monitor
This software is installed on the PC and allows the monitoring of the loggers

Figure 1: Functioning

The Data Loggers can be used in two different modes:

- **Monitoring** (real time monitoring applications): the data logger sends in real time its measurements to a PC or a Gateway. If a measurement is not received by it, it stores it inside its internal memory and sends it to the receiver on the next communication channel
- **Record / Restitution** (a posteriori monitoring): the data logger records in its embedded memory the measurements it takes. The user can download on the PC all the stored measurements when he wants.

3 Newsteo Data Logger

3.1 Technical characteristics

Preliminary specification – Subjected to change without prior notification.
TBC : To be confirmed
TBD : To be defined
NA: Not applicableMeasurement accuracy

	LOG26	LOG86	LOG36
Type	High precision Temperature	High precision Temperature	High precision Temperature
Appearance	Internal sensor	Internal sensor	Internal sensor
Operating temperature	-40°C to +70 °C	-40°C to +70 °C	-40°C to +85 °C
Resolution	@12 bits (0.1°C)	@12 bits (0.1°C)	@12 bits (0.1°C)
Accuracy	± 0,3°C [-30°C…+70°C] ± 1°C [-40°C…-30°C]	± 0,3°C [-30°C…+70°C] ± 1°C [-40°C…-30°C]	± 0,3°C [-30°C…+70°C] ± 1°C [-40°C…-30°C; +70°C…+85°C]
Product latency (response time)	≤10 min	≤10 min	≤10 min
Sensor drift		Excellent long-term stability	

3.1.1 Casing

Characteristics	LOG26	LOG86	LOG36
IP Level of the Data Logger	IP54	IP65	IP65

3.1.2 Power supply / Autonomy

Characteristics	LOG26	LOG86	LOG36
Battery	½ AA lithium Thionyle (included)	A Lithium Thionyl (included) with plug-in connector	AA Lithium Thionyl (included) with plug-in connector
Autonomy @ 25°C	Up to 2 years At 25°C with a frequency measures of 10 minutes. Average value which can slightly vary depending on the use. It is given with the product working in non alert mode.	Up to 5 years At 25°C with a frequency measures of 10 minutes. Average value which can slightly vary depending on the use. It is given with the product working in non alert mode.	Up to 3 years At 25°C with a frequency measures of 10 minutes. Average value which can slightly vary depending on the use. It is given with the product working in non alert mode.

Using the product at high temperature highly reduces its autonomy. A LOG26 used at 60°C has autonomy of about 1 month.

3.1.3 Antenna and RF range

Characteristics	LOG26	LOG86	LOG36
RF connector	SMA connector	SMA connector	SMA connector
Antenna	½ wave antenna (included)	½ wave antenna (included)	½ wave antenna (included)
Radio range	900 meters	900 meters	900 meters

3.1.4 Other characteristics

Characteristics	LOG26	LOG86	LOG36
LED	1 bi-color LED	1 bi-color LED	No LED
Memory Capacity	32 256 measurements with date and time		
Time resolution	1s		
Time deviation	+/- 2 min/month @ 25°C		
Time retention	Main battery life time. Time kept: - 3 min if the main battery is removed, when the main battery is at 3,6V - 1 min if the main battery is removed, when the main battery is at 2,2V - Time lost if the main battery is under 2 V.		
Flash life time	Up to 100 000 cycles (meaning 100 years is a measure is done every second)		
ILS	ILS integrated for several functions: - wakeup of the product in hibernate mode - take of a measure outside of the frequency measure set		

3.2 Casing specification

	LOG26	LOG86	LOG36
Features	ABS plastic casing Color: black The casing integrates 2 holes for fixation on a wall or inside a parcel.	Plastic casing The casing integrates 2 holes for fixation on a wall or inside a parcel.	Aluminium casing (4mm)
Dimensions (w/o antenna)	Flanged lid included Without antenna Length 96 mm Width 40 mm Height 20 mm To have more details on the casing size, please refer to the Annex 1.	Flanged lid included Without antenna Length 115 mm Width 58 mm Height 40 mm To have more details on the casing size, please refer to the Annex 2.	No flanged lid Without antenna Length 98 mm Width 64 mm Height 34 mm To have more details on the casing size, please refer to the Annex 3.
Weight	45g	About 130 g	About 250 g
Stickers	2 stickers on the product: - 1 sticker on the top face, giving the product range - 1 sticker on the side, giving the complete product reference and its serial number		

3.3 Starting of the Data Logger

The product is delivered with a battery inserted, in hibernate mode.
The user has to pass a magnet on the product to wake up it and to set it.
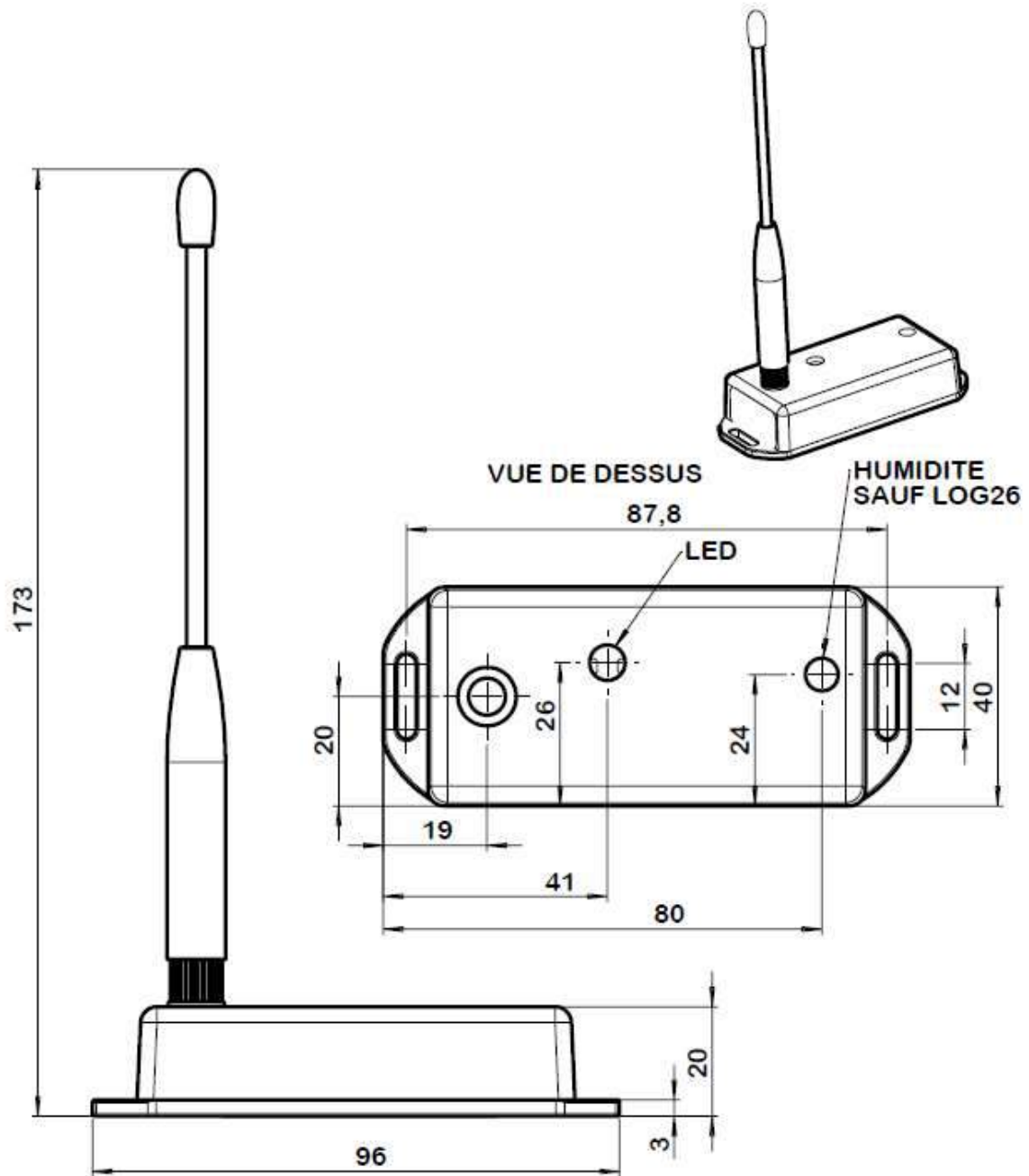The time is set in production.

3.4 Certifications

Products certified for radio use in Europe, on the frequency of 868 MHz (ISM band). For use in another area, check with local authorities.
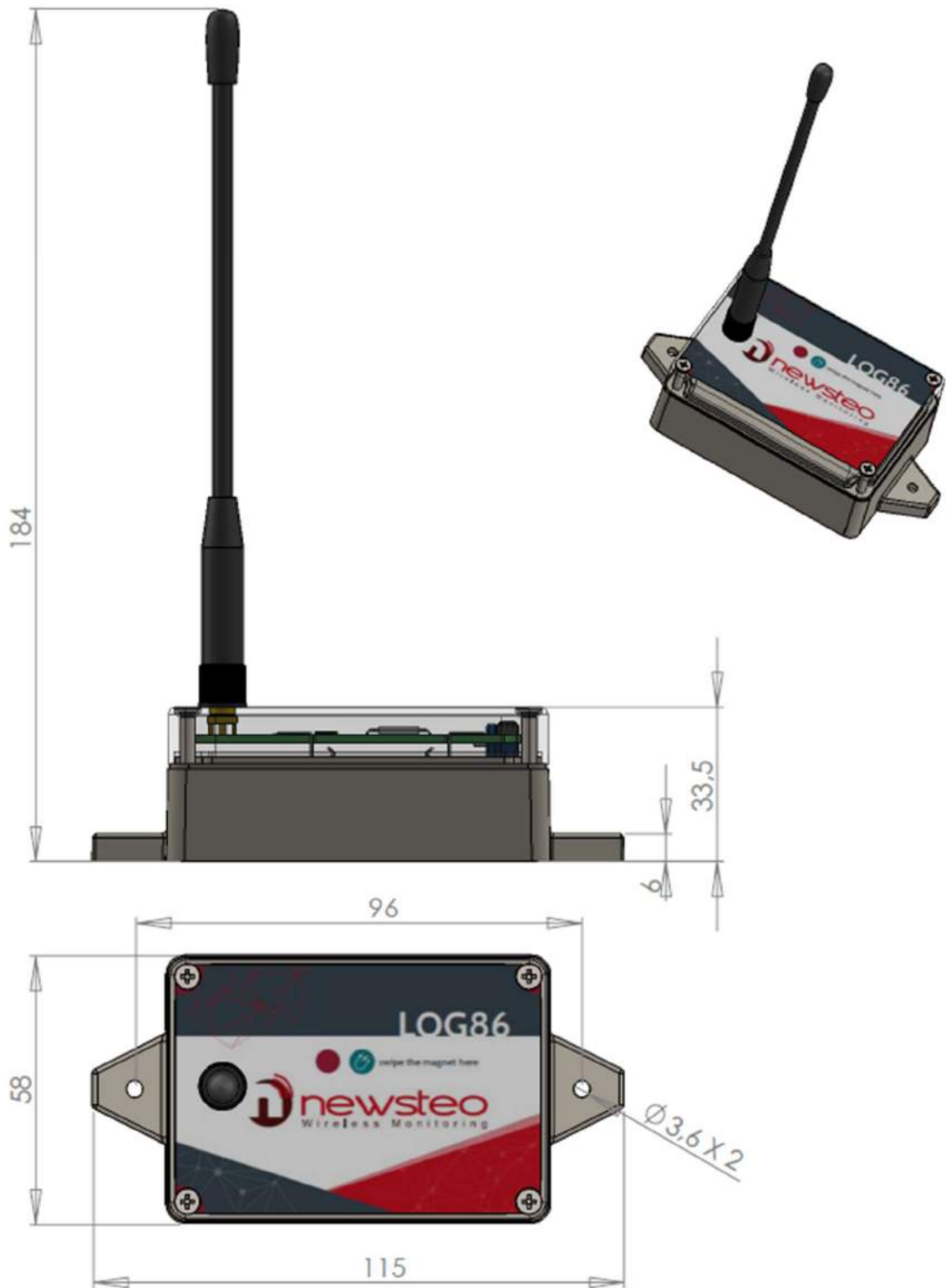
LOG36: EN12830 certified.

The certificates can be downloaded on Newsteo's website: www.newsteo.com.

On order (with additional fees), **Newsteo can provide individual calibrations performed under its COFRAC accreditation.** COFRAC is equivalent to UKAS (UK's National Accreditation Body), DAkkS (Germany), ENAC (Spain), ACCREDIA (Italy).

VUE DE DESSUS

LED

HUMIDITE
SAUF LOG26

ANNEX 2 : LOG86 DIMENSIONS

ANNEX 3: LOG36 DIMENSIONS

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