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Author:	AC

Newsteo LGS range LGS30, LGS33, LGS34, LGS35, LGS36, LGS37, LGS39
Product Specification

Revisions

Revision	Issue Date	Author	Comments
1.0	July 21th, 2011	AC	
1.1	November 7th, 2011	AC	LGS74 reference removal
1.2	January 9th, 2012	AC	LGS36 & LGS76 : 2 inputs
1.3	October 26th, 2012	AC	Correction on Measurement range (LGS39, LGS79, LGSA9) Addition of Battery life vs. Transmission period & temperature chart
1.4	November 17th 2014	AC	Addition of LGA34 reference
1.5	December 8th, 2014	AC	Precision on temperature sensor
1.6	September 5th, 2016	AC	Addition of LGS30 Removal of LGS76, LGS79, LGSA9, LGA34

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1 Introduction

Object:

Define the products specifications in term of technical characteristics, physical dimensions, aperture, accessories and casing.

Products: LGS range

	References	Interface
	PFPN-LGS30-001	0-2V
	PFPN-LGS33-001	0-2.5V
	PFPN-LGS34-001	4-20mA
	PFPN-LGS35-001	0-10V
	PFPN-LGS36-001	Relay – 2 inputs
	PFPN-LGS37-001	-50/+50mV
	PFPN-LGS39-001	Impulse

2 Summary of the product functioning
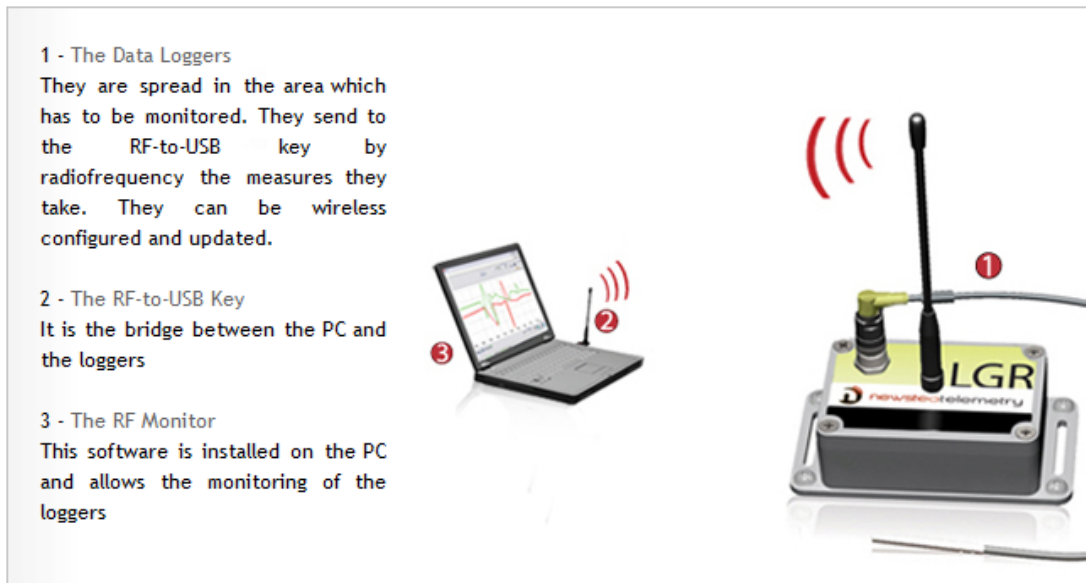
Figure 1: Functioning

The loggers can be used in two different modes:
- **Monitoring** (real time monitoring applications): the logger sends in real time its measurements to the PC. If a measurement is not received by the PC, it stores it inside its internal memory and sends it to the PC on the next communication channel
- **Record / Restitution** (a posteriori monitoring): the 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 LGS logger

3.1 Technical characteristics

Preliminary specification – Subjected to change without prior notification.

TBC : To be confirmed
TBD : To be defined
NA: Not applicable

3.1.1 Measurement accuracy / interface

The connection to the external probe is done through an external connector available on the top of the casing.

	LGS30	LGS33	LGS34	LGS35	LGS36	LGS37
Interface	0-2 V	0-2.5 V	4-20mA	0-10V	Relay	-50mV / +50m V
Number of inputs	1	1	1	1	2	1
Measurement range	0 … 2 Volt	0 … 2.5 Volt	0 … 20mA Impedance: 62 Ohm	0 … 10 Volt	10 Hz	-50mV / +50m V
Accuracy (without sensor)	TBD	TBD	+/- 0.001 mA	+/- 0.008 V	N.A	+/- 1.6 µV
Resolution	TBD	TBD	0.0006 mA	0.0003 V	N.A	1.6 µV
Power supply for the sensor	N.A	N.A	N.A.	N.A	2.7 V / 62 mA max	N.A
Temperature sensor	Yes	Yes	Yes	Yes	Yes	Yes

	LGS39
Interface	Impulse
Number of inputs	1
Measurement range	Up to 10 Hz
Accuracy (without sensor)	N.A
Resolution	N.A
Power supply for the sensor	N.A
Minimum pulse duration	20 ms
Commutation type	Dry contact or CMOS 0-3.5V
Temperature sensor	Yes

3.1.2 Electronic board temperature

A temperature sensor is integrated on the electronic board (inside the casing). The temperature measurement is done at the same frequency than the measurement of the external sensor.
The temperature measurement is displayed on RF Monitor.

3.1.3 Casing

Characteristics	Newsteo LGS range
Temperature range of use of the Logger	-40 °C to + 85°C
IP Level of the Logger and the connector	IP65 The level of tightness of the product is valid only if the probe and antenna are properly tightened (seals crushed).

3.1.4 Power supply / Autonomy

Characteristics	LGS30 LGS33 LGS34 LGS35 LGS36 LGS37 LGS39
Power supply	**Battery** AA Lithium Thionyl (included) with plug-in connector
Autonomy @ 25°C	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.

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The chart below provides an estimate of the battery life of products based on the frequency of measurements taking and operating temperature. This graph is used as an estimate, not contractual. Newsteo gives you the most accurate and detailed information as possible, but cannot know the exact conditions of use of its products.
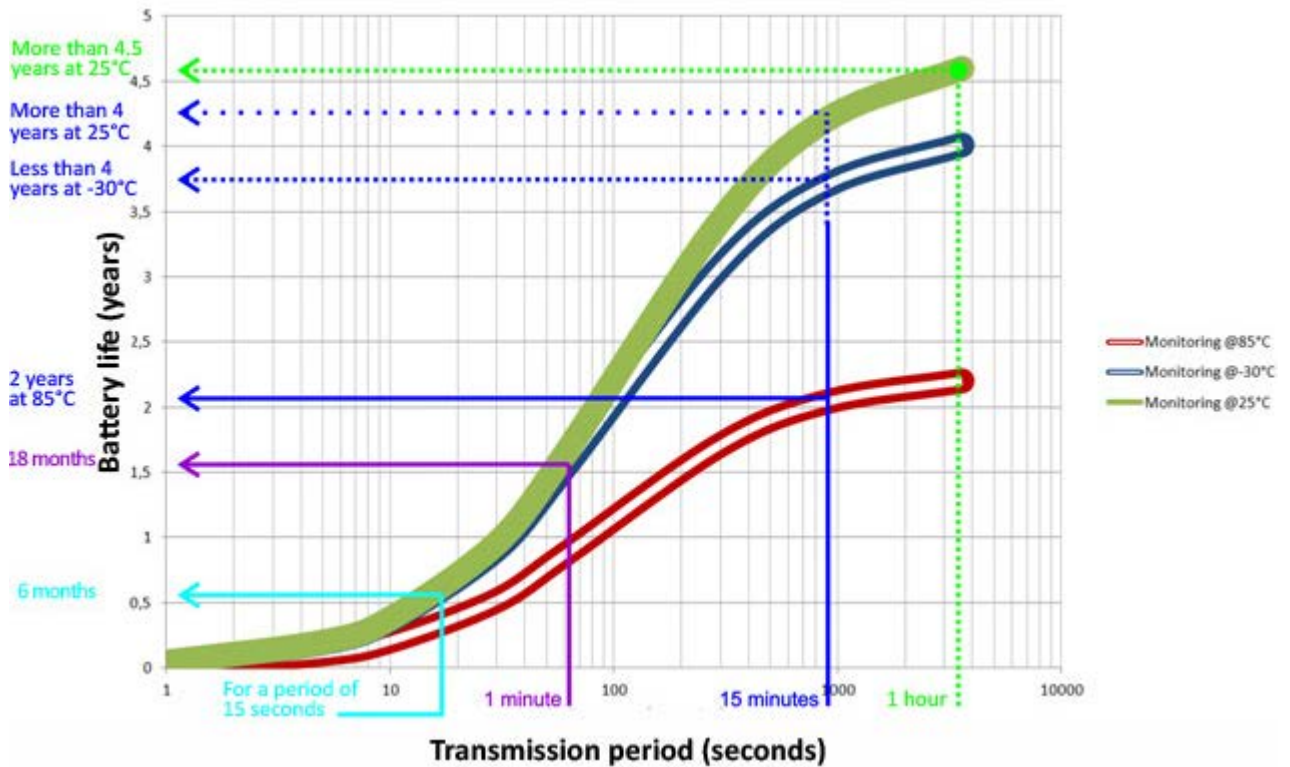
Valid for: LGS30 LGS33 LGS34 LGS35 LGS36 LGS37 LGS39

Figure 2: Battery life vs. Transmission period & temperature

3.1.5 Other characteristics

Characteristics	Newsteo LGS range
Antenna RF Connector	SMA connector
Antenna	1/2 wave antenna (included)
RF range in free land	100m to 1Km, depending on the antenna used on the reception side
Memory Capacity	32 256 measurements with date and time
Time resolution	1s
Time deviation	+/- 2 min/month @ 25°C
Data memory retention	100 years
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

Figure 3: LGR casing

Characteristics	Newsteo
Features	Aluminium casing (4mm)
Fixation	Fixation support provided screwed in the casing for screwing in 4 points or strapping through 2 holes
Colour	Grey (aluminium)
Dimensions (w/o antenna)	Length : 98 mm Depth : 64 mm Height: 34 mm
Weight	About 280 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 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.

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4   Connection to the sensor

Newsteo can provide connector and cable to connect to the loggers.

Assembly:
When installation is required, the customer is responsible for the proper assembly of the sensors and good connection of the probe on the Logger.

	References	Type	
	PFPN-CON05-001	Connector	
	PFPN-SES55-001	Cable	5 meters cable – Provided with fast contactor

Cables and connectors can be ordered to connect customer's sensor on Newsteo LGR logger.

4.1   Cable PFPN-SES55-001

Figure 4: PFPN-SES55-001 (cables and quick connectors)

	Characteristics
Type	Cable - M12 connector for direct connection to the LGR - Wires to connect the sensor (for each LGR reference, 2 wires are used. The connection instructions are provided).
Length of cable	5 meters (can be shortened by the customer if necessary)
IP level	IP68 (male connector, cable and quick connectors)

Ambient temperature (operation)	Cable :
	          -40 °C ... 80 °C (cable, fixed installation)
	          -5 °C ... 80 °C (cable, flexible installation)
	Connector (plugged on the logger):
	          -25 °C ... 90 °C

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4.2 Connector PFPN-CON05-001

Figure 5: PFPN-CON05-001

	Characteristics
Type	M12 connector with 5 positions
IP	IP67 (depending on the quality of the assembly made by the customer)
External cable diameter	4 mm … 6 mm
Conductor cross section stranded min. / max	0,25 mm² / 0,75 mm² If the cable is thin, it is recommended to thicken it by using a shrink sleeve to ensure a good seal
Installation	See provided installation instructions
Ambient temperature (operation)	-40 °C à 85 °C

5 How to order?

You need to order a data logger. You order for example:
- 1 PFPN-LGS35-001 (battery and antenna included)
- 1 PFPN-SES55-001 (connection cable)